**ANNUAL REPORT 2013-14**

**(FOR THE PERIOD APRIL 2013 TO MARCH 2014)**

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 | bkvkchairperson@gmail.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 2014)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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 | Dr. Binu John Sam | Subject Matter Specialist | M | Horticulture | Ph.D. Horticulture | 15600-39100 | 21000 | 17-01-2011 | Permanent | Others |
| 6 | SMS | Sudhakar Soundarajan | Subject Matter Specialist | M | Plant Protection | M.Sc. Agricultural Entomology, MBA | 15600-39100 | 21000 | 27-01-2011 | Permanent | OBC |
| 7 | SMS | Vacant | Subject Matter Specialist | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| 8 | Programme Assistant (Lab Tech.)  / T-4 | Jayisy Joseph | Programme Assistant | F | Home Science | M. Sc. Home Science (Extension for Rural Development) | 9300-34800 | 13500 | 20-06-1995 | Permanent | Others |
| 9 | Programme Assistant (Computer)  / T-4 | Biju Narayanan | Programme Assistant | M | Computer Application | M.C.A., PGDCA | 9300-34800 | 13500 | 01-10-2007 | Permanent | OBC |
| 10 | Programme Assistant/ Farm Manager | Rachel Skariakutty | Programme Assistant | F | Rural craft | M.A. Sociology (P.G. Diploma in Rural Development) | 9300-34800 | 13500 | 05-06-1995 | Permanent | Others |
| 11 | Assistant | Shaji. K. Kakkattu | Assistant | M | **-** | **-** | 9300-34800 | 13500 | 05-06-1995 | Permanent | Others |
| 12 | Jr. Stenographer | Daisy Daniel | Jr. Stenographer | F | **-** | **-** | 5200-20200 | 7100 | 05-06-1995 | Permanent | Others |
| 13 | Driver | P. Nandagopal | Driver | M | **-** | **-** | 5200-20200 | 7200 | 05-06-1995 | Permanent | OBC |
| 14 | Auxiliary Staff | K.T. Mathew | Peon/ Messenger | M | **-** | **-** | 5200-20200 | 7000 | 05-06-1995 | Permanent | Others |
| 15 | Supporting Staff-1 | K.O. Jose | Skilled Supporting Staff-1 | M | **-** | **-** | 5200-20200 | 7000 | 05-06-1995 | Permanent | Others |
| 16 | Supporting Staff-2 | P. Sabu | Skilled Supporting Staff-2 | M | **-** | **-** | 5200-20200 | 7000 | 05-06-1995 | Permanent | Others |

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

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

**1.7. Infrastructural Development:**

**A) Buildings**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sl.  No. | Name of building | Source of  funding | Stage | | | | | |
| Complete | | | Incomplete | | |
| Completion  Date | Plinth area (Sq. m.) | Expenditure (Rs.) | Starting Date | Plinth area  (Sq. m) | Status of construction |
| 1. | Administrative  Building | ICAR | 2002 | 740 | 47,85,208.10 | - | - | - |
| 2. | Farmers’ Hostel | NA | - | - | - | - | - | *Master Plan & Estimate submitted. Sanction pending*. |
| 3. | Staff Quarters | NA | - | - | - | - | - | - |
| 4. | Demonstration Units |  |  |  |  |  |  |  |
|  | 1. Duck cum fish culture unit. | RF | 2009 | 50 | 7,000.00 | - | - | - |
|  | 2. Mushroom unit | Grama Panchayath, Santhanpara | 2002 | 10 | 85,000.00 | - | - | - |
|  | 3. Spawn production unit | SHM | 2009 | 10 | 3,00,000.00 | - | - | - |
|  | 4. Mist Chamber | SHM | 2009 | 96 | 2,72,832.00 | - | - | - |
|  | 5. Rain Shelter | SHM | 2009 | 50 | 1,04,091.00 | - | - | - |
| 5 | Fencing | NA | - | - | - | - | - | *Urgent requirement as the area is constantly facing intuition of wild animals and other intruders* |
| 6 | Rain Water harvesting system | NA | - | - | - | - | - | - |
| 7 | Threshing floor | NA | - | - | - | - | - | - |
| 8 | Farm godown | NA | - | - | - | - | - | - |
| 9 | Vehicle garage |  |  |  |  |  |  | *Urgently required* |

B) Vehicles

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type of vehicle | Year of purchase | Cost (Rs.) | Total kms. Run | Present status |
| Mahindra Bolero SLE | May - 2012 | 5,78,380.36 | 39156.2 | 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 | 9329.8 | 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 2013-14**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. No. | Date | Number of Participants | No. of absentees | Salient Recommendations | Action taken |
| 1. | 11/12/2013 | 28 | 2 | * Recommendation of micro-nutrient sprays should be based only on soil test reports * Organic management in Cabbage & Cauliflower should be emphasized * More importance should be given to soil test based fertilizer recommendations to crops * Demonstration units on Animal Husbandry should be strengthened * More stress to promote organic farming * Increase the number of demonstration units * Production of vegetable seed and quality planting materials should be improved * Women empowerment should be emphasized * Zinc and Boron deficiency is reported in many parts of Idukki district. A scientific intervention and compilation of soil test reports should be done by Bapooji KVK with the support of State Agriculture Department, VFPCK & ICRI to solve this problem * Home Science FLD/OFTs should be linked with other disciplines * Awareness on methods of proper hygiene should be given during food processing training programmes * Manual Chaff cutter should be included in fodder crops interventions * Animal health campaigns should be given more emphasis * More emphasis should be given on Hi-Tech vegetable cultivation and mechanization in paddy * Lead bank officials suggested to improve the linkages on financial literacy centre’s | * FLDs are proposed for 2014-15 * Awareness campaigns are planned * OFTs & FLDs are proposed * Initiated demo units of poultry, rabbit etc. * Awareness campaigns are planned * Activities initiated * Participatory mode of seed production planned * Action initiated * Action initiated * FLDs proposed * Awareness method of proper hygienic are included in food processing training schedules * FLDs proposed * FMD awareness campaigns planned during next month * Training programmes are included on hi-tech vegetable cultivation * EDP training programmes are included with the consultant of FLC |

**PART II - DETAILS OF DISTRICT**

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

|  |  |
| --- | --- |
| S. No | Farming system/enterprise |
| 1 | Cardamom and Pepper based farming system in the High Ranges of the District |
| 2 | Paddy belts in specific locations |
| 3 | Homestead based farming |
| 4 | Tea plantation |
| 5 | Vegetables (Bitter gourd & Cowpea) |
| 6 | Cool season vegetables in Devikulam Block |
| 7 | Banana cropping |
| 8 | Rubber as mono-crop |
| 9 | 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 110 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 | - |
| 2. | Cheenikuzhy series | Fine loamy texture | - |
| 3. | Thommankuthu series | Clayey texture | - |
| 4. | Venmani series | Clayey texture | - |
| 5. | Marayoor series | Clay loam to clayey texture | - |
| 6. | Pampadumpara series | Clayey texture | - |

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.

