

ANNUAL REPORT 2012-13

(FOR THE PERIOD APRIL 2012 TO MARCH 2013)

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		
Bapooji Krishi Vigyan Kendra, Santhanpara P.O., Idukki (Dt.), Pin-685619, Kerala.	04868 – 247541, 247715.	04868 – 247715	kvksanthanpara@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, Meenadom P.O., Pampady, Kottayam (Dt.), Pin-686 516, Kerala.	0481-2506271 +919446826019	Nil	chairmankvkidukki@rediffmail.com	www.kvkidukki.org

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

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. Benjamin Mathew, Programme Coordinator i/c.	Nil	9447095299	benjaminbkvk@gmail.com

1.4. Year of sanction: 1994**1.5. Staff Position (as 31st March 2012)**

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. in Animal Husbandry	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	Horticulture / Extension	Ph.D. Horticulture	15600-39100	21000	17-01-2011	Permanent	Others
5	SMS	Pramod Chacko	Subject Matter Specialist	M	Agronomy	M.Sc. Agriculture (Agronomy)	15600-39100	21000	17-01-2011	Permanent	Others
6	SMS	Dr. Binu John Sam	Subject Matter Specialist	M	Horticulture	Ph.D. Horticulture	15600-39100	21000	17-01-2011	Permanent	Others
7	SMS	Sudhakar Soundarajan	Subject Matter Specialist	M	Plant Protection	M.Sc. Agricultural Entomology, MBA	15600-39100	21000	27-01-2011	Permanent	OBC
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	Farm Manager	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

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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	-	-	-	-	-	<i>Master Plan & Estimate submitted. Sanction pending.</i>
3.	Staff Quarters	NA	-	-	-	-	-	-
4.	Demonstration Units							
	1. Duck cum fish culture unit.	RF	15-06-2009	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	-	-	-	-	-	<i>Urgent requirement as the area is constantly facing intuition of wild animals and other intruders</i>
6	Rain Water harvesting system	NA	-	-	-	-	-	-
7	Threshing floor	NA	-	-	-	-	-	-
8	Farm godown	NA	-	-	-	-	-	-
9	Vehicle garage							<i>Urgently required</i>

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mahindra Bolero SLE	May - 2012	5,78,380.36	18417	Good condition.
Motor Bike (Suzuki Shogun)	January - 1995	37,972.78	8828	In running condition with poor fuel efficiency.
Honda Aviator	March - 2009	50,000.00	8270	Running condition

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
2ET 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
Public Address System	2003	26,755.00	Good
Power Generator	2003	32,492.00	Good
LCD Projector (EPSON – EBW8)	2010	55,186.00	Good
Liberty Show Juno 5 x 7 (MW) Screen	2010	5,885.00	Good
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	Bad and not in use
FACIT Typewriter (English)	1995	9429.00	Bad and not in use
Stencil Duplicator	1995	13,700.00	Bad and not in use
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
Fax Machine	2009	15,000.00	Needs Repair
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 2012-13:

Sl. No.	Date	Number of Participants	No. of absentees	Salient Recommendations	Action taken
1.	17/12/2012	21	2	<p>1. Zinc and Boron deficiency is reported from many parts of Idukki. A scientific intervention by BKVK through its mandatory trials supported by technology backstopping by KAU is warranted to mitigate this problem.</p> <p>2. KVK is permitted to avail the technology of preparing IIHR specials at a concessional rate. ICAR through ZPD would support KVK in the necessary formalities.</p> <p>3. KVK shall not promote any farmer released variety unless passed by the Varieties Release Committee of KAU.</p> <p>4. KVK should not take up any intervention that would promote any one particular private company especially through its FLDs / OFTs.</p> <p>5. Steps to be initiated to popularize commercial mushroom farming in Idukki district. The different types should be popularized so that year round production is ensured.</p> <p>6. Value addition in mushroom to be strengthened so that the different products are made available to the tourist hot spots round the year.</p> <p>7. Cassava extracts have been proved to be effective against many pests. KVK may take up suitable intervention so that the same may be produced at the farmer level.</p> <p>8. KVK needs to take up measures in collaboration with engineering department of KAU to make refinement in the constraints currently faced by paddy transplanter.</p> <p>9. KVK should try to formulate a cheaper dairy cattle food supplement mix and popularize the same similar to the work by TANUVAS.</p> <p>10. Lime application should be promoted in Idukki district based on soil test values.</p>	OFT, FLDs and trainings are proposed during the year 2013-14 in accordance with the major recommendations by the delegates.

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
6	Cool season vegetables
7	Banana cropping
8	Rubber mono-crop
9	Dairying

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 2012	178.4	28.9	18.2	97.0
May 2012	24.9	27.6	19.1	97.7
June 2012	208	24.8	17.9	98.9
July 2012	194.2	24.5	17.9	99.1
August 2012	283.4	24.2	17.1	99.4
September 2012	153.4	25.4	17.8	98.3
October 2012	327.9	26.2	17.6	97.9
November 2012	150.8	26.8	16.7	94.8
December 2012	12.3	24.6	16.2	94.8
January 2013	0.4	25.9	14.9	90.0
February 2013	92.1	26.0	15.6	94.2
March 2013	21.5	28.0	17.5	90.0

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>	78910	Milk – 367 Lakh Litres	Milk – 385 Lakh Litres
<i>Indigenous</i>	9870	-	-
Buffalo	5455	Milk – 25 Lakh Litres	Milk – 40 Lakh Litres
Sheep			
<i>Crossbred</i>	-	-	-
<i>Indigenous</i>	-	-	-
Goats	97830	Meat – 75.77 Ton	-
Pigs			
<i>Crossbred</i>	11241	8.70 T	-
<i>Indigenous</i>	-	-	-
Rabbits	39276	5249 Kg	-
Poultry			
Hens	295389	126.90 Billions	-
<i>Desi</i>	4439		
<i>Improved</i>	-		
Ducks	25065	-	-
Turkey	3660	-	-
Others (Quail)	912	Egg – 2.07 Lakh	
Others (Horses)	12	-	
Others (Dog)	59525	-	
Others (Elephant / Mithun)	7	-	

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

2.7 District profile has been **Updated** for 2012-13 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	Udumbanchola	Nedumkandam , Kattappana	Anakkara, Anavilasom, Ayyappankoil, Chakkupallom, Chathurangappara, Chinnakanal, Kalkoonthal, Kanthippara, Karunapuram, Kattappana, Konnathady, Pampadumpara, Parathodu, Pooppara, Pottankadu (Bison Valley), Rajakkad, Rajakumary, Santhanpara, Thankamany, Udumbanchola, Upputhodu, Vathikudy, Vandanmedu & Senapathy	1995 onwards	Cardamom, Pepper, Ginger, Banana, Vegetables, Rice. Dairy cattle, goat, quail & poultry.	1) Unscientific crop management practices. 2) Use of local varieties of crops with poor yield potential. 3) Labour scarcity in paddy farming. 4) Heavy pest & disease incidence in crops. 5) Infertility problem in dairy cows. 6) Poor growth performance and production. 7) Low productivity in poultry. 8) Lack of mechanization in pepper processing 8) Labour shortage in paddy farming 9) Heavy infestation of shoot borer in ginger. 10) Heavy infestation of cardamom root grub.	1) Productivity improvement of major crops. 2) Introduction of high yielding improved crop varieties, livestock and poultry breeds. 3) Farm mechanization. 4) Integrated Pest and Disease Management (IPDM) in major crops. 5) Scientific management of livestock & poultry. 6) Self-employment and Income generation of rural youth & women. 7) Value addition of farm produce. 8) Mechanized pepper threshing 9) Mechanization in paddy farming 10) Trial on cultural method of shoot borer control in ginger. 11) Varietal trial of root grub resistant Thiruthali variety cardamom.
2	Peermedu	Azhutha	Elappara, Kokkayar, Kumily, Manjumala, Mlappara, Peerumedu, Periyar, Peruvanthanam, Upputhara & Vagamon	1995 onwards	Tea, Coffee, Cardamom. Dairy cattle, goat, poultry & piggery.	1) Unscientific crop management. 2) Heavy pest & disease incidence in crops. 3) Infertility problem in dairy animals. 4) Mastitis. 5) Ecto and endo parasitic infestation.	1) Productivity improvement of major crops. 2) IPDM in major crops. 3) Scientific management of livestock & poultry. 4) Trial on pest resistant cardamom variety.

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3	Devikulam	Devikulam, Adimali	Anaviratty, Kannan Devan Hills, Kanthalloor, Keezhanthoor, Kottakomboor, Kunjithanny, Mankulam, Mannamkandam, Marayoor, Pallivasal, Parathode Pullukandam Vattavada & Vellathooval	1995 onwards	Cardamom, Pepper, Tea, Rice. Dairy cattle, goat, poultry & piggery.	1) Unscientific crop management practices. 2) Heavy pest & disease incidence in crops. 3) Mastitis and ecto & endo parasitic infestation. 4) Poor growth rate and body weight gain in dairy calves. 5) Lack of entrepreneurship among rural youth and women. 6) Low productivity in pepper due to depletion of soil organic matter.	1) Productivity improvement of major crops. 2) Integrated Pest and Disease Management (IPDM) in major crops. 3) Scientific management of livestock & poultry. 4) Self-employment and Income generation of rural youth & women. 5) Popularization of consortium bio fertilizers.
4	Thodupuzha	Thodupuzha, Elamdesom & Idukki	Alakkodu, Arakkulam, Elappally, Idukki, Kanjikkuzhy, Karikkodu, Karimannoor, Karimkulam, Kodikkulam, Kudayathoor, Kumaramangalam, Manakkad, Muttom, Neyyasserry, Purappuzha, Thodupuzha, Udumbannoor, Vannapuram & Velliyamattam	1995 onwards	Rubber, Coffee, Coconut, Vegetables, Tree spices, Tapioca, Rice. Dairy cattle, goat, poultry, piggery & turkey.	1) Unscientific crop management practices. 2) Lack of entrepreneurship among rural youth and women. 3) Mastitis and infertility problem in dairy animals. 4) Labour shortage in paddy farming.	1) Productivity improvement of major crops. 2) Self-employment and Income generation of rural youth & women. 3) Scientific management of livestock & poultry. 4) Mechanization in paddy farming.

2.9 Priority thrust areas

S. No.	Thrust area
1.	Productivity improvement of major crops
2.	Paddy farm mechanization
3.	Introduction of high yielding improved crop varieties, livestock and poultry breeds
4.	Integrated Crop Management
5.	Integrated Pest and Disease Management (IPDM) in major crops
6.	Self-employment and Income generation of rural youth & women
7.	Nutritional security for homestead
8.	Value addition of farm produce
9.	Scientific management of livestock and poultry
10.	Drudgery reduction
11.	Improvement in reproductive efficiency in dairy cattle
12.	Feed and nutrient management in livestock

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
8	7	33	28	10	10	70	70

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
425	405	11300	11967	500	467	2200	2104

Seed Production (Qtl.)				Planting materials (Nos.)			
5				6			
Target		Achievement		Target		Achievement	
Vegetable seeds – 0.05q		Vegetable seeds – 0.0264q					
				Spices – 7000 nos.		Spices – 6752 nos.	
Mushroom spawn – 12q		Mushroom spawn – 9.65q		Ornamental crops – 2000 nos.		Ornamental crops – 1113 nos.	