\* Please provide latest data from authorized sources. Please quote the source

2.5. Weather data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Month | Rainfall (mm) | Temperature 0 C | | Relative Humidity (%) |
|  |  | Maximum | Minimum |  |
| April 2013 | 178.6 | 29.0 | 17.9 | 97.1 |
| May 2013 | 24.9 | 28.3 | 19.2 | 96.9 |
| June 2013 | 203.3 | 25.0 | 18.1 | 98.9 |
| July 2013 | 182.2 | 24.7 | 17.8 | 99.0 |
| August 2013 | 290.0 | 23.6 | 17.4 | 99.4 |
| September 2013 | 148.40 | 25.4 | 17.7 | 98.2 |
| October 2013 | 327.9 | 26.1 | 17.7 | 97.3 |
| November 2013 | 150.8 | 26.6 | 16.6 | 94.8 |
| December 2013 | 12.7 | 24.5 | 16.3 | 94.8 |
| January 2014 | 5.6 | 23.6 | 13.8 | 95.3 |
| February 2014 | 4.10 | 26.6 | 15.3 | 93.7 |
| March 2014 | 11.2 | 27.6 | 16.5 | 85.6 |

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

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Population** | **Production** | **Productivity** |
| **Cattle** | | | |
| *Crossbred* | 90081 | 234638 ton (Milk) & 9090.87 MT (meat) | **-** |
| *Indigenous* |  | 809 ton (milk) | **-** |
| **Buffalo** | 5627 | 1181 ton (milk) & 7385.62 MT (meat) | **-** |
| **Sheep** | | | |
| Crossbred | 25 |  | **-** |
| *Indigenous* |  |  |  |
| **Goats** | 97974 | 5898 ton (Milk) & 692.10 MT (meat) | **-** |
| **Pigs** |  |  |  |
| *Crossbred* | 11631 | 3136.5 MT (Meat) | **-** |
| *Indigenous* |  |  |  |
| **Rabbits** | 39628 | **-** | **-** |
| **Poultry** | | | |
| Hens | 531501 | 8.64 crores (Egg) | **-** |
| *Desi* |  | 3.38 crores (Egg) | **-** |
| *Improved* |  | 5.25 crores (Egg) & 12019.8 MT (Meat) | **-** |
| Ducks |  | 1.21 crores (Egg) | **-** |
| Turkey and others |  | **-** | **-** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Area** | **Production** | **Productivity** |
| Fish | **-** | **-** | **-** |
| *Marine* | **-** | **-** | **-** |
| *Inland* | **-** | **-** | **-** |
| Prawn | **-** | **-** | **-** |
| Scampi | **-** | **-** | **-** |
| Shrimp | **-** | **-** | **-** |

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

* 1. District profile has been **Updated** for 2013-14 Yes / No: Yes
  2. 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) Heavy pest & disease incidence in crops.  4) Infertility problem in dairy cows.  5) Poor growth performance and production.  6) Heavy infestation of shoot borer in ginger.  7) 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) Trial on cultural method of shoot borer control in ginger.  9) 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. |
| 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. |

2.9 Priority thrust areas:

|  |  |
| --- | --- |
| S. No. | Thrust area |
| 1. | Integrated Nutrient Management in major crops |
| 2. | IPDM in major Plantation and Vegetable crops |
| 3. | Integrated sustainable farming system models |
| 4. | Organic agriculture |
| 5. | Scientific management of livestock and poultry |
| 6. | Scientific fertility management |
| 7. | Improvement in reproductive efficiency in dairy cattle |
| 8. | 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** |
| 9 | 9 | 44 | 44 | 10 | 10 | 75 | 75 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Training** | | | | **Extension Programmes** | | | |
| Number of Courses | | Number of Participants | | Number of Programmes | | Number of participants | |
| Targets | Achievement | Targets | Achievement | Targets | Achievement | Targets | Achievement |
| 75 | 101 | 3500 | 4066 | 250 | 293 | 1250 | 1397 |
| **Seed Production (Qtl.)** | | | | **Planting materials (Nos.)** | | | |
| 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)** | | | |
| 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.2.7**

| **S. No** | **Thrust area** | **Crop/**  **Enterprise** | **Identified Problem** | **Interventions** | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Title of OFT if any** | **Title of FLD if any** | **Number of Training (farmers)** | **Number of Training (Youths)** | **Number of Training (extension personnel)** | **Extension activities**  **(No.)** | **Supply of seeds (Qtl.)** | **Supply of planting materials (No.)** | **Supply of livestock (No.)** | **Supply of bio products** | |
|  |  |  |  |  |  |  |  |  |  |  |  |  | **No.** | **Kg** |
| 1 | Self-employment and Income generation of rural youth & women. | Mushroom | High cost of paddy straw due to its limited availability | Alternate media for growing oyster mushrooms | - | 3 | 2 | 0 | 0 | Spawn 60  pkts | - | - | - | - |
| 2 | 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 | - | - | - | - | - |
| 3 | Integrated Nutrient Management | Cowpea | Indiscriminate use of chemical inputs | - | Use of microbial consortium for organic production of cowpea | 3 | 0 | 0 | 0 | - | - | - | - | VAM – 10 kg  Panchagavyam – 10 kg  Trichoderma – 20 lit  Pseudomonas – 20 lit |
| 4 | Productivity improvement of major crops. | Banana | Low productivity | - | High density planting in banana | 1 | 0 | 0 | 0 | - | Suckers 1000 no. | - | - |  |
| 5 | Integrated Crop Management | Bitter gourd | Unscientific Nutrient Management |  | Demonstration o f PGPR – Mix 1 on productivity of Bitter Gourd | 3 | 2 | 1 |  |  | Seed  (0.05) |  |  |  |
| 6 | Integrated Crop Management | Cow Pea | Unscientific Nutrient Management |  | Demonstration o f of IIHR Vegetable Nutrient mixture in cow pea Var. Vellayani Jothika | 2 | 2 | 1 |  |  | Seeds  (0.05) |  |  |  |
| 7 | IPM | Bitter Gourd | Indiscriminate use of PP chemical |  | Pheromone traps for management of fruit fly in Bitter gourd | 4 | 2 | 2 |  |  | Seeds  (0.05) |  |  |  |
| 8 | Varietal evaluation | Cardamom | Heavy infestation of root grub | Varietal trial of Thiruthali cardamom variety | - | 3 | - | - | 2 | - | - | - | - | - |
| 9 | Varietal evaluation | Black Pepper | High susceptibility to foot rot disease of cultivated varieties only available | Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki district | - | 2 | - | - | - | - | 300 Rooted cutting | - | - | - |
| 10 | IPM | Cardamom | Young suckers with dead heart symptoms and indiscriminate use of PPC | Management of shoot fly, *Formosina flavipes* Mall. in small cardamom | - | 3 | - | - | - | - | - | - | - | - |
| 11 | IPM | Banana | Incidence of pseudostem weevil causes heavy yield loss | Assessment of Banana Pseudostem Weevil with Cassava based bio-pesticides | - | 5 | - | - | - | - | - | - | Beauveria  Menma | 2.6 kg  2 litres |
| 12 | INM | Black Pepper | Low productivity due to unscientific soil and nutrient management | - | Microbial Consortium bio fertilizers in black pepper | 3 | - | - | - | - | - | - | Azosprillum  Phosphobacteria  VAM  Neem cake | 25 kg  25 kg  110 kg  1000 kg |
| 13 | IPM | Cardamom | Low productivity due to poor pollination and  Heavy infestation of root grub leading to heavy usage of PPC | - | Popularization of apiculture and EPN for increase in productivity and reducing root grub menace in cardamom | 2 | - | - | - | - | - | - | Bee box with hives  EPN | 10 Nos.  5330 nos. |
| 14 | IPM | Banana | Incidence of pseudo stem weevil causes heavy yield loss | - | Biological control of banana pseudo t stem weevil | 3 | - | - | - | - | - | - | Beauveria | 35 kg |
| 15 | Crop improvement | Black Pepper | Less berry filling, non-uniform ripening and berry shedding | Management of berry drop in black pepper | - | 2 | - | - | 2 | - | - | - | - | - |
| 16 | INM | Cardamom | Poor soil fertility status | - | Integrated Nutrient Management in cardamom | 5 | - | - | 5 | - | - | - | - | - |
| 17 | Crop improvement | Black Pepper | Lower rooting percentage | - | Effective application of Azospirillum and VAM for better rooting in black pepper nursery | 2 | - | - | 3 | - | - | - | - | - |
| 18 | Improvement in reproductive efficiency of dairy cattle | Dairy cattle | Low reproductive efficiency and long inter calving period | Fertility management in repeat breeder cows following double PGF2 α injection | - | 4 | - | - | 2 | - | - | - | - | - |
| 19 | Feed and nutrient management in livestock | Dairy cattle | Poor growth performance & low milk production | Effect of rumen specific yeast (Saccromyces cervisiae) on growth, disease resistance & milk production in lactating animals | - | 3 | - | - | 2 | - | - | - | - | - |

**3.B2. Details of technology used during reporting period**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Title of Technology** | **Source of technology** | **Crop/enterprise** | **No. of programmes conducted** | | | |
| **OFT** | **FLD** | **Training** | **Others (Specify)** |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| 1 | Alternate media for growing oyster mushrooms | KAU, TNAU | Mushroom | 1 | 0 | 5 | Field visits – 10  FAS – 20  Demonstrations - 5 |
| 2 | Use of concrete poles as standards in Black Pepper | KAU, IISR | Black Pepper | 1 | 0 | 0 | Field visits - 2 |
| 3 | Use of microbial consortium for organic production of cowpea | KAU | Cowpea | 0 | 10 | 3 | Demonstrations - 2  Field visits – 10  FAS – 5 |
| 4 | High density planting in banana | KAU | Banana | 0 | 10 | 1 | Field visits – 10  FAS – 5 |
| 5 | Demonstration o f PGPR – Mix 1 on productivity of Bitter Gourd | KAU | Bitter gourd | 0 | 10 | 6 | Demonstrations - 1  Field visits – 5  FAS – 8 |
| 6 | Demonstration o f of IIHR Vegetable Nutrient mixture in cow pea Var. Vellayani Jothika | IIHR | Cowpea | 0 | 10 | 5 | Demonstrations - 2  Field visits – 5  FAS – 9 |
| 7 | Pheromone traps for management of fruit fly in Bitter gourd | KAU | Bitter gourd | 0 | 5 | 8 | Field visits – 5  FAS – 6 |
| 8 | Varietal trial of locally adapted farmer developed pest/disease resistant variety of cardamom. | Innovation and ICRI | Cardamom | 5 | 0 | 3 | Field visits- 15  Demonstration-5  FAS-6 |
| 9 | Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District | Innovation and IISR | Black Pepper | 5 | 0 | 2 | Field visits- 4  Demonstration-5  FAS-6 |
| 10 | Management of shoot fly, *Formosina flavipes* Mall. in small cardamom | Zonal Horticultural Research Station, UAS, Dharwad | Cardamom | 5 | **0** | 3 | Field visits- 8  Demonstration-5  FAS-18 |
| 11 | Assessment of Banana Pseudostem Weevil with Cassava based bio-pesticides | NRCB and CTCRI | Banana | 5 | 0 | 5 | Field visits- 2  Demonstration-1 |
| 12 | Microbial Consortium bio fertilizers in black pepper | IISR | Black Pepper | 0 | 10 | 3 | Field visits- 6  Demonstration-10  FAS-8 |
| 13 | Popularization of apiculture and EPN for increase in productivity and reducing root grub menace in cardamom | KAU and ICRI | Cardamom | 0 | 10 | 2 | Field visits- 4  Demonstration-6  FAS-21 |
| 14 | Biological control of banana pseudo t stem weevil | NRCB | Banana | 0 | 10 | 3 | Field visits- 12  Demonstration-3  FAS-6 |
| 15 | Management of berry drop in black pepper | TNAU, IISR | Black Pepper | 3 | 0 | 2 | Field visit-5  FAS-5  Demonstration-3 |
| 16 | Integrated Nutrient Management in cardamom | KAU, ICRI | Cardamom | 0 | 10 | 5 | Field visit-10  FAS-5 |
| 17 | Effective application of Azospirillum and VAM for better rooting in black pepper nursery | IISR | Black Pepper | 0 | 10 | 5 | Field visit-5  FAS-3  Demonstration-2 |
| 18 | Fertility management in repeat breeder cows following double PGF2 α injection | KAU & TANUVAS | Dairy cattle | 10 | 0 | 4 | Field visit-2 |
| 19 | Effect of rumen specific yeast (Saccromyces cervisiae) on growth, disease resistance & milk production in lactating animals | KAU & TANUVAS | Dairy cattle | 5 | 0 | 3 | Field visit-2 |

**3.B2 contd..**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No. of farmers covered** | | | | | | | | | | | | | | | | |
| **OFT** | | | | | **FLD** | | | | **Training** | | | | **Others (Specify)** | | | |
| **General** | | | **SC/ST** | | **General** | | **SC/ST** | | **General** | | **SC/ST** | | **General** | | **SC/ST** | |
|  | **M** | **F** | **M** | **F** | **M** | **F** | **M** | **F** | **M** | **F** | **M** | **F** | **M** | **F** | **M** | **F** |
|  | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 57 | 12 | 8 | 24 | 21 | 11 | 6 |
| 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 33 | 14 | 0 | 0 | 10 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 23 | 8 | 0 | 0 | 10 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 54 | 35 | 23 | 11 | 8 | 2 | 2 | 2 |
| 6 | 0 | 0 | 0 | 0 | 8 | 2 | 0 | 0 | 44 | 28 | 10 | 13 | 9 | 5 | 4 | 3 |
| 7 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 63 | 43 | 20 | 14 | 6 | 5 | 0 | 0 |
| 8 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 8 | 0 | 0 | 15 | 6 | 0 | 0 |
| 9 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 4 | 0 | 0 | 6 | 4 | 0 | 0 |
| 10 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 8 | 0 | 0 | 21 | 5 | 0 | 0 |
| 11 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 16 | 0 | 0 | 21 | 0 | 0 | 0 |
| 12 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 8 | 0 | 0 | 10 | 4 | 0 | 0 |
| 13 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 4 | 0 | 0 | 18 | 7 | 0 | 0 |
| 14 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 8 | 0 | 0 | 18 | 0 | 0 | 0 |
| 15 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 5 | 0 | 0 | 15 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 40 | 10 | 0 | 0 | 21 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 20 | 10 | 0 | 0 | 10 | 0 | 0 | 0 |
| 18 | 6 | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 55 | 15 | 8 | 2 | 0 | 0 | 0 | 0 |
| 19 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 28 | 12 | 3 | 2 | 0 | 0 | 0 | 0 |