Livestock, poultry strains and fingerlings (No.)				Bio-products (Kg)			
7				8			
Target		Achievement		Target		Achievement	
Vigova Super M Duck-200 nos.		Vigova Super M Duck-200 nos.		Pseudomonas – 1000 L		Pseudomonas – 1250 L	
				Trichoderma – 500 L		Trichoderma – 114 L	
				EPN-8000 nos.		EPN-22550 nos.	
				Vermicompost – 30q		Vermicompost – 20q	

3.B1. Abstract of interventions undertaken based on thrust areas identified for the district as given in Sl.No.2.9

S. No	Thrust area	Crop/ Enterprise	Identified Problem	Interventions											
				Title of OFT if any	Title of FLD if any	Number of Training (farmers)	Number of Training (Youths)	Number of Training (extension personnel)	Extension activities (No.)	Supply of seeds (Qtl.)	Supply of planting materials (No.)	Supply of livestock (No.)	Supply of bio products		
1.	Integrated Pest and Disease Management (IPDM) in major crops	Cardamom	Recurring occurrence of pest	Management of cardamom root grub with microbial bio-pesticides	-	5	0	0	2	-	-	-	-	-	No. Kg <i>Metarhizium anisopliae</i> -30 kg EPN (IJs)-3750 cadavers
2.	Productivity improvement of major crops	Cardamom	Lack of knowledge in apiary	-	Popularization of honey bee colonies in cardamom plantations	5	2	0	1	-	Bee hives with colonie-12 nos	-	-	-	-
3.	Integrated Pest and Disease Management (IPDM) in major crops	Cardamom	Heavy infestation of root grub in cardamom	Varietal trial of root grub resistant Thiruthali variety cardamom	-	1	-	-	8	-	-	-	-	-	-

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4.	Farm mechanization	Paddy	Labour scarcity	-	Mechanization in paddy farming	2	2	4	13	-	-	-	-	-
5.	Self-employment and Income generation of rural youth & women.	Mushroom	Large demand & inadequate supply.	Performance of different types of mushrooms for year round production in Idukki district		3	2	0	0	Spawn – 100 pkts	-	-	-	Vermicompost – 6 kg
6.	Integrated Crop Management	Black Pepper	High incidence of P & D in living standards of black pepper.	Use of concrete poles as standards in Black Pepper		0	0	0	2	-	Rooted Pepper cuttings – 90 nos.	-	-	-
7.	Integrated Crop Management	Banana	Lodging of banana plants nearing maturity.	Different types of props and supports to mitigate lodging / breaking of banana pseudostem		0	0	0	2	-	-	-	-	-
8.	Popularization of consortium bio fertilizers.	Cowpea	Indiscriminate use of chemical inputs		Use of microbial consortium for organic production of cowpea	3	0	0	0	-	-	-	-	Rhizobium – 2 kg VAM – 2 kg Panchagavyam – 40 kg
9.	Productivity improvement of major crops.	Bitter gourd	Low fruit set and yield		Foliar spray of Boron to increase the fruit set and size in bitter gourd	1	0	0	0	-	-	-	-	-
10.	Productivity improvement of major crops	Cowpea	Poor yield & Less profitability High disease incidence	Assessment on performance of cowpea varieties Vellayani Jyothika Arka Mangala & C.B.2001 against Lola in Idukki district		3	2	1	3	0.002	-	-	-	<i>Pseudomonas</i> & <i>Trichoderma</i> 10 L each
11.	Productivity improvement of major crops	Cauliflower	No availability of quality seed	Assessment of suitable cultivars of Cauliflower for High Ranges of Idukki District		3	2	1	3	0.001	-	-	-	<i>Beauveria</i> – 5kg
12.	ICM	Banana	Low yield	-	Integrated Nutrient Management of Nendran Banana under the agro climatic conditions of High Ranges of Idukki along with IIHR Banana Special & Potassium Sulphate Spray	5	3	2	10	-	-	-	-	IIHR Banana special-5kg each SOP-1kg each

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13.	Nutritional security for homestead	Vegetables	Non-availability of quality vegetables	-	Popularization of organic kitchen garden in homesteads for nutritional security	4	5	-	10	-	-	-	-	Vegetable seed kit 25no.
14.	Crop improvement	Vegetables	Use of inferior quality seedlings for planting	-	Popularization of protrait nursery method in vegetables	2	-	-	2	-	Protrait – 20 nos.	-	-	Pseudomonas – 2L
15.	Value addition of farm produce	Mushroom	Mushrooms are highly perishable	Assessment of different types of packaging materials for enhancement of shelf life and marketability in mushroom	-	2	-	-	6	-	-	-	-	-
16.	Self-employment and Income generation of rural youth & women	Under exploited fruits	1) Under exploited fruits are wasted. 2) Less profitability.	-	Product diversification and extension of shelf life in under exploited fruits	3	-	-	16	-	-	-	-	-
17.	Production and improvement of dairy cattle	Dairy cattle	Unaware and low production of mixed fodder	-	Popularization of mixed fodder system	5	4	-	2	Desmanthus – 0.08 Fodder Sorghum – 0.04 Agathi – 0.024 Subabul – 0.22	Hybrid Napier CO4 – 40000 sets	-	-	-
18.	Production and improvement of poultry	Poultry – duck	Low meat production	-	Performance of Vigova Super M duck in backyard system	5	3	-	1	-	-	200 nos.	Vigova Super M ducklings	-

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.	Management of cardamom root grub with microbial bio-pesticides	ICRI	Cardamom	1	0	15	Field visits – 30 Demonstrations – 5
2.	Popularization of honey bee colonies in cardamom plantations	KAU,	Cardamom	0	1	8	Field visits – 10 FAS – 15
3.	Assessment on performance of cowpea varieties Vellayani Jyothika Arka Mangala & C.B.2001 against Lola in Idukki district	KAU, IIHR	Cow pea	1	0	2	Field visits – 5 FAS - 7
4.	Assessment of suitable cultivars of Cauliflower for High Ranges of Idukki District	Namdhari seeds, IARI	Cauliflower	1	0	2	Field visits - 2
5.	ICM in Banana	KAU & IIHR	Banana	0	1	6	Field visits – 10 FAS - 15
6.	Popularization of organic kitchen garden in homesteads for nutritional security	-	Vegetables	0	1	8	Field visits-15

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7.	Performance of different types of mushrooms for year round production in Idukki district	KAU	Mushroom	1		5	Field visits – 10 FAS – 20 Demonstrations - 5
8.	Use of concrete poles as standards in Black Pepper	KAU, IISR	Black Pepper	1			Field visits - 2
9.	Different types of props and supports to mitigate lodging / breaking of banana pseudostem	KAU, TNAU	Banana	1			Field visits – 2 FAS – 4
10.	Use of microbial consortium for organic production of cowpea	KAU	Cowpea	0	1		Demonstrations - 3 Field visits – 2 FAS – 2
11.	Foliar spray of Boron to increase the fruit set and size in bitter gourd	IIHR	Bittergourd	0	1		Field visits – 2 FAS – 2
12.	Varietal trial of root grub resistant Thiruthali variety cardamom	Farmer Innovation	Cardamom	1		5	Field visits – 15
13.	Mechanization in paddy farming	FLD	Paddy		1	8	Field visits –10 FAS – 15
14.	Popularization of portray nursery method in vegetables	KAU	Vegetables	-	1	-	Field visit – 2 Demo – 1 FAS-2
15.	Assessment of different types of packaging materials for enhancement of shelf life and marketability in mushroom	DMR, Solan	Mushroom	1	-	-	Field visit – 2 FAS-6
16.	Product diversification and extension of shelf life in under exploited fruits	KAU	Under exploited fruits	-	5	3	Field visit – 4 Demonstration – 10 FAS - 30
17.	Popularization of mixed fodder system	TANUVAS	Dairy cattle	-	20	9	Field visit - 2
18.	Performance of Vigova Super M duck in backyard system	CPDO, Hessarghatta	Poultry – duck	-	10	9	Field visit -1

3.B2 contd..

	No. of farmers covered															
	OFT				FLD				Training				Others (Specify)			
	General		SC/ST		General		SC/ST		General		SC/ST		General		SC/ST	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1.	2	5	0	0	0	0	0	10	15	0	0	15	10	0	0	
2.	0	0	0	0	7	1	0	0	4	4	0	0	15	0	0	
3.	4	1	0	0	0	0	0	8	3	0	0	0	0	0	0	
4.	5	0	0	0	0	0	0	10	2	0	0	0	0	0	0	
5.	0	0	0	0	5	0	0	15	5	0	0	0	0	0	0	
6.	0	0	0	0	10	15	0	5	5	0	0	0	0	0	0	
7.	0	4	0	0	0	0	0	56	67	12	8	64	21	11	6	
8.	2	1	0	0	0	0	0	0	0	0	0	6	4	0	0	
9.	3	0	0	0	0	0	0	0	0	0	0	8	2	0	0	
10.	0	0	0	0	2	2	0	0	0	0	0	16	6	0	0	
11.	0	0	0	0	2	1	0	0	0	0	0	6	6	0	0	
12.	4	0	0	1	0	0	0	10	15	0	0	0	0	0	0	
13.	0	0	0	0	7	1	0	2	17	13	0	1	0	0	0	
14.	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
15.	0	3	0	0	0	0	0	0	0	0	0	3	6	0	0	
16.	0	0	0	0	3	3	0	0	6	50	0	3	42	0	0	
17.	0	0	0	0	13	7	0	0	200	45	20	5	0	0	0	
18.	0	0	0	0	5	4	1	0	200	27	10	3	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					2			1		3
Integrated Pest Management								1		1
Integrated Crop Management						1		1		2
Integrated Disease Management										
Small Scale Income Generation Enterprises				1						1
Weed Management										
Resource Conservation Technology										

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Farm Machineries									
Integrated Farming System									
Seed / Plant production									
Value addition									
Drudgery Reduction									
Storage Technique									
Mushroom cultivation (Packaging)			1						1
Total			2	2	1		3		8

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					
Varietal Evaluation	Cow pea	Assessment on performance of cowpea varieties Vellayani Jyothika Arka Mangala & C.B.2001 against Lola in Idukki district	5	5	0.04
	Cauliflower	Assessment of suitable cultivars of Cauliflower for High Ranges of Idukki District	5	5	0.03
	Cardamom	Varietal trial of root grub resistant Thiruthali variety cardamom	5	5	0.4
Integrated Pest Management	Cardamom	Management of cardamom root grub with microbial bio-pesticides	5	5	2.5
Integrated Crop Management	Black Pepper	Use of concrete poles as standards in Black Pepper	3	3	0.25
	Banana	Different types of props and supports to mitigate lodging / breaking of banana pseudostem	3	3	0.50
Integrated Disease Management					
Small Scale Income Generation Enterprises	Mushroom	Performance of different types of mushrooms for year round production in Idukki district	4	4	0.05
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation (Packaging)	Mushroom	Assessment of different types of packaging materials for enhancement of shelf life and marketability in mushroom	3	3	3 units
Total			33	33	