**PART IV - On Farm Trial**

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Thematic areas | Cereals | Oilseeds | Pulses | Commercial Crops | Vegetables | Fruits | Flower | Plantation crops | Tuber Crops | TOTAL |
| Integrated Nutrient Management |  |  |  | 1 |  |  |  |  |  | 1 |
| Varietal Evaluation |  |  |  | 2 |  |  |  |  |  | 2 |
| Integrated Pest Management |  |  |  | 2 |  |  |  |  |  | 2 |
| Integrated Crop Management |  |  |  |  |  |  |  | 1 |  | 1 |
| Integrated Disease Management |  |  |  |  |  |  |  |  |  |  |
| Small Scale Income Generation Enterprises |  |  |  | 1 |  |  |  |  |  | 1 |
| Weed Management |  |  |  |  |  |  |  |  |  |  |
| Resource Conservation Technology |  |  |  |  |  |  |  |  |  |  |
| Farm Machineries |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming System |  |  |  |  |  |  |  |  |  |  |
| Seed / Plant production |  |  |  |  |  |  |  |  |  |  |
| Value addition |  |  |  |  |  |  |  |  |  |  |
| Drudgery Reduction |  |  |  |  |  |  |  |  |  |  |
| Storage Technique |  |  |  |  |  |  |  |  |  |  |
| Mushroom cultivation |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  | **6** |  |  |  | **1** |  | **7** |

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

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Thematic areas** | **Cattle** | **Poultry** | **Piggery** | **Rabbitry** | **Fisheries** | **TOTAL** |
| Evaluation of Breeds |  |  |  |  |  |  |
| Nutrition Management | 1 |  |  |  |  | 1 |
| Disease of Management | 1 |  |  |  |  | 1 |
| Value Addition |  |  |  |  |  |  |
| Production and Management |  |  |  |  |  |  |
| Feed and Fodder |  |  |  |  |  |  |
| Small Scale income generating enterprises |  |  |  |  |  |  |
| **TOTAL** | **2** | **0** | **0** | **0** | **0** | **2** |

1. **A4. Abstract on the number of technologies refined in respect of livestock enterprises:** Nil.
2. **B. Achievements on technologies Assessed and Refined**
3. **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 | Black pepper | Management of berry drop in black pepper | 3 | 3 | 0.2 |
| Varietal Evaluation | Cardamom | Varietal trial of locally adapted farmer developed pest/disease resistant variety of cardamom. | 5 | 5 | 0.2 |
| Black Pepper | Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District | 5 | 5 | 0.08 |
| Integrated Pest Management | Cardamom | Management of shoot fly, *Formosina flavipes* Mall. in small cardamom | 5 | 5 | 0.2 |
| Banana | Assessment of Banana Pseudostem Weevil with Cassava based bio-pesticides | 5 | 5 | 0.08 |
| Integrated Crop Management | Black Pepper | Use of concrete poles as standards in Black Pepper | 3 | 3 | 0.25 |
|  |  |  |  |  |
| Integrated Disease Management |  |  |  |  |  |
|  |  |  |  |  |
| Small Scale Income Generation Enterprises | Mushroom | Alternate media for growing oyster mushrooms | 3 | 3 | 0.05 |
|  |  |  |  |  |
| Weed Management |  |  |  |  |  |
|  |  |  |  |  |
| Resource Conservation Technology |  |  |  |  |  |
|  |  |  |  |  |
| Farm Machineries |  |  |  |  |  |
|  |  |  |  |  |
| Integrated Farming System |  |  |  |  |  |
| Seed / Plant production |  |  |  |  |  |
|  |  |  |  |  |
| Value addition |  |  |  |  |  |
|  |  |  |  |  |
| Drudgery Reduction |  |  |  |  |  |
|  |  |  |  |  |
| Storage Technique |  |  |  |  |  |
|  |  |  |  |  |
| Mushroom cultivation |  |  |  |  |  |
|  |  |  |  |  |
| **Total** |  |  | **29** | **29** | **1.06** |

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

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Thematic areas** | **Name of the livestock enterprise** | **Name of the technology assessed** | **No. of trials** | **No. of farmers** |
| Evaluation of breeds |  |  |  |  |
| Nutrition management | Dairy cattle | Effect of rumen specific yeast (Saccromyces cervisiae) on growth, disease resistance & milk production in lactating animals | 5 | 5 |
| Disease management | Dairy cattle | Fertility management in repeat breeder cows following double PGF2 α injection | 10 | 10 |
| Value addition |  |  |  |  |
| Production and management |  |  |  |  |
| Feed and fodder |  |  |  |  |
| Small scale income generating enterprises |  |  |  |  |
| **Total** | | | **15** | **15** |

**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 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 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 | Adoptability restricted for small farmers as cost involved is high | - | - |
| Mushroom | Commercial crop | High cost of paddy straw due to its limited availability | Alternate media for growing oyster mushrooms | 3 | Use of alternate media like saw dust and farm wastes for oyster mushroom bed preparation | Yield per bed | Ongoing and shall be over by July 2014 | Average yield of 0.8 kg per bed in 4 harvests in paddy straw beds  Beds from Saw dust, Dried banana sheath & pseudostem and other dried farm waste prepared | Skeptical on the chances of contamination in beds prepared from dried banana sheath & pseudostem and other dried farm waste | - | - |
| Cardamom | Perennial | Heavy infestation of root grub. | Varietal trial of root grub resistant cardamom variety | 5 | Root grub resistant Thiruthali variety | % decrease in root grub attack.  Yield & BCR | The attack of cardamom root grub was nill in Thiruthali variety with dry yield of 2.5kg / plant | Thriruthali can be recommended for multi-location trial | Thiruthali variety shows comparatively better root grub control. | - | - |
| Black pepper | Perennial | High susceptibility to foot rot disease of cultivated varieties | Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District | 5 | 1) Farmers practice (Chengannoor)  2) IISR –Thevam  3) Ashwati  4) Suvarna | % reduction in quick wilt incidence & yield | *Ongoing* | | | | |
| Cardamom | Perennial | Young suckers with dead heart symptoms and Indiscriminate use of PPC. | Management of shoot fly, *Formosina flavipes* Mall. in small cardamom | 5 | Spray Neem oil @3.5ml/lit.  Spray @ Thiamethoxam 0.5 g/lit. | No of dead hearts at different days after treatment (30,60,70) | Based on the observation indicated that thiamethoxam recorded lowest dead heart symptoms compared to neem oil. | Thiamethoxam treated plot recorded minimum infestation with 1.38 mean dead hearts compared to neem oil | Thiamethoxam was effective against cardamom  shoot fly. | - | - |
| Banana | Commercial crop | Incidence of pseudostem weevil causes heavy yield loss. | Management of Banana Pseudostem Weevil with Cassava based bio-pesticides | 5 | Pseudostem trap smeared with Beauveria @ 100/ha  and  Stem injection with cassava extract @ 20 ml/plant | % reduction in Pseudostem weevil attack | *Ongoing* | | | | |
| Black Pepper | Perennial crop | Less berry filling, no uniform ripening, berry shedding | Management of berry drop in black pepper | 3 | DAP(1.5%) spray at berry set and fruit development stage & KNO3 (1%)+ NAA (25 ppm) spray at berry set and fruit development stage | Yield, BCR | Comparatively more yield and BCR in KNO3 (1%)+ NAA (25 ppm) spray at berry set and fruit development stage. | Kno3 (1 %) + NAA (25 ppm) gave 35% increase in yield. | The farmers were satisfied in the IISR technology and found very effective in field than TNAU technology | - | - |
| Dairy cattle | Mixed farming | Low reproductive efficiency & long inter calving period | Fertility management in repeat breeder cows following double PGF2 α injection | 10 | Fertility management in repeat breeder cows following double PGF2 α injection | 1) No. of animals shown estrus  2) Conceived status | *Ongoing* | | | | |
| Dairy cattle | Mixed farming | Poor growth performance & low milk production | Effect of rumen specific yeast (Saccromyces cervisiae) on growth, disease resistance & milk production in lactating animals | 5 | Effect of rumen specific yeast (Saccromyces cervisiae) on growth, disease resistance & milk production in lactating animals | 1) % of body weight gain  2) Increase in milk production  3) Digestive tract disease incidence  4) FCR | *Ongoing* | | | | |