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
Cardamom	Perennial crop	Heavy root grub incidence	Management of cardamom root grub with microbial bio-pesticides	5	Evaluation of root grub management using microbial biopesticides & EPN.	Root grub incidence, Effectiveness & BCR	Comparative root grub control evaluation in cardamom.	Root grub is controlled by 95 % in all the EPN treated plots and <i>Metarhizium anisopliae</i> indicate that 80 % control of root grub when compare to control plots.	EPN is effective in controlling of root grub and increasing yield substantially.	-	-
	Perennial crop	Heavy infestation of root grub	Varietal trial of root grub resistant Thiruthali variety cardamom	5	.Root grub resistant Thiruthali variety cardamom	% reduction in root grub attack Yield BCR	Comparative root grub control evaluation in cardamom.	Ongoing	Thiruthali variety shows better root grub resistance.	-	-
Cow Pea	Annual	Poor yield & Less profitability High disease incidence	Assessment on performance of cowpea varieties Vellayani Jyothika Arka Mangala & C.B.2001 against Lola in Idukki district	5	Varietal performance of three varieties	Incidence of anthracnose BCR	C.B.2011 shown field resistance on anthracnose But the yield parameter of Vellayani Jyothika found superior than other varieties	Vellayani Jyothika can be recommended for the farmers of Idukki dist based on the yield performance and BCR	Farmers are well accepted with the performance of Vellayani Jyothika	-	-
Cauliflower	Annual	No availability of quality seed	Assessment of suitable cultivars of Cauliflower for High Ranges of Idukki District Assessment of suitable cultivars of Cauliflower for High Ranges of Idukki District	5	Varietal performance of two varieties	Yield BCR	-	Due to the non availability of Pusa Meghana seeds the assessment was not carried out this year.	-	-	-
Black Pepper	Perennial crop	High incidence of P & D in living standards of black pepper.	Use of concrete poles as standards in Black Pepper	3	Using concrete poles as standards instead of live standards	BCR	Ongoing for three years from 2012-13	Concrete poles supplied and rooted cuttings of Black Pepper planted	Adaptability restricted for small farmers as cost involved is high	-	-
Banana	Commercial crop	Lodging of banana plants nearing maturity.	Different types of props and supports to mitigate lodging / breaking of banana pseudostem	3	1. Single propping by bamboo/ casuarina / eucalyptus props 2. Double propping by bamboo/ casuarina/ eucalyptus props 3. Support by ¾ inch nylon / polythene tapes	Percentage of plants damaged/ survived during wind. BCR.	Ongoing	Props and supports supplied. The crop is just coming to bearing stage	Need to wait till monsoon to assess the suitability of the technology assessed	-	-
Mushroom	Commercial crop	Large demand & inadequate supply.	Performance of different types of mushrooms for year round production in Idukki district	4	Assessing the suitability of growing Milky mushrooms during summer months followed by oyster mushroom during cooler regimes	Yield realization per bed in relation to prevailing weather conditions.	Ongoing and shall be over by July 2013	Oyster mushroom – Average yield of 0.8 kg per bed in 4 harvests Milky mushroom – Beds prepared	Skeptical on the marketability of Milky mushrooms	-	-
Mushroom	-	Mushrooms are highly perishable	Assessment of different types of packaging materials for enhancement of shelf life and marketability in mushroom	3	Assessment of different types of packaging materials (Tray packs, stand packs, PP pouches, CFB boxes)	Shelf life	-	Tray packs with cling film cover is more suitable for packaging	-	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice- Drenching Chlorpyrifos @ 0.04%)	-	0.8	t/ha	Rs.2,80,000	1.7
Technology option 2 (Soil application of <i>Metarhizium anisopliae</i> @25g/plant mixed with cow dung)	ICRI	1	t/ha	Rs.3,50,000	2.4
Technology option 3(Soil application of EPN (IJs) @ 4 cadaver / plant)	ICRI	1.3	t/ha	Rs.5,30,000	3.1
Technology option 1 (Farmer's practice- Njallani variety)	Farmer Innovation	On going			
Technology option 2 (<i>Thiruthali</i> variety)	Farmer Innovation				
Technology option 1 (Farmer's practice- Lola)	-	12.5	t/ha	Rs.1,40,625	1.1
Technology option 2 (Vellayani Jothika)	KAU	18.8	t/ha	Rs.1,75,600	1.5
Technology option 3 (Arka Mangala)	IIHR	13.6	t/ha	Rs.1,52,764	1.2
Technology option 4 (C.B 2011)	Farmer Innovation	10.1	t/ha	Rs.1,02,214	0.8
Technology option 1 (Farmer's practice -NS-60)	Namdhari seeds	Due to the non availability of Pusa Meghana seeds the assessment was not carried out this year.			
Technology option 2 (Pusa Shakthi)	IARI				
Technology option 3 (Pusa Meghana)	IARI				
Technology option 1 Farmers practice (Live standards of Glyricidia)	-	More than 50% Glyricidia standards damaged by caterpillar	-	-	Ongoing for three years from 2012-13
Technology option 2 (Live standards of Erythrina)	KAU	More than 30% Erythrina standards damaged by Erythrina wasp	-	-	
Technology option 3 (Concrete Poles)	IISR	-	-	-	
Technology option 1 Farmers practice (Single propping by bamboo/ casuarina / eucalyptus props)	-	Ongoing			
Technology option 2 (Double propping by bamboo/ casuarina/ eucalyptus props)	KAU	Props supplied. The crop is just coming to bearing stage	-	-	Need to wait till monsoon to assess the suitability of the technology assessed
Technology option 3 (Support by ¾ inch nylon / polythene tapes)	TNAU	Supports supplied. The crop is just coming to bearing stage	-	-	-
Technology option 1 (Oyster Mushroom)	KAU	Oyster mushroom – Average yield of 0.8 kg per bed in 4 harvests	kg/bed	Rs. 200/bed	3.33
Technology option 2 (Milky mushroom)	KAU	Milky mushroom – Beds prepared	-	-	Ongoing
Technology option 3	Nil	-	-	-	-
Technology option 1 (Farmer's practice-Ordinary packaging)	Nil	-	-	-	-
Technology option 2 (Packaging of mushrooms in poly propylene pouches)	DMR	-	-	-	-
Technology option 3(Packaging of mushrooms in CFB)	DMR	-	-	-	-
Technology option 4(Packaging of mushrooms in Tray packs with cling film cover)	DMR	Tray packs with cling film cover is more suitable for packaging	-	-	-

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 of cardamom root grub, *Basilepta fulvicorne* with microbial bio-pesticides and Entomopathogenic Nematodes**
 - 2 Problem Definition: Low productivity due to root grub incidence.
 - 3 Details of technologies selected for assessment: Application of *Metarhizium anisopliae* @ 25g/plant with cow dung and EPN @ 4 cadavers/ plant twice in a year (April-May & September-October).
 - 4 Source of technology: ICRI, Myladumpara.
 - 5 Production system and thematic area: Cardamom based cropping system and Integrated management of cardamom root grub.
 - 6 Performance of the Technology with performance indicators: The yield and BCR data recorded after the treatments indicated the following results. The percentage reduction of root grub attack was 53 % and the yield 0.6 t/ha with the BCR of 1.7 in farmers practice, 77 % and the yield 1 t/ha with the BCR of 2.4 in management with *Metarhizium anisopliae* and 88 % with the yield of 1.3 t/ha with the BCR of 3.1 in management with Entomopathogenic Nematodes.
 - 7 Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: EPN is effective in controlling of root grub and increasing yield substantially.
 - 8 Final recommendation for micro level situation: Nil.
 - 9 Constraints identified and feedback for research: Microbial bio-pesticides and Entomopathogenic Nematodes show significant results on the productivity of cardamom only if the technology is continuously practiced for three years and maintain shade area properly.
 - 10 Process of farmer's participation and their reaction: The cardamom growers association had adopted the technology and more than 400 farmers are practicing the technology in over 250 ha area.
- 2)
- 1 Title of Technology Assessed: **Assessment on performance of cowpea varieties Vellayani Jyothika Arka Mangala & C.B.2001 against Lola in Idukki district**
 - 2 Problem Definition: Poor yield, less profitability & High disease incidence.
 - 3 Details of technologies selected for assessment:-
 - Tech 1 - Lola
 - Tech 2 - Vellayani Jyothika
 - Tech 3 - Arka Mangala
 - Tech 4 - C.B. 2001
 - 4 Source of technology: KAU, IIHR & Farmer Innovation.
 - 5 Production system and thematic area: Introduction of high yielding improved crop varieties.
 - 6 Performance of the Technology with performance indicators: Incidence of Anthracnose and yield parameters
 - 7 Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Nil.
 - 8 Final recommendation for micro level situation: Vellayani Jyothika can be recommended for the farmers of Idukki dist based on the yield performance and BCR.
 - 9 Constraints identified and feedback for research: The seeds of C.B.2001 was not readily available, but this variety shown tolerance to anthracnose disease in field condition.
 - 10 Process of farmer's participation and their reaction: Farmers are well accepted with the performance of Vellayani Jothika.

3)

- 1 Title of Technology Assessed: **Assessment of suitable cultivars of Cauliflower for High Ranges of Idukki District Assessment of suitable cultivars of Cauliflower for High Ranges of Idukki District**
- 2 Problem Definition: No availability of quality seed.
- 3 Details of technologies selected for assessment:-
 - Tech 1 – NS 60
 - Tech 2 – Pusa Meghana
 - Tech3 – Pusa Shakthi
- 4 Source of technology: Namdhari seeds, IARI.
- 5 Production system and thematic area: Introduction of high yielding improved crop varieties.
- 6 Performance of the Technology with performance indicators: Not conducted.
- 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: Due to the non availability of Pusa Meghana seeds the assessment cannot be carried out this year.
- 10 Process of farmer's participation and their reaction: Nil.

4)

- 1 Title of Technology Assessed: **Use of concrete poles as standards in Black Pepper**
- 2 Problem Definition: High incidence of P & D in living standards of black pepper.
- 3 Details of technologies selected for assessment: Using concrete poles as standards instead of live standards.
- 4 Source of technology: IISR.
- 5 Production system and thematic area: Integrated Crop Management in perennial crop of Black Pepper.
- 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: Percentage of live standards affected by pests and diseases.
- 8 Final recommendation for micro level situation: Ongoing.
- 9 Constraints identified and feedback for research: Erection of poles is cumbersome.
- 10 Process of farmer's participation and their reaction: Adoptability restricted for small farmers as cost involved is high.

5)

- 1 Title of Technology Assessed: **Different types of props and supports to mitigate lodging / breaking of banana pseudostem**
- 2 Problem Definition: Lodging of banana plants nearing maturity.
- 3 Details of technologies selected for assessment:-
 - a. Single propping by bamboo/ casuarina / eucalyptus props.
 - b. Double propping by bamboo/ casuarina/ eucalyptus props.
 - c. Support by ¾ inch nylon / polythene tapes.
- 4 Source of technology: KAU and TNAU.
- 5 Production system and thematic area: Integrated Crop Management in Banana.
- 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: Percentage of plants damaged/ survived during wind and BCR.
- 8 Final recommendation for micro level situation: Ongoing.

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- 9 Constraints identified and feedback for research: Low availability of bamboo / casuarina poles and high cost.
- 10 Process of farmer's participation and their reaction: Need to wait till monsoon to assess the suitability of the technology assessed.

6)

- 1 Title of Technology Assessed: **Performance of different types of mushrooms for year round production in Idukki district**
- 2 Problem Definition: Large demand & inadequate supply.
- 3 Details of technologies selected for assessment: Assessing the suitability of growing Milky mushrooms during summer months followed by oyster mushroom during cooler regimes to ensure year round supply.
- 4 Source of technology: KAU.
- 5 Production system and thematic area: Small Scale Income Generation Enterprise in Mushroom Farming.
- 6 Performance of the Technology with performance indicators: Yield per bed.
- 7 Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Yield realization per bed in relation to prevailing weather conditions.
- 8 Final recommendation for micro level situation: Ongoing.
- 9 Constraints identified and feedback for research: Ongoing.
- 10 Process of farmer's participation and their reaction: Skeptical on the marketability of Milky mushrooms.

7)

- 1 Title of Technology Assessed: **Varietal trial of root grub resistant Thiruthali variety cardamom**
- 2 Problem Definition: Heavy infestation of root grub.
- 3 Details of technologies selected for assessment: Thiruthali variety cardamom.
- 4 Source of technology: Farmer developed.
- 5 Production system and thematic area: Cardamom based cropping system and crop improvement
- 6 Performance of the Technology with performance indicators: The Thiruthali variety cardamom shows better root grub resistance.
- 7 Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: The Thiruthali variety cardamom shows better root grub resistance.
- 8 Final recommendation for micro level situation: The trial is ongoing and the final recommendation is possible only after 3 years.
- 9 Constraints identified and feedback for research: Nil.
- 10 Process of farmer's participation and their reaction: The farmers are happy with the root grub resistant nature of the variety.