**Contd..**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Technology Assessed | Source of Technology | Production | Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year) | Net Return (Profit) in Rs. / unit | BC Ratio |
| 13 | 14 | 15 | 16 | 17 | 18 |
| Technology option 1 (FP - 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 (FP - Paddy Straw) | KAU | Oyster mushroom – Average yield of 0.8 kg per bed in 4 harvests | kg/bed | Rs. 200/bed | 3.33 |
| Technology option 2 (Saw Dust) | KAU | Beds prepared | - | - | *Ongoing* |
| Technology option 3 (Dried banana sheath & pseudostem) | TNAU | Beds prepared | - | - |
| Technology option 4 (Other dried farm wastes) | TNAU | Beds prepared | - | - |
| Technology option 1 (FP - Njallani variety cardamom) | Farmer developed variety | 0.735 | t/ha | 234500 | 2.14 |
| Technology option 2 (Thiruthali variety Cardamom) | Farmer developed variety | 0.850 | t/ha | 332000 | 2.87 |
| Technology option 3 | - | - | - | - | - |
| Technology option 1 (FP - Chengannoor variety Black pepper) | Local | - | - | - | *Ongoing* |
| Technology option 2 (IISR Thevam variety Black pepper) | IISR | - | - | - |
| Technology option 3 (Ashwati  variety Black pepper) | Farmer developed variety from Wyanad | - | - | - |
| Technology option 4 (Suvarna  variety Black pepper) | Farmer developed variety  from Wyanad | - | - | - |
| Technology option 1 (FP - Spray Quinalphos @ 2ml/ litre) | - | 0.648 | t/ha | 136000 | 1.82 |
| Technology option 2 (Spray Neem oil @ 3.5ml/ litre) | ZHRS, UAS, Dharwad | 0.760 | t/ha | 226000 | 1.98 |
| Technology option 3 (Spray Thiamethoxam 0.5g/ litre) | 0.790 | t/ha | 273000 | 2.36 |
| Technology option 1 (FP - Spray Chlorpyriphos) | - | - | - | - | *Ongoing* |
| Technology option 2 (Pseudostem trap smeared with Beauveria @ 100/ ha) | NRCB, Trichy | - | - | - |
| Technology option 3 (Stem injection with cassava extract @ 20 ml/ plant) | CTCRI, Thiruvananthapuram | - | - | - |
| Technology option 1 (Farmer’s practice) | - | 1.3 | t/ha | 11800 | 1.13 |
| Technology option 2 (DAP(1.5%) spray at berry set and fruit development stage) | TNAU | 1.75 | t/ha | 25200 | 1.26 |
| Technology option 3 (KNO3 (1%)+ NAA (25 ppm) spray at berry set and fruit development stage) | IISR | 2.01 | t/ha | 37000 | 1.34 |
| Technology option 1 (FP - Artificial breeding with frozen semen at optimum time during estrus) | - | - | - | - | *Ongoing* |
| Technology option 2 (Synchronization with double PGF2 α injection followed by fixed time breeding at 72 & 96 hours) | KAU & TANUVAS | - | - | - |
| Technology option 3 | - | - | - | - | *-* |
| Technology option 1 (FP - Feeding with concentrate and irregular deworming practices) | - | - | - | - | *Ongoing* |
| Technology option 2 (Allowing required amount of concentrate feed + forage grasses + deworming) | KAU & TANUVAS | - | - | - |
| Technology option 3 (Feeding with rumen specific yeast along with concentrate feed) | KAU & TANUVAS | - | - | - |

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: **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 farmers participation and their reaction: Adoptability restricted for small farmers as cost involved is high.

**2)**

1 Title of Technology Assessed: **Alternate media for growing oyster mushrooms**

2 Problem Definition: High cost of paddy straw due to its limited availability.

3 Details of technologies selected for assessment: Use of alternate media like saw dust, dried banana sheath & pseudostem and farm wastes for oyster mushroom bed preparation.

4 Source of technology: KAU, TNAU.

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 different media used.

8 Final recommendation for micro level situation: Ongoing.

9 Constraints identified and feedback for research: Ongoing.

10 Process of farmers participation and their reaction: Skeptical on the chances of contamination in beds prepared from dried banana sheath & pseudostem and other dried farm wastes.

**3)**

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 varieties

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 showed 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: Thiruthali can be recommended for the farmers for control of root grub based on the percentage reduction in the root grub.

9 Constraints identified and feedback for research: Multi Location trial is recommended for the suitability of the variety in other areas of Idukki dist.

10 Process of farmers participation and their reaction: Farmers are satisfied with the root grub resistance of Thiruthali variety but due to the low boldness of the variety it is less preferred in the market.

**4)**

1 Title of Technology Assessed: **Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District**

2 Problem Definition: High susceptibility to foot rot disease of cultivated varieties.

3 Details of technologies selected for assessment: IISR-Thevam, Ashwathi and Suvarna variety Black Pepper.

4 Source of technology: IISR &Farmer developed variety.

5 Production system and thematic area: Pepper based cropping systems and Crop Improvement.

6 Performance of the Technology with performance indicators: Ongoing.

7. Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring

techniques: Ongoing.

8 Final recommendation for micro level situation: Ongoing.

9 Constraints identified and feedback for research: Ongoing.

10 Process of farmers participation and their reaction: Ongoing.

**5)**

1 Title of Technology Assessed: **Assessment of shoot fly, *Formosina flavipes* Mall. in small cardamom**

2 Problem Definition: Young suckers with dead heart symptoms and indiscriminate use of PPC

3 Details of technologies selected for assessment: Spray Neem oil @ 3.5ml/L and Thiamethoxam 0.5 g/L of water.

4 Source of technology: ZHRS, Mudigree

5 Production system and thematic area: Cardamom based cropping system and Pest Management.

6 Performance of the Technology with performance indicators: The observations at 30,60 and 70 days after spraying indicated that thiamethoxam treated plots recorded lowest dead heart symptoms compared to neem oil treated plots.

7. Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring

techniques: The development of healthy suckers was higher in thiamethoxam treated plots.

8 Final recommendation for micro level situation: Nil.

9 Constraints identified and feedback for research: Nil

10 Process of farmers participation and their reaction: The Cardamom Grower Association, Cardamom Planter Association and Haritha Farmers Club had adopted the technology and more than 100 farmers are practicing the

technology in over 200 ha area.

**6)**

1 Title of Technology Assessed: **Management of Banana Pseudostem Weevil with Cassava based bio-pesticides**

2 Problem Definition: Incidence of pseudo stem weevil causes heavy yield loss.

3 Details of technologies selected for assessment: Pseudostem trap smeared with Beauveria @ 100/ha and Stem injection with cassava extract @ 20 ml/plant.

4 Source of technology: NRCB and CTCRI.

5 Production system and thematic area: Mono cropping and IPM.

6 Performance of the Technology with performance indicators: Ongoing.

7. Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring

techniques: Ongoing.

8 Final recommendation for micro level situation: Ongoing.

9 Constraints identified and feedback for research: Ongoing.

10 Process of farmers participation and their reaction: Ongoing.

**7)**

1 Title of Technology Assessed: **Management of berry drop in black pepper**

2 Problem Definition: Less berry filling, non-uniform ripening & berry shedding

3 Details of technologies selected for assessment

**Tech-1**: No measures taken (Farmers practice)

**Tech-2**: DAP (1.5%) spray at berry set and fruit development stage

**Tech-3**: KNO3 (1%) + NAA (25 ppm) spray at berry set and fruit development stage

4 Source of technology: TNAU and IISR

5 Production system and thematic area: Pepper based cropping system and nutrient management

6 Performance of the Technology with performance indicators: Yield recorded in farmers practice was 13 q/ha with BCR 2.23 and T-2- yield 17.5 q/ha with BCR-2.67 and T-3- Yield -20.1qt/ha with BCR-2.75

7. Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring

Techniques: T-3 IISR technology is effective in controlling berry shedding

8 Final recommendation for micro level situation: Nil

9 Constraints identified and feedback for research: Nil

10 Process of farmers participation and their reaction: The pepper growers were satisfied with the IISR technology and the technology is proposed for demonstrations in 2014-15.

**8)**

1 Title of Technology Assessed: **Fertility management in repeat breeder cows following double PGF2 α injection**

2 Problem Definition: Low reproductive efficiency and long inter calving period

3 Details of technologies selected for assessment:

**Tech-1**: Artificial breeding with frozen semen at optimum time during estrus

**Tech-2**: Synchronization with double PGF2 α injection followed by fixed time breeding at 72 & 96 hours

4 Source of technology: KAU & TANUVAS

5 Production system and thematic area: Scientific reproduction and breeding management

6 Performance of the Technology with performance indicators: For control repeat breeding in dairy animals

7. Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring

techniques: Synchronization with double PGF2 α injection to overcome repeat breeding.

8 Final recommendation for micro level situation: Ongoing

9 Constraints identified and feedback for research: Nil

10 Process of farmers participation and their reaction: Final result is awaited on September 2014 to assess the suitability of the technology.

**9)**

1 Title of Technology Assessed: **Effect of rumen specific yeast (*Saccromyces cervisiae*) on growth, disease resistance & milk production in lactating animals**

2 Problem Definition: Poor growth performance, low milk production & unaware of new technologies

3 Details of technologies selected for assessment:

**Tech-1**: Feeding with concentrate and irregular deworming practices

**Tech-2**: Allowing required amount of concentrate feed + forage grasses + deworming

**Tech-3**: Feeding with rumen specific yeast along with concentrate feed

4 Source of technology: KAU & TANUVAS

5 Production system and thematic area: Dairy farming and sustainable livestock production

6 Performance of the Technology with performance indicators: For good growth performance and more milk production

7. Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring

techniques: Feeding with rumen specific yeast along with concentrate feed to solve the problem.

8 Final recommendation for micro level situation: The trial is ongoing and the final recommendation is possible after lactation period.

9 Constraints identified and feedback for research: Nil

10 Process of farmers participation and their reaction: Final result is awaited on July 2014 to assess the suitability of the technology.

**4. D1. Results of Technologies Refined:** Nil**.**

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

**PART V - FRONTLINE DEMONSTRATIONS**

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sl.  No. | Category | Farming  Situation | Season  and  Year | Crop | Variety/ breed | Hybrid | Thematic area | Technology Demonstrated | Area (ha) | | No. of farmers/  demonstration | | | Reasons for shortfall in achievement |
| Proposed | Actual | SC/ST | Others | Total |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Oilseeds |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Pulses |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Cereals |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Millets |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | Vegetables | Monocrop | Rabi | Cowpea | Local | - | Integrated Nutrient Management | Use of microbial consortium for organic production of cowpea | 0.8 | 0.8 | 0 | 10 | 10 | - |
| 2 | Mono cropping | Rabi | Bitter gourd | Priyanka |  | Unscientific Nutrient Management | Demonstration of PGPR – Mix -1 on productivity of Bitter Gourd | 1 | 1 | 0 | 10 | 10 | - |
| 3 | Mono cropping | Rabi | Cowpea | Vellayani Jothika |  | Unscientific Nutrient Management | Demonstration of IIHR Vegetable Nutrient mixture in cow pea Var. Vellayani Jothika | 1 | 1 | 0 | 10 | 10 | - |
| 4 | Mono cropping | Rabi | Bitter gourd | Local |  | Indiscriminate use of PP chemical | Pheromone traps for management of fruit fly in Bitter gourd | 2 | 2 | 0 | 5 | 5 | - |
|  | Flowers |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Ornamental |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 | Fruit | Mono cropping | 1.2 years | Banana | Nendran | - | IPM | Biological control of banana pseudo stem weevil | 1 | 1 | 0 | 10 | 10 | - |
| 6 | Monocrop | 1.2 years | Banana | Nendran |  | Productivity improvement of major crops | High density planting in banana | 2.0 | 2.0 | 0 | 10 | 10 | - |
| 7 | Spices and condiments | Black Pepper based cropping system | Perennial | Black  Pepper | Karimunda | - | INM | Microbial Consortium bio fertilizers in black pepper | 0.4 | 0.4 | 0 | 10 | 10 | - |
| 8 | Cardamom base cropping system | Perennial | Cardamom | Njallani | - | IPM | Popularization of apiculture and EPN for increase in productivity and reducing root grub menace in cardamom | 3.5 | 3.5 | 0 | 10 | 10 | - |
| 9 | Perennial crop | - | Cardamom | Njallani | - | Integrated nutrient management | INM in cardamom | 1 | 1 | 0 | 10 | 10 | - |
| 10 | Perennial crop | - | Black pepper | - | - | Integrated nutrient management | Effective Application of Azospirillum and VAM in rooting media for improve rooting | 0.02 | 0.02 | 0 | 10 | 10 | - |
|  | Commercial crops |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Medicinal and aromatic |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Fodder |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Plantation |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Fibre |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Dairy |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Poultry |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Rabbitry |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Pigerry |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Sheep and goat |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Duckery |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Common carps |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Mussels |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Ornamental fishes |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Oyster mushroom |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Button mushroom |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Vermicompost |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Sericulture |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Apiculture |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Implements |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Others (specify) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**11. Integrated Farming System:**

Two farmers were identified for the IFS models in two blocks such as Adimali and Nedumkandam blocks. Both the farmers are practicing the IFS in small scale. This year we introduced two more component in their field namely rabbit rearing and Apiculture. In the two models farmers also started mushroom cultivation in their house in smaller scale and planning to upgrade to commercial scale. We conduct regular field visit and monitoring of the farm. Group meetings and regular training programmes in these IFS plot.

**12. Special programme on value addition with branding of products and marketing**

EDP specialised training for fifteen trainees on “***Processing and value addition of fruits and vegetables”*** conducted at Bapooji Krishi Vigyan Kendra, Seminar hall from **20th to 27th January, 2014**. Practical and theory classes were arranged for the trainees along with orientation on preservation methods, squash making, packaging & labeling. They were also trained on CIG formation food hygiene issues, food laws & standards etc. Product training on sugar based products (Jam & Jelly), Mushroom products, pickling aspects, extract preparation and the trainees also given training on financial literacy.

An ex-trainees sammelan was also conducted on 26th and 27th March, 2014 respectively to motivate the trainees to start the units.