8)

- 1 Title of Technology Assessed: **Assessment of different types of packaging material for enhancement of shelf life and marketability in mushroom (Ongoing)**

4.D1. Results of Technologies Refined: Nil.

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

PART V - FRONTLINE DEMONSTRATIONS**5.A. Summary of FLDs implemented during 2012-13**

Sl. No.	Category	Farming Situation	Season and Year	Crop	Variety/breed	Hybrid	Thematic area	Technology Demonstrated	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
									Proposed	Actual	SC/ST	Others	Total	
	Oilseeds													
	Pulses													
	Cereals	Mono crop	Kharif 2012	Paddy	Palthony	-	Farm mechanization	Mechanization in paddy farming	5	5	2	8	10	-
	Millets													
	Vegetables	Mixed farming	Seasonal	Vegetables	Local	-	Nutritional security for homestead	Popularization of organic kitchen garden in homesteads for nutritional security	0.4	0.4	5	20	25	-
		Mono crop	Rabi 2012	Cowpea	Local	-	Integrated Nutrient Management	Use of microbial consortium for organic production of cowpea	0.08	0.08		4	4	-
		Mono crop	Rabi 2012	Bittergourd	Local	-	Productivity improvement of major crops.	Foliar spray of Boron to increase the fruit set and size in bitter gourd	0.05	0.05		3	3	-
		Mixed farming	Seasonal	Vegetables			Crop improvement	Popularization of portray nursery method in vegetables	5 units	5 units				
	Flowers													
	Ornamental													
	Fruit (Under exploited fruits)	Mixed farming		Jack fruit, Banana	Local	-	Product diversification (preservation)	Product diversification & extension of shelf life of under exploited fruits	3 units	3 units		3	3	-
		Mono crop		Banana	Nendran	-	ICM	Integrated Nutrient Management of Nendran Banana under the agro climatic conditions of High Ranges of Idukki along with IIHR Banana Special & Potassium Sulphate Spray	2	2		5	5	-
	Spices and condiments													
	Commercial													
	Medicinal and aromatic													
	Fodder													
	Fibre													
	Dairy	Mixed farming	Throughout the year	Dairy cattle	Cross bred cattle	-	Production and improvement of dairy cattle	Popularization of mixed fodder system	20	0.04	0	20	20	-
	Poultry	Mixed farming	Throughout the year	Poultry	Poultry - duck	-	Production and improvement of poultry	Performance of Vigova Super M duck in backyard system	10	200	1	9	10	-
	Rabbitry													
	Pigerry													

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Sheep and goat														
Duckery														
Common carps														
Mussels														
Ornamental fishes														
Oyster mushroom														
Button mushroom														
Vermicompost														
Sericulture														
Apiculture	Mono crop	Perennial crop	Cardamom	Njallani	-	Better pollination	Popularization of honey bee colonies in cardamom plantations	2.5	2.5	-	5	5	-	

5.A. 1. Soil fertility status of FLDs plots during 2012-13

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		
	Oilseeds													
	Pulses													
	Cereals	Mono Crop	Kharif 2012	Paddy	Palthony	-	Farm mechanization	Mechanization in paddy farming	Kharif 2012	M	L	H	Cow pea	
	Millets													
	Vegetables	Mixed farming	Seasonal	Vegetables	Local	-	Nutritional security for homestead	Popularization of organic kitchen garden in homesteads for nutritional security	Seasonal	H	H	M	Fallow	
		Mono crop	Rabi 2012	Cowpea	Local	-	Integrated Nutrient Management	Use of microbial consortium for organic production of cowpea	Rabi 2012	M	M	M	Bitter gourd	
		Mono crop	Rabi 2012	Bitter gourd	Local	-	Productivity improvement of major crops.	Foliar spray of Boron to increase the fruit set and size in bitter gourd	Rabi 2012	M	M	M	Snake gourd	
	Flowers													
	Ornamental													
	Fruit	Mono crop	Perennial	Banana	Nendran	-	ICM	Integrated Nutrient Management of Nendran Banana under the agro climatic conditions of High Ranges of Idukki along with IIHR Banana Special & Potassium Sulphate Spray	Perennial	M	H	M	Cowpea & Bitter gourd	
	Spices and condiments													
	Commercial													
	Medicinal and aromatic													
	Fodder													
	Plantation													
	Fibre													

5.B. Results of Frontline Demonstrations

5.B.1. Crops

Crop	Name of the technology demonstrated	Variety	Hybrid	Farming situation	No. of Demo.	Area (ha)	Yield (q/ha)			Check	% Increase	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)				
							H	L	A			Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR	
Oilseeds																				
Pulses																				
Cereals	Mechanization in paddy farming	PalTHONY	-	Mono crop	10	5	34.2	30.6	32.4	29.1	11.34	30200	45644	15444	1.51	42156	40243	-1913	0.95	
Millets																				
Vegetables	Popularization of organic kitchen garden in homesteads for nutritional security	Local	-	Seasonal	25	0.4	Ongoing													
	Use of microbial consortium for organic production of cowpea	Local	-	Monocrop	4	0.08	120	100	110	80	37.5	135000	220000	85000	1.62	142000	160000	18000	1.12	
	Foliar spray of Boron to increase the fruit set and size in bitter gourd	Local	-	Monocrop	3	0.05	150	140	145	120	20.8	275400	435000	159600	1.58	275000	360000	85000	1.30	
	Popularization of portray nursery method in vegetables	-	-	Seasonal	5 units	5 units	-	-	-	-	-	16000	22000	6000	1:1.37	27000	28000	1000	1:1.07	
Flowers																				
Ornamental																				
Fruit	Integrated Nutrient Management of Nendran Banana under the agro climatic conditions of High Ranges of Idukki along with IIHR Banana Special & Potassium Sulphate Spray	Nendran	-	Perennial	5	2	Ongoing													
Spices and condiments																				
Commercial																				
Fibre crops like cotton																				
Medicinal and aromatic																				
Fodder																				
Plantation																				
Fibre																				

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Others (Apiculture)	Popularization of honey bee colonies in cardamom plantations	Njallani	-	Perennial crop	5	2.5	H			-	30%	1.5 lakhs	9 lakhs	7.5 lakhs	6.0	1.25 lakhs	5 lakhs	3.5 lakhs	2.8
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* 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
a. Visual difference in crop stand	Plants more green in colour	Normal stand of the crop
b. Difference in pest & disease incidence	No major pest or disease incidence	Aphids and Serpentine leaf miner found in almost 75% area
Pollination & fruit set	Better pollination & fruit set almost to about 80%	Fruit set only to the tune of 60%

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)			Check if any	% 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 mixed fodder system	Cross bred cattle	20	0.04	16 L	12 L	11 L	10 L	33	6200	12800	6600	2.06	8200	21000	12800	1.56
Poultry	Performance of Vigova Super M duck in backyard system	Poultry – Vigova Super M duck	10	200 birds	2.75 kg	2 kg	2.25 kg	2.1 kg	28	57000	135000	78000	1.36	61000	125000	64000	1.04
Rabbitry																	
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.): Nil.

5.B.3. Fisheries: Nil.

5.B.4. Other enterprises

Enterprise	Name of the technology demonstrated	Variety/species	No. of Demo	Units/Area {m ² }	Yield (q/ha)			Check if any	% Increase	*Economics of demonstration (Rs./unit) or (Rs./m ²)				*Economics of check (Rs./unit) or (Rs./m ²)			
					Demo					Gross Cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
					H	L	A										
Oyster mushroom																	
Button mushroom																	
Vermicompost																	
Sericulture																	
Apiculture																	
Others (Fruits)	Product diversification & extension of shelf life of under exploited fruits	Local	3	-	-	-	-	-	-	6093	11765	5672	1.93	-	-	-	-

* 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., additional income realized, employment generation, quantum of farm resources recycled etc.): Nil.

5.B.5. Farm implements and machinery

Name of the implement	Cost of the implement in Rs.	Name of the technology demonstrated	No. of Demo	Area covered under demo in ha	Labour requirement in Mandays		% save	Savings in labour (Rs./ha)	*Economics of demonstration (Rs./ha)				*Economics of check (Rs./ha)			
					Demo	Check			Gross cost	Gross Return	Net Return	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Power Tiller	137158	Mechanized paddy farming	30	11	31	55	43	16800	30200	45644	15444	1.5	42156	40243	-1913	0.95
Paddy Transplanter	154650															
Cono weeder	1550															
Paddy reaper	73767															
Paddy thresher	17063															
Pepper Thresher	27140	Mechanized pepper threshing	-	10	-	-	-	-	Rs.1.3/kg				Rs.3/kg			

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

** BCR= GROSS RETURN/GROSS COST

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

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

Sl. No.	Activity	No. of activities organised	Number of participants	Remarks
1	Field days	3	34	Ecodon field day
2	Farmers Training	17	356	-
3	Media coverage			
4	Training for extension functionaries	1	25	Training on application of IIHR and SOP (ICM of banana)
5	Others (Field visit)	33	98	-
6	Others (Demonstration)	15	57	-
7	Others (Fest, Carnival, One-day workshop)	3	150	-
8	Others (FAS)	28	30	-
9	Others (Please specify)			
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										

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Integrated Farming	2	32	21	53	0	0	0	32	21	53
Micro Irrigation/Irrigation	1	10	5	15	0	0	0	10	5	15
Seed production										
Nursery management										
Integrated Crop Management										
Soil and Water Conservation										
Integrated Nutrient Management										
Production of organic inputs										
Others (Paddy Mechanization)	2	34	8	42	0	0	0	34	8	42
Others (pl.specify)										
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	3	56	10	66	0	0	0	56	10	66
Others (Organic farming)	4	42	25	67	0	5	5	42	30	72
Others (pl.specify)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards	1	22	31	53	0	0	0	22	31	53
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (Hi-tech banana cultivation)	1	84	30	114	0	0	0	84	30	114
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management	1	32	21	43	0	0	0	32	21	43
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										

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Production and Management technology										
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology										
Processing and value addition	4	22	45	57	0	0	0	22	45	57
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	12	152	6	3	9	146	15	161
Integrated water management										
Integrated nutrient management	3	164	19	183	14	12	26	178	31	209
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	7	245	37	282	10	22	32	267	47	314
Poultry Management	2	47	21	68	0	0	0	47	21	68
Piggery Management	2	24	20	44	0	0	0	24	20	44
Rabbit Management	2	21	21	42	0	0	0	21	21	42
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	7	345	37	382	10	8	18	355	45	400
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										

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Location specific drudgery production											
Rural Crafts											
Women and child care											
Others (pl.specify)											
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	7	106	20	126	68	26	94	174	46	220	
Integrated Disease Management	4	68	20	88	38	13	51	81	33	114	
Bio-control of pests and diseases	3	40	16	56	2	4	6	42	22	64	
Production of bio control agents and bio pesticides	3	40	30	70	22	20	42	62	50	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											

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Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom production	5	12	65	77	0	0	0	12	65	77
Apiculture	4	32	0	32	45	14	59	77	14	91
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	1	32	6	38	0	1	1	32	7	39
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	71	1630	520	2150	215	128	343	1852	638	2470

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	2	11	0	11	6	12	18	16	18	34
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	3	45	8	53	15	10	25	60	18	78
Soil and Water Conservation										
Integrated Nutrient Management	2	60	30	90	0	0	0	60	30	90
Production of organic inputs										
Others (Paddy cultivation)	1	25	0	25	0	0	0	25	0	25
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	10	5	15	20	5	25	30	10	40
Off-season vegetables										