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sl.  No. | Category | Farming  Situation | Season  and  Year | Crop | Variety/ breed | Hybrid | Thematic area | Technology Demonstrated | Season and year | Status of soil | | | Previous crop grown | |
| N | P | K | |  |
|  | Oilseeds |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  | Pulses |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  | Cereals |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  | Millets |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| 1 | Vegetables | Monocrop | Rabi | Cowpea | Local | - | Integrated Nutrient Management | Use of microbial consortium for organic production of cowpea | Rabi | M | M | M | | Bitter gourd |
| 2 |  | Mono cropping | Rabi | Bitter gourd | Priyanka |  | Unscientific Nutrient Management | Demonstration o f PGPR – Mix 1 on productivity of Bitter Gourd | Rabi | M | H | M | | Fallow |
| 3 |  | Mono cropping | Rabi | Cowpea | Vellayani Jothika |  | Unscientific Nutrient Management | Demonstration o f of IIHR Vegetable Nutrient mixture in cow pea Var. Vellayani Jothika | Rabi | M | H | L | | Bitter gourd |
| 4 |  | Mono cropping | Rabi | Bitter gourd | Local |  | Indiscriminate use of PP chemical | Pheromone traps for management of fruit fly in Bitter gourd | Rabi | H | H | M | | Cowpea |
|  | Flowers |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  | Ornamental |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| 5 | Fruit | Monocrop | 1.2 yrs | Banana | Nendran |  | Productivity improvement of major crops. | High density planting in banana | Annual | H | M | M | | Banana |
| 6 |  | Mono cropping | 1.2 yrs | Banana | Nendran | - | IPM | Biological control of banana pseudo stem weevil | Annual | M | M | L | | Banana |
| 7 | Spices and condiments | Black Pepper based cropping system | Perennial | Black Pepper | Karimunda | - | INM | Microbial Consortium bio fertilizers in black pepper | Perennial | H | M | L | | Black Pepper |
| 8 | Cardamom base cropping system | Perennial | Cardamom | Njallani | - | IPM | Popularization of apiculture and EPN for increase in productivity and reducing root grub menace in cardamom | Perennial | H | M | L | | Cardamom |
| 9 | Cardamom base cropping system | Perennial | Cardamom | Njallani | - | Integrated nutrient management | INM in cardamom | Perennial | H | M | L | | Cardamom |
| 10 | Black Pepper based cropping system | Perennial | Black pepper | Karimunda | - | Application of Azospirillum and VAM in rooting media for improve rooting | Nutrient management | Perennial | H | M | L | | Pepper |
|  | Commercial crops |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  | 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) | | | | % Increase | \*Economics of demonstration (Rs./ha) | | | | \*Economics of check  (Rs./ha) | | | |
| Demo | | | Check | Gross  Cost | Gross  Return | Net Return | \*\*  BCR | Gross  Cost | Gross  Return | Net Return | \*\*  BCR |
|  |  |  |  |  |  |  | H | L | A |  |  |  |  |  |  |  |  |  |  |
| Oilseeds |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pulses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cereals |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Millets |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Vegetables | Use of microbial consortium for organic production of cowpea | Local | - | Monocrop | 10 | 0.8 | 120 | 100 | 110 | 80 | 37.5 | 135000 | 220000 | 85000 | 1.62 | 142000 | 160000 | 18000 | 1.12 |
| Demonstration o f PGPR – Mix 1 on productivity of Bitter Gourd | Priyanka | - | Mono cropping | 10 | 1 | 210.2 | 152.6 | 181.4 | 165.2 | 9.81 | 165000 | 293000 | 128000 | 1.78 | 142000 | 232000 | 90000 | 1.63 |
| Demonstration o f of IIHR Vegetable Nutrient mixture in cow pea Var. Vellayani Jothika | Vellayani Jothika | - | Mono cropping | 10 | 1 | 175.6 | 100.2 | 137.9 | 108.6 | 26.98 | 156500 | 256700 | 100200 | 1.64 | 134500 | 214300 | 79800 | 1.59 |
| Pheromone traps for management of fruit fly in Bitter gourd | Local | - | Mono cropping | 5 | 2 | 168.4 | 131.2 | 149.8 | 113.4 | 32.1 | 134300 | 243500 | 109200 | 1.81 | 126300 | 214700 | 88400 | 1.70 |
| Flowers |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ornamental |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fruit | Biological control of banana pseudo stem weevil | Nendran | - | Mono cropping | 10 | 1 | 301.4 | 275.6 | 288.5 | 227.3 | 26.92 | 250610 | 386000 | 135390 | 1.54 | 214200 | 304300 | 90100 | 1.42 |
|  | High density planting in banana | Nendran | - | Monocrop | 10 | 2.0 | *Ongoing* | | | | | | | | | | | | |
| Spices and condiments | Microbial Consortium bio fertilizers in black pepper | Karimunda | - | Perennial | 10 | 0.4 | 2.6 | 2.5 | 2.6 | 2.1 | 23.81 | 185000 | 365000 | 180000 | 1.97 | 152000 | 264000 | 112000 | 1.73 |
| Popularization of apiculture and EPN for increase in productivity and reducing root grub menace in cardamom | Njallani | - | Perennial | 10 | 3.5 | 7.4 | 7.0 | 7.2 | 5.7 | 26.32 | 154000 | 3150000 | 161000 | 2.04 | 132000 | 236000 | 1040000 | 1.78 |
| Integrated nutrient management in cardamom | Njallani | - | Cardamom based cropping system | 10 | 1 | 9 | 8.8 | 8.9 | 7 | 27 | 285000 | 712000 | 427000 | 2.49 | 285000 | 560000 | 275000 | 1.96 |
| Effective application of azospirillum and VAM for better rooting in pepper nursery | Karimunda | - | Pepper based cropping system | 10 | 1 | - | - | - | - | - | 10000 | 18500 | 8500 | 1.85 | 8000 | 12300 | 4300 | 1.53 |
| Commercial |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fibre crops like cotton |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Medicinal and aromatic |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fodder |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Plantation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fibre |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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

\*\* BCR= GROSS RETURN/GROSS COST

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

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

|  |  |  |
| --- | --- | --- |
| **Data on other parameters in relation to technology demonstrated** | | |
| **Parameter with unit** | **Demo** | **Check** |
| a. Visual difference in crop stand  b. Difference in pest & disease incidence | Plants more green in colour  No major pest or disease incidence | Normal stand of the crop  Aphids and Serpentine leaf miner found in almost 75% area |
|  |  |  |
|  |  |  |
|  | |  |

5. B.2. Livestock and related enterprises: Nil.

5. B.3. Fisheries: Nil.

5. B.4. Other enterprises: 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 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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

\*\* BCR= GROSS RETURN/GROSS COST

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

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

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl.No.** | **Activity** | **No. of activities organised** | **Number of participants** | **Remarks** |
| 1 | Field days | 5 | 123 | - |
| 2 | Farmers Training | 41 | 567 | - |
| 3 | Media coverage | 1 | - | - |
| 4 | Training for extension functionaries | 1 | 15 | - |
| 5 | Others (Field visit) | 70 | 67 | - |
| 6 | Others (Demonstration) | 21 | 51 | - |
| 7 | Others (Fest, Carnival) | - | - | - |
| 8 | Others (FAS) | 96 | 77 | - |
| 9 | Others (Please specify) | - | - | - |