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Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation	5	125	89	214	0	0	0	125	89	214
Others (Hi-tech vegetable cultivation)	6	194	33	227	33	19	52	227	52	279
Others (Organic farming)	15	344	140	484	25	60	85	369	200	569
Others (Cool season vegetables)	7	413	23	436	158	18	176	571	41	612
Others (pl.specify)										
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 (Hi-tech banana cultivation)	3	57	40	97	12	5	17	69	45	114
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	2	50	12	62	0	0	0	50	12	62
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology	6	165	45	210	0	0	0	165	45	110
Processing and value addition	3	30	15	45	0	0	0	30	15	45
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl.specify)										

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Soil Health and Fertility Management										
Soil fertility management	7	140	70	210	0	0	0	140	70	210
Integrated water management										
Integrated nutrient management	5	182	60	242	0	0	0	182	60	242
Production and use of organic inputs										
Management of Problematic soils	3	127	20	147	0	0	0	127	20	147
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers	2	44	20	64	0	0	0	44	20	64
Soil and water testing	3	75	5	80	0	0	0	75	5	80
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	3	81	16	97	0	0	0	81	16	97
Poultry Management	1	8	5	13	0	0	0	8	5	13
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	1	40	14	54	0	0	0	40	14	54
Production of quality animal products										
Others (Entrepreneurship development programme)	2	48	20	68	0	0	0	48	20	68
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	12	67	170	237	0	0	0	67	170	237
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
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										

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Post Harvest Technology										
Others (pl.specify)										
Plant Protection										
Integrated Pest Management	15	346	169	515	16	18	24	362	187	549
Integrated Disease Management	10	245	70	315	22	6	28	267	76	343
Bio-control of pests and diseases	8	315	68	383	20	0	20	335	68	403
Production of bio control agents and bio pesticides	3	55	42	97	0	0	0	55	42	97
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	9	44	53	0	0	0	9	44	53
Apiculture	1	15	0	15	0	0	0	15	0	15
Others (pl.specify)										
Capacity Building and Group Dynamics										
Leadership development										
Group dynamics										

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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	134	3326	1233	4559	327	153	470	3644	1374	4944

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	4	86	59	145	0	0	0	86	59	145
Training and pruning of orchards	2	41	28	69	0	0	0	41	28	61
Protected cultivation of vegetable crops	3	42	32	74	0	0	0	42	32	74
Commercial fruit production	2	29	4	33	0	0	0	29	4	33
Integrated farming	2	38	19	57	0	0	0	38	19	57
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture	3	42	32	74	0	0	0	42	32	74
Mushroom Production	6	132	0	132	0	0	0	132	0	132
Bee-keeping	3	52	22	74	0	0	0	52	22	74
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	4	54	14	68	0	0	0	54	14	68
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying	6	376	80	456	0	0	0	376	80	456
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										

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Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL	35	892	290	1182	0	0	0	892	290	1182

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	3	174	10	184	0	0	0	174	10	184
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production	2	35	20	55	0	0	0	35	25	55
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	7	45	82	127	0	0	0	45	82	127
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying	3	129	22	151	0	0	0	129	22	151
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										

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Any other (Hi-tech horticulture)	4	163	20	183	0	0	0	163	20	153
TOTAL	19	546	154	700	0	0	0	546	154	700

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	1	69	36	105	0	0	0	69	36	105
Integrated Pest Management	2	25	15	40	0	0	0	25	15	40
Integrated Nutrient management	1	0	10	10	0	14	14	0	24	24
Rejuvenation of old orchards										
Protected cultivation technology	1	7	2	9	0	0	0	7	2	9
Production and use of organic inputs	1	10	4	14	0	0	0	10	4	14
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	6	111	67	178	0	14	14	111	81	192

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	5	65	21	86	0	0	0	65	21	86
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology	4	54	20	74	0	0	0	54	20	74
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs	1	25	10	35	0	0	0	25	10	35
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	10	144	51	195	0	0	0	144	51	195

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	5	114	25	139	5	2	7	119	27	146
1.b.	Commercial production of vegetables	22	463	232	695	0	0	0	463	232	695
2	Production and value addition										
2.a.	Fruit Plants	4	113	49	162	12	5	17	118	54	179
2.b.	Ornamental plants										
2.c.	Spices crops	15	843	268	1111	105	98	203	948	366	1314
3.	Soil health and fertility management										
4	Production of Inputs at site										
5	Methods of protective cultivation	5	125	89	214	0	0	0	125	89	214
6	Others (Mushroom)	7	30	65	95	0	0	0	30	65	95
7	Post harvest technology and value addition										
7.a.	Processing and value addition	10	94	215	309	0	0	0	94	215	309
7.b.	Others (pl.specify)										
8	Farm machinery										
8.a.	Farm machinery, tools and implements	2	40	10	50	0	0	0	40	10	50
8.b.	Others (pl.specify)										
9.	Livestock and fisheries										
10	Livestock production and management										
10.a.	Animal Nutrition Management	18	845	158	1003	60	20	80	905	178	1083
10.b.	Animal Disease Management										
10.c.	Fisheries Nutrition										
10.d.	Fisheries Management										
10.e.	Others (pl.specify)										
11.	Home Science										
11.a.	Household nutritional security	4	25	175	200	0	0	0	25	175	200
11.b.	Economic empowerment of women	2	5	20	25	0	0	0	5	20	25
11.c.	Drudgery reduction of women	1	0	14	14	0	0	0	0	14	14
11.d.	Others (Value addition)	2	18	38	56	0	0	0	18	38	56
12	Agricultural Extension										
12.a.	Capacity Building and Group Dynamics	2	24	10	34	0	1	1	24	11	35
12.b.	Others (Block level research extension interface)	2	144	20	164	0	0	0	144	20	164
	Total	101	2883	1388	4271	182	126	308	3058	1514	4579

Details of sponsoring agencies involved

1. ATMA (Department of Agriculture)
2. Spices Board
3. Coffee Board
4. VFPC
5. Fertilizers Association of India, Chennai.
6. NGOs (PDS, HOPS, HDS, VOSARD, MAS, KPMC Trust, CFCD, MBS, MSS etc.)
7. Lead Bank

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	3	45	26	71	0	0	0	45	26	71
1.b.	Commercial fruit production	3	56	9	65	0	0	0	56	9	65
1.c.	Commercial vegetable production	3	45	23	68	0	0	0	45	23	68
1.d.	Integrated crop management	3	48	20	68	0	0	0	48	20	68
1.e.	Organic farming	3	45	26	71	0	0	0	45	26	71
1.f.	Others (pl.specify)										
2.	Post harvest technology and value addition										
2.a.	Value addition	3	23	11	34	0	0	0	23	11	34
2.b.	Others (pl.specify)										
3.	Livestock and fisheries										
3.a.	Dairy farming	2	41	16	57	0	0	0	41	16	57
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	2	18	24	42	0	0	0	18	24	42
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.	3	45	23	68	0	0	0	45	23	68

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4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts	1	18	20	38	0	0	0	18	20	38
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation	3	30	19	49	0	0	0	30	19	49
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	29	414	217	631	0	0	0	414	217	631

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	3	20	14	34	0	0	0	0	0	0
Kisan Mela										
Kisan Ghosthi	2	60	42	102	0	0	0	14	0	14
Exhibition	3									
Film Show										
Method Demonstrations										
Farmers Seminar	2	117	60	177	0	0	0	0	0	0
Workshop										
Group meetings										
Lectures delivered as resource persons										
Newspaper coverage	6	0	0	0	0	0	0	0	0	0
Radio talks	5									
TV talks	7	0	0	0	0	0	0	0	0	0
Popular articles										
Extension Literature	2	0	0	0	0	0	0	0	0	0
Advisory Services	340	250	110	360	20	10	30	25	0	25
Scientific visit to farmers field	95	300	82	382	0	0	0	0	0	0
Farmers visit to KVK	206	1413	632	2045	0	0	0	35	15	50
Diagnostic visits										
Exposure visits										
Ex-trainees Sammelan										
Soil health Camp										
Animal Health Camp										
Agri mobile clinic										
Soil test campaigns	1	130	23	153	0	0	0	10	0	10
Farm Science Club										
Conveners meet										
Self Help Group										
Conveners meetings										
Mahila Mandals										
Conveners meetings										
Celebration of important days (specify)										
Any Other (Technology Week)	5	298	70	368	0	0	0	20	14	34
Any Other (District Level Seminar)	2	200	130	330	0	0	0	50	35	85
Total	679	2788	1163	3951	20	10	30	154	64	218

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

Crop category	Name of the crop	Variety	Hybrid	Quantity of seed (qtl)	Value (Rs)	Number of farmers to whom provided
Cereals (crop wise)						
Oilseeds						
Pulses						
	Cowpea	Lola	-	0.0030	1800	110
Commercial crops						
Vegetables						
	Tomato	Sakthi	-	0.0025	10000	325
	Bitter gourd	Preethi	-	0.0070	13290	511
	Bitter gourd	Priyanka	-	0.0015	2426	29
	Snake gourd	Kaumudi	-	0.0035	6000	168
	Carrot	Improved Kuroda	-	0.0004	200	20
	Beet root	Action	-	0.0005	250	25
	Cauliflower	NS60	-	0.0002	320	32
	Cauliflower	Pusa Sakthi	-	0.0002	250	25
	Cauliflower	Pusa Sarath	-	0.0003	300	30
	Cabbage	Pusa Drum Head	-	0.0033	1673	33
	Cabbage	Golden Acre	-	0.0046	2150	46
	Cabbage	Pride of India	-	0.0021	1197	21
	Chilli	Ujwala	-	0.0001	420	31
Flower crops						
Spices						
Fodder crop seeds						
	Desamathus	-	-	0.08	4080	20
	Fodder Sorghum	-	-	0.04	1400	20
	Agathi	-	-	0.024	1200	20
	Subhabul	-	-	0.22	6600	20
Fiber crops						
Forest Species						
Others (specify)						
Total				0.39	53,556	1486

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						
	Balsom	-	-	117	2505	117
	Golden Cyprus	-	-	104	5368	95
	Dianthus	-	-	192	3169	120
	Poinsettia	-	-	73	1575	44
	Bougainvillea	-	-	75	2500	75
	Table Palm	-	-	20	1250	20
	Anthurium	-	-	162	2300	150

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	Peperomia	-	-	60	600	45
	Jasmine	-	-	25	250	25
	Marigold	-	-	160	1500	65
	Coleus	-	-	100	500	25
	Bud rose	-	-	25	1250	25
Medicinal and Aromatic						
Plantation						
Spices	Black Pepper	Panniyoor-1	-	506	7590	135
		Panniyoor-2	-	120	1398	14
		Panniyoor-4	-	29	435	08
		Panniyoor-5	-	628	9288	218
		Panniyoor-6	-	24	288	05
		Panniyoor-7	-	609	8623	198
		Chengannoor	-	50	600	10
		Karimunda	-	2216	20316	410
		Kottanadan	-	1148	16186	272
		Malabar Excel	-	252	3395	95
		Pournami	-	153	1660	56
		Panchami	-	173	1822	69
		IISR-Sakthi	-	77	1142	35
		IISR-Thevam	-	127	1552	65
		Sreekara	-	134	1435	89
		Subhakara	-	463	4953	202
	Cardamom tillers	Njallani	-	25	980	16
Tuber						
Fodder crop saplings	Cumbu napier	Co4	-	40,000	10000	40
Forest Species						
Others(specify)						
Total					1,14,430	2,743

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	Azolla	2 kg	96	25
Bio-pesticide	EPN	22550 nos-	22550	200
Bio-fungicide	Pseudomonas	1250	125000	1000
	Trichoderma	114	11400	95
Others	Mushroom Spawn	965.1 kg	96510	500
	Vermiwash	5L	300	5
	Vermicompost	2000 kg	17170	150
	Vermiculture	3 kg	750	10
Total			2,73,776	1985

9.D. Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	Number of farmers to whom provided
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks	Vigova Super M Duck	200 nos.	23150	10
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl. specify)				
Fisheries				
Fingerlings				
Others (Pl. specify)				
Total			23,150	10

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	Agriculture Promotional Programme	Published in Indian Journal of Fertilizers Vol-8 No.4 April 2012 (The Fertilizer Association of India)	-
	Soil test campaign and Farmers' Meet on Soil Health Enhancement	Published in Indian Journal of Fertilizers Vol-8 No.7 July 2012 (The Fertilizer Association of India)	-
News letters			
Technical bulletins			
Popular articles	Quail egg pickle (Kadamutta Achar) published in Vanitha "issue-39" Vol-1 March	Ms. Jayisy Joseph, Programme Assistant (Home Science)	-
Extension literature	Importance of soil testing	Ms. Manju Jincy Varghese, SMS (Soil Science)	1000 copies
	Organic Pest and Disease management in Cardamom	Mr. Sudhakar Soundarajan, SMS (Plant Protection)	5000 nos.
Others (Pl. specify)			
TOTAL			

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

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

A Successful group unit in product diversification (Women in Agriculture - Konnathady)

Bapooji KVK adopted Konnathady Panchayat for the year 2012-13. As a part of FLD programme, 3 trainings conducted on value added product preparation and 56 participants were covered through the demonstrations. Value added product preparation practical classes helped the trainees to prepare various products. Three trainees sold home-made products (Jack products) at CDS Onam market at Konnathady on August 2012.

Mrs. Mini Thankachan, Mrs. Salomy Joseph-Aythamattathil and Mrs. Rosily Joy, Kalakettiyil motivated through the training showed interest to start small scale unit at Vellaplackal house on September-2012. Timely technical guidance given by KVK. This group is trained with a view of minimization of fruit wastage through product diversification with locally available raw-materials. Asparagus pickle, Nutmeg pickle, Banana pseudostem pickle, Papaya jelly, Jam, Passion fruit squash, Rose apple extract, Chilly in brine, Jack products etc. were the products prepared in this unit. The group registered as Women in Agriculture. Product preparation and packaging related aspects given by BKVK. Through value added product preparation and its sale, the group aims supplementary income.

In January 2013, the group members participated in the Idukki Fest and Kattappana Carnival with their home-made products. The group gained Rs.11,765/- through the sale of diversified products with a profit of Rs.5,672/-. The group is getting income through local sale also.

KVK Intervention:

- Off campus demonstration on value added product preparation.
- Identified the interested group from the trainees.
- Regular technical guidance.
- Motivated the group to start the unit.
- Field visit and demonstrations.
- Implemented FLD on product diversification and extension of shelf life in under exploited fruits.
- Guidelines given for marketing.
- Present status – Running successfully.

Impact:

The group is empowered and motivated through training. Home-made products prepared by the unit were sold in local market, shops, fests, carnivals etc. From Agriculture department, this group got Rs.30,000/- as an award for their involvement in product diversification. These entrepreneurs feel proud of getting employment and good social status in their area.

Enhanced Soil health status in different areas

In the existing situation, farmers' awareness on balanced and efficient use of fertilizers is to be updated. Rational use of fertilizers and manures for optimum supply of all essential nutrients for crop production needs to be worked out and emphasized. In this context Bapooji Krishi Vigyan Kendra, Santhanpara along with Fertilizer Association of India conducted crop demonstrations on balanced fertilizer application in Kharif and Rabi seasons respectively. Three plot demonstrations were conducted in paddy at Anakara and Kanakapuzha villages of Idukki district. Soil test based fertilizer recommendations along with organic matter was demonstrated in these plots. The demonstration plot done through scientific methods showed better results compared to farmers' practice. A farmer's meet was conducted at the time of harvest to disseminate the technologies related to balanced fertilizer application and to share the farmers' feed back of the demo. More than 50 farmers' participated in the programme.

KVK Intervention:

- Conducted soil campaign at KVK.
- Field visit.
- Demonstrations.

Impact:

The Farmers' were benefitted with the soil test based fertilizer recommendations. The farmers' cost of inputs (Chemical fertilizers) was nearly reduced to half.

10.D. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year: Nil.**10.E. Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)**

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1	Cardamom and Banana	Spray Coffee powder @ 100g Or Vinegar @ 100 ml with 100 L of water.	Management of slug and snail.
2	Banana	Fenugreek powder @ 50 g plant at the time of planting.	Management of Bunchy top disease and nematode

10.F. Indicate the specific training need analysis tools/methodology followed for**Identification of courses for farmers/farm women**

- Training needs analysis done at village level.
- Interactive sessions during field visits.

Rural Youth

- Interactive sessions conducted in the major Higher Secondary Schools in this block.

Inservice personnel

- Training needs analysis done at district level.

10.G. Field activities

- Number of villages adopted: 8
- No. of farm families selected: 35
- No. of survey/PRA conducted: 1

10.H. Activities of Soil and Water Testing Laboratory

Status of establishment of Lab : Functioning.

- Year of establishment : 2005-06
- 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	796	428	145	36810.00
Water Samples	11	9	9	550.00
Plant samples	0	0	0	0.00
Manure samples	3	2	2	150.00
Others (specify)	0	0	0	0.00
Total	810	439	156	37,510.00

Details of samples analyzed during the year 2012-13:

Details	No. of Samples analyzed	No. of Farmers benefited	No. of Villages	Amount realized (Rs.)
Soil Samples	169	74	50	8550.00
Water Samples	2	2	2	100.00
Plant samples	0	0	0	0.00
Manure samples	1	1	1	50.00
Others (Soil Test Campaign for major & micro nutrients)	100	100	100	30000.00
Total	272	177	153	38,700.00

10.I. Technology Week celebration during 2012-13: Yes.

Period of observing Technology Week: From 18/12/2012 to 22/12/2012

Total number of farmers visited : 450

Total number of agencies involved : 15

Number of demonstrations visited by the farmers within KVK campus : 7

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies			Mushroom Cultivation, Apiculture
Lectures organized	13	450	Hi-Tech Agriculture, Mushroom Cultivation, Animal Husbandry, Apiculture, Cardamom and Black Pepper
Exhibition	15 stalls	450	Hi-Tech Agriculture, Apiculture, Agri-inputs
Film show	11		Hi-Tech Agriculture, Mushroom Cultivation, Animal Husbandry, Apiculture, Cardamom and Black Pepper
Fair	15		Hi-Tech Agriculture, Apiculture, Agri-inputs
Farm Visit	5		KVK Demo Units
Diagnostic Practicals	9		Hi-Tech Agriculture, Mushroom Cultivation, Apiculture, PP applications, ITK
Supply of Literature (No.)	5		IPDM, Soil Testing
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	-	450	-

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

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
ECODON	65	78%	12,000	20,000
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
Product diversification in minor fruits	56	70%	6093	11,765
Paddy Task Force on Farm Mechanization	20	100%	-1913/ha	15444/ha

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

**11.B. Cases of large scale adoption
(Please furnish detailed information for each case)****11.C. Details of impact analysis of KVK activities carried out during the reporting period****Integrated Farming System (IFS)**

Bapooji Krishi Vigyan Kendra implemented integrated farming system at Konnathody panchayat selecting three women farmers (Mrs. Kunjumol, Mrs Manju and Mrs Reshmi). They have a traditional type of farm land with crops like coffee, pepper, cardamom, arecanut, vegetable, paddy, banana and a dairy unit. By implementing IFS, KVK could introduce yielding varieties of fodder grass (Co-3, Co-4, agathi and desmanthus) in an area of one hectare of high yielding arecanut garden with micro sprinkler irrigation system. The practice drastically reduced fodder expenses from 400 to Rs. 50 a day when they depended solely on paddy straw as cattle feed. The complete switch over to organic farming became possible through effective recycling of crop waste to vermicompost, bio-gas plant and with the technology demonstrated to the farmers. The dairy unit has 15 cows and produces nearly 92 litres milk a day. Dairy farming plays a vital role in the sustainability of the system not only as a major source of income, but by enhancing the nutrient recycling and meeting energy requirement for the household. They also have to set up 25 honey bee colonies (*Apis cerana indica*) in cardamom plantation. The average production from this system is 350 kg from a cardamom plantation per acre, 1.4 kg of dried arecanut, 1 kg of dried pepper per vine, 10 kg bunch from each banana plant, 1 tonne of vermicompost, 75 kg of honey, 110 tonnes of cowdung, 170 tonnes of fodder grass. The selected women farmers said integrative farming ensures 90 per cent of nutrient requirement through bio-mass produced in the farm itself, one of the basic requirements of organic farming practices.

Farmers Field School (FFS) on Integrated Crop Management in Black Pepper***Problem identified:***

- Soil acidity and depletion of soil organic matter due to indiscriminate use of chemical fertilizers leads to deficiency of nutrients.
- Unscientific pest and disease management.
- Lack of mechanization in post harvest management.
- Pest problems in live standards.

Objectives:

- Awareness creation among farmers on integrated nutrient management and Integrated Pest and disease management.
- Popularization of Pepper Thresher.
- Trials on alternate standards for black pepper.

Activities:

Activities	Objectives achieved
Meetings	Identified the problems in black pepper at Konnathady and Parathodu
Formation of FFS group (20 farmers/group)	Conducted field demonstration on ICM in Pepper
Supply of FFS kit and critical inputs	100 no's - IPDM kit supplied to farmers
Field day	Five farmers' field days were conducted at different stages of crop growth

Conclusion :-

FFS conducted on ICM in Black Pepper at Konnathady and Parathodu of Adimali block, Idukki district. The training classes included live demonstration on various aspects of Identifying the pest and disease in various crops and their control measure, extract of neem leaf, wild sunflower, white chrysanthemum flower, 3% malimulaku extract, Fish amino acid, Jeeva mirutham, Custard apple seed extract, 2% neem oil + garlic emulsion and Village-level production, integration and implementation of EPN and Trichoderma sp. The group members were trained on ICM practices in Black Pepper. Throughout the training, participants practiced some exercises to build group trust and coherence. After the training farmers can identified the insect pests and natural enemies. They can also prepare botanical extracts and spray it on Black Pepper, Cardamom and vegetable crops efficiently.

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 special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Soil Health Enhancement Programme	April, 2012	Fertilizer Association of India, Chennai	80,000.00
Paddy Task Force on Farm Mechanization	July ,2012	State Planning Board	5,17,500.00
Scouting and documentation of farm innovations	December, 2012	State Planning Board	1,50,000.00

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 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 2012-13

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	GB/BTT	24	-	-
02	Research projects	-	-	-	-
03	Training programmes				
		Field day -Ecodon	3		-
		Organic vegetable cultivation	18	5	-
		Hi-tech Vegetable cultivation	8	4	-
		Hi-tech Banana cultivation	7	3	-
		Soil Health Management	8	5	-
		Cardamom Pest and Disease Management	9	3	-

		Black Pepper Pest and Disease Management	5	2	
		Diary and Cattle Management	1	5	
04	Demonstrations/assessment				
		Assessment of IIHR Banana special along with K ₂ SO ₄ for quality production of banana in Idukki district.		3	On going
		Introduction of different type and varieties of Mushrooms for year round production in Idukki		2	On going
		Management of Banana Pseudostem weevil through Bioagents.		3	On going
		Management of cardamom root grub through bio pesticides and EPN		3	On going
		Organic kitchen gardens for homesteads for nutritional security		3	On going
		Subsidiary income generation through apiculture in cardamom plantations		3	On going
		Assessment on the efficacy of bio-fertilizer consortium in black pepper		3	On going
05	Extension Programmes				
		Kisan Mela			
		Technology Week			
		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				
	Agripreneurs development				

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

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

12.F. Details of linkage with RKVY

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
1	Project submitted on cardamom sucker production	-	-	-	-

12. G Kisan Mobile Advisory Services: Not initiated.

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.	Mushroom production unit	2010	50 m ²	Oyster mushroom var. CO1	Mushroom	0.71950 q	2878.00	215855.00	Revolving Fund
2.	Mushroom Spawn production unit	2009	10 m ²	Var. CO1, CO2 & Florida	Spawn	3217 packets	22519.00	96510.00	Funded by SHM
3.	Mist Chamber	2009	96 m ²	Panniyoor-1, 2, 4, 5, 6 & 7 Sreekara Subhakara Panchami Pournami IISR Thevam IISR Shakthi Excel Kottanadan Karimunda Chengannoor	Pepper vines	6709 rooted cuttings	13418.00	80683.00	Funded by SHM
4.	Rain Shelter	2009	50 m ²	-	Ornamental plants	1113 nos.	2226.00	25272.00	Funded by SHM
5.	Terrace cultivation of vegetables	2010	170 m ²	Local	Tomato	15.20 q	7600.00	45589.00	Revolving Fund
				Maharani	Cabbage				
				Local	Garden Beans				
				INDAM-9803	Cauliflower				
				-	Cowpea				
				Improved Kuroda	Carrot				
				Action	Beetroot				
				INDAM Mahabharath	Capsicum				

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals									
Pulses									
Oilseeds									
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Vegetables	07/08/2012	28/12/2012	0.15	Arun	Amaranthus seeds	1.5 kg	1260	3250	-
Others (specify)									

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1.	Pseudomonas	1250 L	60,000.00	65,000.00	-
2.	Trichoderma	114 L	5,472.00	5,928.00	-
3.	EPN	22550 nos.	6,765.00	15,785.00	-
4.	Vermiculture	3 kg	50.00	700.00	-
5.	Vermicompost	2000 kg	800.00	16,370.00	-

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

13.E. Utilization of hostel facilities: Nil.

13.F. Database management : Nil.

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

PART XIV - FINANCIAL PERFORMANCE

14.A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State Bank of Travancore	Rajakumary	453	Chairman	57060837003	-	SBTR0000453
With KVK	State Bank of Travancore	Rajakumary	453	Chairman & Programme Coordinator	57060836995	-	SBTR0000453

14.B. Utilization of KVK funds during the year 2012-13 (Rs. in lakh)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances	70.50	70.50	70.42725
2	Traveling allowances	1.70	1.70	1.70
3	Contingencies			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	2.80	2.80	2.80008
B	POL, repair of vehicles, tractor and equipments	2.10	2.10	2.10005
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained)	0.95	0.95	0.95
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	0.75	0.75	0.75
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	1.50	1.50	1.50
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	1.00	1.00	1.00
G	Training of extension functionaries	0.25	0.25	0.25020
H	Maintenance of buildings	0.35	0.35	0.35005
I	Establishment of Soil, Plant & Water Testing Laboratory	0.00	0.00	0.00
J	Library	0.05	0.05	0.05
K	Extension activities	0.25	0.25	0.25041
L	Farmers Field School	0.25	0.25	0.25
TOTAL (A)		82.45	82.45	82.37804
B. Non-Recurring Contingencies				
1	Works	0	0	0
2	Equipments including SWTL & Furniture	0	0	0
3	Vehicle (Four wheeler/Two wheeler, please specify)	0	0	0
4	Library (Purchase of assets like books & journals)	0	0	0
TOTAL (B)		0.00	0.00	0.00
C. REVOLVING FUND				
GRAND TOTAL (A+B+C)		82.45	82.45	82.37804

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 2010 to March 2011	5.39085	3.44458	6.03395	2.80148
April 2011 to March 2012	2.80148	9.17622	7.95126	4.02645
April 2012 to March 2013	4.11341	15.40938	12.65084	6.87195

15. Details of HRD activities attended by KVK staff during 2012-13

Name of the staff	Designation	Title of the training programme	Institute where attended	Dates
Mr. Sudhakar Soundarajan	SMS (Plant Protection)	Plant Health Management - Plant Protection	Kerala State Planning Board, Thiruvananthapuram.	07/02/2013 to 08/02/2013
Ms. Jayisy Joseph	Programme Assistant (Home Science)	National conference on emerging avenues in food technology for better health and safety – Eminence' 13.	TKM Institute of Technology Management, Kollam.	08/03/2013 to 09/03/2013
Dr. Benjamin Mathew	Programme Coordinator i/c	Hi-tech Agriculture	Kerala Agricultural University	4/12/2012 to 6/12/2012
Dr. Benjamin Mathew	Programme Coordinator i/c	Plant Health Management - Plant Protection	Kerala State Planning Board, Thiruvananthapuram.	07/02/2013 to 08/02/2013

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

SUMMARY FOR 2012-13

I. TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops

Thematic areas	Crop	Name of the technology assessed	No. of trials
Integrated Nutrient Management			
Varietal Evaluation	Cow pea	Assessment on performance of cowpea varieties Vellayani Jyothika Arka Mangala & C.B.2001 against Lola in Idukki district	5
	Cauliflower	Assessment of suitable cultivars of Cauliflower for High Ranges of Idukki District Assessment of suitable cultivars of Cauliflower for High Ranges of Idukki District	5
Integrated Pest Management	Cardamom	Management of cardamom root grub with microbial bio-pesticides	5
		Varietal trial of root grub resistant Thiruthali variety cardamom	1
Integrated Crop Management	Black Pepper	Use of concrete poles as standards in Black Pepper	3
	Banana	Different types of props and supports to mitigate lodging / breaking of banana pseudostem	3
Integrated Disease Management			
Small Scale Income Generation Enterprises	Mushroom	Performance of different types of mushrooms for year round production in Idukki district	4
Weed Management			
Resource Conservation Technology			
Farm Machineries			
Integrated Farming System			
Seed / Plant production			
Value addition			
Drudgery Reduction			
Storage Technique			
Others (Pl. specify)			
Total			25

Summary of technologies assessed under livestock: Nil.

Summary of technologies assessed under home science

Thematic areas	Enterprise	Name of the technology assessed	No. of trials
Value Addition	Mushroom	Assessments of different types of packaging material for Enhancement of shelf life and marketability in mushroom	3

II. TECHNOLOGY REFINEMENT: 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	** BCR	Gross Cost	Gross Return	Net Return	** BCR
Cereals																		
Millets																		
Oilseeds																		
Pulses																		
Vegetables	Nutritional security	Popularization of organic kitchen garden in homesteads for nutritional security	1	25	0.4	On going												
	Integrated Nutrient Management	Use of microbial consortium for organic production of cowpea	1	4	0.08	110	80	37.5	Plants more green in colour	Normal stand of the crop	135000	220000	85000	1.62	142000	160000	18000	1.12
	Productivity improvement of major crops.	Foliar spray of Boron to increase the fruit set and size in bitter gourd	1	3	0.05	145	120	20.8	Better pollination & fruit set almost to about 80%	Fruit set only to the tune of 60%	275400	435000	159600	1.58	275000	360000	85000	1.30
	Crop improvement	Popularization of portray nursery method in vegetables	1	5	0.2	-	-	-	-	-	16000	22000	6000	1:1.25	27000	28000	1000	1:1.07
Flowers																		
Ornamental																		
Fruit (Under exploited fruits)	Product diversification (Preservation)	Minimization of fruit wastage through product diversification	-	3	3 units	-	-	-	BCR & Increase in income	-	6093	11765	5672	1.93	-	-	-	-
	ICM	Integrated Nutrient Management of Nendran Banana under the agro climatic conditions of High Ranges of Idukki along with IHR Banana Special & Potassium Sulphate Spray	1	5	2	On going												
Fibres like Cotton																		
Spices and condiments																		
Commercial																		
Medicinal and aromatic																		
Fodder																		
Plantation																		
Fibre																		
Others (Apiculture)	Better pollination	Popularization of honey bee colonies in cardamom plantations	-	5	2.5	1300	-	30%	-	-	1.5 lakhs	9 lakhs	7.5 lakhs	6.0	1.25 lakhs	5 lakhs	3.5 lakhs	2.8
Others (pl.specify)																		
Total																		

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

** BCR= GROSS RETURN/GROSS COST

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	Production and improvement of dairy cattle	Popularization of mixed fodder system	1	20	0.04	16 L	12 L	33	Fat-5.11% SNF-9.19%	Fat-4.5% SNF-8.10%	6200	12800	6600	2.06	8200	21000	12800	1.56
Poultry	Production and improvement of poultry	Performance of Vigova Super M duck in backyard system	1	10	200 birds	2.75 kg	2 kg	28	-	-	57000	135000	78000	1.36	61000	125000	64000	1.04
Rabbitry																		
Pigerry																		

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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	3	56	10	66	0	0	0	56	10	66
Others (Organic farming)	4	42	25	67	0	5	5	42	30	72
Others (pl.specify)										
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young plants/orchards	1	22	31	53	0	0	0	22	31	53
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (Hi-tech banana cultivation)	1	84	30	114	0	0	0	84	30	114
Others (pl.specify)										
c) Ornamental Plants										
Nursery Management	1	32	21	43	0	0	0	32	21	43
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	4	22	45	57	0	0	0	22	45	57
Others (pl.specify)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										

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Others (pl.specify)										
Soil Health and Fertility Management										
Soil fertility management	2	140	12	152	6	3	9	146	15	161
Integrated water management										
Integrated nutrient management	3	164	19	183	14	12	26	178	31	209
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers										
Soil and water testing										
Others (pl.specify)										
Livestock Production and Management										
Dairy Management	7	245	37	282	10	22	32	267	47	314
Poultry Management	2	47	21	68	0	0	0	47	21	68
Piggery Management	2	24	20	44	0	0	0	24	20	44
Rabbit Management	2	21	21	42	0	0	0	21	21	42
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	7	345	37	382	10	8	18	355	45	400
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										
Women and child care										
Others (pl.specify)										
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										

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Post Harvest Technology											
Others (pl.specify)											
Plant Protection											
Integrated Pest Management	7	106	20	126	68	26	94	174	46	220	
Integrated Disease Management	4	68	20	88	38	13	51	81	33	114	
Bio-control of pests and diseases	3	40	16	56	2	4	6	42	22	64	
Production of bio control agents and bio pesticides	3	40	30	70	22	20	42	62	50	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	5	12	65	77	0	0	0	12	65	77	
Apiculture	4	32	0	32	45	14	59	77	14	91	
Others (pl.specify)											
Capacity Building and Group Dynamics											
Leadership development											
Group dynamics											
Formation and Management of SHGs											

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Mobilization of social capital										
Entrepreneurial development of farmers/youths	1	32	6	38	0	1	1	32	7	39
Others (pl.specify)										
Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (Pl. specify)										
TOTAL	71	1630	520	2150	215	128	343	1852	638	2470

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	2	11	0	11	6	12	18	16	18	34
Micro Irrigation/Irrigation										
Seed production										
Nursery management										
Integrated Crop Management	3	45	8	53	15	10	25	60	18	78
Soil and Water Conservation										
Integrated Nutrient Management	2	60	30	90	0	0	0	60	30	90
Production of organic inputs										
Others (Paddy cultivation)	1	25	0	25	0	0	0	25	0	25
Others (pl.specify)										
Horticulture										
a) Vegetable Crops										
Production of low value and high volume crop	1	10	5	15	20	5	25	30	10	40
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation	5	125	89	214	0	0	0	125	89	214
Others (Hi-tech vegetable cultivation)	6	194	33	227	33	19	52	227	52	279
Others (Organic farming)	15	344	140	484	25	60	85	369	200	569
Others (Cool season vegetables)	7	413	23	436	158	18	176	571	41	612
Others (pl.specify)										
b) Fruits										
Training and Pruning										

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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 (Hi-tech banana cultivation)	3	57	40	97	12	5	17	69	45	114
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	2	50	12	62	0	0	0	50	12	62
Processing and value addition										
Others (pl.specify)										
f) Spices										
Production and Management technology	6	165	45	210	0	0	0	165	45	110
Processing and value addition	3	30	15	45	0	0	0	30	15	45
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	7	140	70	210	0	0	0	140	70	210
Integrated water management										
Integrated nutrient management	5	182	60	242	0	0	0	182	60	242
Production and use of organic inputs										
Management of Problematic soils	3	127	20	147	0	0	0	127	20	147
Micro nutrient deficiency in crops										
Nutrient use efficiency										
Balanced use of fertilizers	2	44	20	64	0	0	0	44	20	64
Soil and water testing	3	75	5	80	0	0	0	75	5	80
Others (pl.specify)										

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Livestock Production and Management										
Dairy Management	3	81	16	97	0	0	0	81	16	97
Poultry Management	1	8	5	13	0	0	0	8	5	13
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Animal Disease Management										
Feed and Fodder technology	1	40	14	54	0	0	0	40	14	54
Production of quality animal products										
Others (Entrepreneurship development programme)	2	48	20	68	0	0	0	48	20	68
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	12	67	170	237	0	0	0	67	170	237
Women empowerment										
Location specific drudgery production										
Rural Crafts										
Women and child care										
Others (pl.specify)										
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	346	169	515	16	18	24	362	187	549
Integrated Disease Management	10	245	70	315	22	6	28	267	76	343
Bio-control of pests and diseases	8	315	68	383	20	0	20	335	68	403
Production of bio control agents and bio pesticides	3	55	42	97	0	0	0	55	42	97
Others (pl.specify)										
Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										

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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	9	44	53	0	0	0	9	44	53
Apiculture	1	15	0	15	0	0	0	15	0	15
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	134	3326	1233	4559	327	153	470	3644	1374	4944

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	4	86	59	145	0	0	0	86	59	145
Training and pruning of orchards	2	41	28	69	0	0	0	41	28	61
Protected cultivation of vegetable crops	3	42	32	74	0	0	0	42	32	74
Commercial fruit production	2	29	4	33	0	0	0	29	4	33
Integrated farming	2	38	19	57	0	0	0	38	19	57
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture	3	42	32	74	0	0	0	42	32	74
Mushroom Production	6	132	0	132	0	0	0	132	0	132
Bee-keeping	3	52	22	74	0	0	0	52	22	74
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	4	54	14	68	0	0	0	54	14	68
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying	6	376	80	456	0	0	0	376	80	456
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)										
TOTAL	35	892	290	1182	0	0	0	892	290	1182

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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	3	174	10	184	0	0	0	174	10	184
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production	2	35	20	55	0	0	0	35	25	55
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	7	45	82	127	0	0	0	45	82	127
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying	3	129	22	151	0	0	0	129	22	151
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 (Hi-tech horticulture)	4	163	20	183	0	0	0	163	20	183
Any other (pl.specify)										
TOTAL	19	546	154	700	0	0	0	546	154	700

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	1	69	36	105	0	0	0	69	36	105
Integrated Pest Management	2	25	15	40	0	0	0	25	15	40
Integrated Nutrient management	1	0	10	10	0	14	14	0	24	24
Rejuvenation of old orchards										
Protected cultivation technology	1	7	2	9	0	0	0	7	2	9
Production and use of organic inputs	1	10	4	14	0	0	0	10	4	14
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	6	111	67	178	0	14	14	111	81	192

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	5	65	21	86	0	0	0	65	21	86
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology	4	54	20	74	0	0	0	54	20	74
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs	1	25	10	35	0	0	0	25	10	35
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	10	144	51	195	0	0	0	144	51	195

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	5	114	25	139	5	2	7	119	27	146	
1.b.	Commercial production of vegetables	22	463	232	695	0	0	0	463	232	695	
2.	Production and value addition											
2.a.	Fruit Plants	4	113	49	162	12	5	17	118	54	179	
2.b.	Ornamental plants											
2.c.	Spices crops	15	843	268	1111	105	98	203	948	366	1314	
3.	Soil health and fertility management											
4.	Production of Inputs at site											
5.	Methods of protective cultivation	5	125	89	234	0	0	0	125	89	234	
6.	Others (Mushroom)	7	30	65	95	0	0	0	30	65	95	
7.	Post harvest technology and value addition											
7.a.	Processing and value addition	10	94	215	309	0	0	0	94	215	309	
7.b.	Others (pl.specify)											
8.	Farm machinery											
8.a.	Farm machinery, tools and implements	2	40	10	60	0	0	0	40	10	60	
8.b.	Others (pl.specify)											
9.	Livestock and fisheries											
10.	Livestock production and management											
10.a.	Animal Nutrition Management	18	845	158	1003	60	20	80	905	178	1083	
10.b.	Animal Disease Management											
10.c.	Fisheries Nutrition											
10.d.	Fisheries Management											
10.e.	Others (pl.specify)											
11.	Home Science											
11.a.	Household nutritional security	4	25	175	200	0	0	0	25	175	200	
11.b.	Economic empowerment of women	2	5	20	25	0	0	0	5	20	25	
11.c.	Drudgery reduction of women	1	0	14	14	0	0	0	0	14	14	
11.d.	Others (Value addition)	2	18	38	56	0	0	0	18	38	56	
12.	Agricultural Extension											
12.a.	Capacity Building and Group Dynamics	2	24	10	34	0	1	1	24	11	35	
12.b.	Others (Block level research extension interface)	2	144	20	164	0	0	0	144	20	164	
	Total	101	2883	1388	4271	182	126	308	3058	1514	4579	

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	3	45	26	71	0	0	0	45	26	71
1.b.	Commercial fruit production	3	56	9	65	0	0	0	56	9	65
1.c.	Commercial vegetable production	3	45	23	68	0	0	0	45	23	68
1.d.	Integrated crop management	3	48	20	68	0	0	0	48	20	68
1.e.	Organic farming	3	45	26	71	0	0	0	45	26	71
1.f.	Others (pl.specify)										
2	Post harvest technology and value addition										
2.a.	Value addition	3	23	11	34	0	0	0	23	11	34
2.b.	Others (pl.specify)										
3.	Livestock and fisheries										
3.a.	Dairy farming	2	41	16	57	0	0	0	41	16	57
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	2	18	24	42	0	0	0	18	24	42
4.b.	Production of bio-agents, bio-pesticides, bio-fertilizers etc.	3	45	23	68	0	0	0	45	23	68
4.c.	Repair and maintenance of farm machinery and implements										
4.d.	Rural Crafts	1	18	20	38	0	0	0	18	20	38
4.e.	Seed production										
4.f.	Sericulture										
4.g.	Mushroom cultivation	3	30	19	49	0	0	0	30	19	49
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	29	414	217	631	0	0	0	414	217	631

V. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	340	410	25	435
Diagnostic visits	5	25	0	25
Field Day	3	34	2	26
Group discussions				
Kisan Ghosthi	2	102	14	116
Film Show				
Self -help groups				
Kisan Mela				
Exhibition				
Scientists' visit to farmers field	95	382	0	382
Plant/animal health camps				
Farm Science Club				
Ex-trainees Sammelan				
Farmers' seminar/workshop	2	177	9	186
Method Demonstrations				
Celebration of important days				
Special day celebration				
Exposure visits				
Others (Technology Week)	5	368	34	402
Others (District Level Seminar)	2	330	85	415
Others (Soil Campaign)	1	153	10	163
Total	455	1981	179	2150

Details of other extension programmes

Particulars	Number
Electronic Media	
Extension Literature	2
News Letter	
News paper coverage	5
Technical Articles	1
Technical Bulletins	
Technical Reports	
Radio Talks	5
TV Talks	5
Animal health camps (Number of animals treated)	
Others (FAI Journal)	2
Total	20

VI. PRODUCTION OF SEED/PLANTING MATERIAL

Production of seeds by the KVKs

Crop category	Name of the crop	Name of the Variety	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals (crop wise)					
Oilseeds					
Pulses					
	Cowpea	Lola	0.0030	1800	110
Commercial crops					
Vegetables					
	Tomato	Sakthi	0.0025	10,000	325
	Bitter gourd	Preethi	0.0070	13,290	511
	Bitter gourd	Priyanka	0.0015	2,426	29
	Snake gourd	Kaumudi	0.0035	6,000	168
	Carrot	Improved Kuroda	0.0004	200	20
	Beet root	Action	0.0005	250	25
	Cauliflower	NS60	0.0002	320	32
	Cauliflower	Pusa Sakthi	0.0002	250	25
	Cauliflower	Pusa Sarath	0.0003	300	30
	Cabbage	Pusa Drum Head	0.0033	1673	33
	Cabbage	Golden Acre	0.0046	2150	46
	Cabbage	Pride of India	0.0021	1197	21
	Chilli	Ujwala	0.0001	420	31
Flower crops					
Spices					
Fodder crop seeds					
	Desamathus	-	0.08	4080	20
	Fodder Sorghum	-	0.04	1400	20
	Agathi	-	0.024	1200	20
	Subhabul	-	0.22	6600	20
Fiber crops					
Forest Species					
Others (specify)					
Total			0.39	53,556	1486

Production of planting materials by the KVKs

Crop category	Name of the crop	Name of the Variety	Number	Value (Rs.)	Number of farmers
Commercial					
Vegetable seedlings					
Fruits					
Ornamental plants					
	Balsom	-	117	2505	117
	Golden Cyprus	-	104	5368	95
	Dianthus	-	192	3169	120
	Poinsettia	-	73	1575	44
	Bougainvillea	-	75	2500	75
	Table Palm	-	20	1250	20
	Anthurium	-	162	2300	150
	Peperomia	-	60	600	45
	Jasmine	-	25	250	25

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	Marigold	-	160	1500	65
	Coleus	-	100	500	25
	Bud rose	-	25	1250	25
Medicinal and Aromatic					
Plantation					
Spices	Black Pepper	Panniyoor-1	506	7590	135
		Panniyoor-2	120	1398	14
		Panniyoor-4	29	435	08
		Panniyoor-5	628	9288	218
		Panniyoor-6	24	288	05-
		Panniyoor-7	609	8623	198
		Chengannoor	50	600	10
		Karimunda	2216	20316	410
		Kottanadan	1148	16186	272
		Malabar Excel	252	3395	95
		Pournami	153	1660	56
		Panchami	173	1822	69
		IISR-Sakthi	77	1142	35
		IISR-Thevam	127	1552	65
		Sreekara	134	1435	89
		Subhakara	463	4953	202
	Cardamom tillers	Njallani	25	980	16
Tuber					
Fodder crop saplings	Cumbu napier	CO4	40,000	10,000	40
Forest Species					
Others(specify)					
Total				1,14,430	2,743

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	Number of farmers to whom provided
Bio Fertilizers	Azolla	0.0020	96	25
Bio-pesticide	EPN	22550 no's-	22,550	200
Bio-fungicide	Pseudomonas	1250	1,25,000	1000
	Trichoderma	114	11,400	95
Others	Mushroom Spawn	3217 packets	96,510	500
	Vermiwash	5L	300	5
	Vermicompost	2000 kg	17,170	150
	Vermiculture	3 kg	750	10
Total			2,73,776	1985

Production of livestock and related enterprise materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks	Vigova Super M Duck	200	23150	10
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl. specify)				
Fisheries				
Fingerlings				
Others (Pl. specify)				
Total			23150	10

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS 2012-13

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	169	74	50	850.00
Water	2	2	2	100.00
Plant	0	0	0	0.00
Manure	1	1	1	50.00
Others (Soil Test Campaign)	100	100	1	30000.00
Total	272	177	54	38,700.00

VIII. SCIENTIFIC ADVISORY COMMITTEE

Number of SACs conducted - 1

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 - Nil

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