**PART VI – DEMONSTRATIONS ON CROP HYBRIDS:** Nil.

**PART VII. TRAINING**

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **Crop Production** |  |  |  |  |  |  |  |  |  |  |
| Weed Management |  |  |  |  |  |  |  |  |  |  |
| Resource Conservation Technologies |  |  |  |  |  |  |  |  |  |  |
| Cropping Systems |  |  |  |  |  |  |  |  |  |  |
| Crop Diversification |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming |  |  |  |  |  |  |  |  |  |  |
| Micro Irrigation/Irrigation |  |  |  |  |  |  |  |  |  |  |
| Seed production |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Crop Management |  |  |  |  |  |  |  |  |  |  |
| Soil and Water Conservation |  |  |  |  |  |  |  |  |  |  |
| Integrated Nutrient Management |  |  |  |  |  |  |  |  |  |  |
| Production of organic inputs |  |  |  |  |  |  |  |  |  |  |
| 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 | 1 | 2 | 32 | 34 | 0 | 0 | 0 | 2 | 32 | 34 |
| Others (Kitchen garden) | 1 | 30 | 1 | 31 | 1 | 1 | 2 | 31 | 2 | 33 |
| Others (**Banana cultivation**) | 2 | 23 | 0 | 23 | 0 | 0 | 0 | 23 | 0 | 23 |
| **b) Fruits** |  |  |  |  |  |  |  |  |  |  |
| Training and Pruning |  |  |  |  |  |  |  |  |  |  |
| Layout and Management of Orchards |  |  |  |  |  |  |  |  |  |  |
| Cultivation of Fruit |  |  |  |  |  |  |  |  |  |  |
| Management of young plants/orchards |  |  |  |  |  |  |  |  |  |  |
| Rejuvenation of old orchards |  |  |  |  |  |  |  |  |  |  |
| Export potential fruits |  |  |  |  |  |  |  |  |  |  |
| Micro irrigation systems of orchards |  |  |  |  |  |  |  |  |  |  |
| Plant propagation techniques |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **c) Ornamental Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery Management |  |  |  |  |  |  |  |  |  |  |
| Management of potted plants |  |  |  |  |  |  |  |  |  |  |
| Export potential of ornamental plants |  |  |  |  |  |  |  |  |  |  |
| Propagation techniques of Ornamental Plants |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **d) Plantation crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **e) Tuber crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **f) Spices** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **g) Medicinal and Aromatic Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Production and management technology |  |  |  |  |  |  |  |  |  |  |
| Post harvest technology and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Soil Health and Fertility Management** |  |  |  |  |  |  |  |  |  |  |
| Soil fertility management | 2 | 3 | 19 | 22 | 0 | 0 | 0 | 3 | 19 | 22 |
| Integrated water management |  |  |  |  |  |  |  |  |  |  |
| Integrated nutrient management | 1 | 30 | 0 | 30 | 0 | 0 | 0 | 30 | 0 | 30 |
| Production and use of organic inputs | 1 | 47 | 53 | 100 | 0 | 0 | 0 | 47 | 53 | 100 |
| Management of Problematic soils |  |  |  |  |  |  |  |  |  |  |
| Micro nutrient deficiency in crops | 1 | 0 | 35 | 35 | 0 | 0 | 0 | 0 | 35 | 35 |
| Nutrient use efficiency |  |  |  |  |  |  |  |  |  |  |
| Balanced use of fertilizers |  |  |  |  |  |  |  |  |  |  |
| Soil and water testing |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Livestock Production and Management** |  |  |  |  |  |  |  |  |  |  |
| Dairy Management |  |  |  |  |  |  |  |  |  |  |
| Poultry Management |  |  |  |  |  |  |  |  |  |  |
| Piggery Management |  |  |  |  |  |  |  |  |  |  |
| Rabbit Management |  |  |  |  |  |  |  |  |  |  |
| Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| Animal Disease Management |  |  |  |  |  |  |  |  |  |  |
| Feed and Fodder technology |  |  |  |  |  |  |  |  |  |  |
| Production of quality animal products |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Home Science/Women empowerment** |  |  |  |  |  |  |  |  |  |  |
| Household food security by kitchen gardening and nutrition gardening |  |  |  |  |  |  |  |  |  |  |
| Design and development of low/minimum cost diet |  |  |  |  |  |  |  |  |  |  |
| Designing and development for high nutrient efficiency diet |  |  |  |  |  |  |  |  |  |  |
| Minimization of nutrient loss in processing |  |  |  |  |  |  |  |  |  |  |
| Processing and cooking |  |  |  |  |  |  |  |  |  |  |
| Gender mainstreaming through SHGs |  |  |  |  |  |  |  |  |  |  |
| Storage loss minimization techniques | 1 | 1 | 16 | 17 | 7 | 3 | 10 | 8 | 19 | 27 |
| Value addition | 3 | 12 | 21 | 33 | 0 | 0 | 0 | 12 | 21 | 33 |
| 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 | 4 | 74 | 26 | 100 | 26 | 4 | 30 | 100 | 30 | 130 |
| Integrated Disease Management | 1 | 31 | 40 | 71 | 1 | 28 | 29 | 32 | 68 | 100 |
| Bio-control of pests and diseases |  |  |  |  |  |  |  |  |  |  |
| Production of bio control agents and bio pesticides |  |  |  |  |  |  |  |  |  |  |
| 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 | 4 | 21 | 13 | 34 | 0 | 0 | 0 | 21 | 13 | 34 |
| Apiculture |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Capacity Building and Group Dynamics** |  |  |  |  |  |  |  |  |  |  |
| Leadership development |  |  |  |  |  |  |  |  |  |  |
| Group dynamics |  |  |  |  |  |  |  |  |  |  |
| Formation and Management of SHGs |  |  |  |  |  |  |  |  |  |  |
| Mobilization of social capital |  |  |  |  |  |  |  |  |  |  |
| Entrepreneurial development of farmers/youths |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Agro-forestry** |  |  |  |  |  |  |  |  |  |  |
| Production technologies |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming Systems |  |  |  |  |  |  |  |  |  |  |
| Others (Pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **TOTAL** | **22** | **274** | **256** | **530** | **35** | **36** | **71** | **309** | **292** | **601** |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **Crop Production** |  |  |  |  |  |  |  |  |  |  |
| Weed Management |  |  |  |  |  |  |  |  |  |  |
| Resource Conservation Technologies |  |  |  |  |  |  |  |  |  |  |
| Cropping Systems |  |  |  |  |  |  |  |  |  |  |
| Crop Diversification |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming |  |  |  |  |  |  |  |  |  |  |
| Micro Irrigation/Irrigation |  |  |  |  |  |  |  |  |  |  |
| Seed production |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Crop Management |  |  |  |  |  |  |  |  |  |  |
| Soil and Water Conservation | 1 | 30 | 0 | 30 | 0 | 0 | 0 | 30 | 0 | 30 |
| Integrated Nutrient Management |  |  |  |  |  |  |  |  |  |  |
| Production of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Horticulture** |  |  |  |  |  |  |  |  |  |  |
| **a) Vegetable Crops** |  |  |  |  |  |  |  |  |  |  |
| Production of low value and high volume crop |  |  |  |  |  |  |  |  |  |  |
| Off-season vegetables |  |  |  |  |  |  |  |  |  |  |
| Nursery raising |  |  |  |  |  |  |  |  |  |  |
| Exotic vegetables |  |  |  |  |  |  |  |  |  |  |
| Export potential vegetables |  |  |  |  |  |  |  |  |  |  |
| Grading and standardization |  |  |  |  |  |  |  |  |  |  |
| Protective cultivation | 2 | 15 | 66 | 81 | 15 | 22 | 37 | 30 | 88 | 118 |
| Others (Organic farming) | 6 | 100 | 45 | 145 | 22 | 22 | 44 | 122 | 67 | 189 |
| Others (**Production technology**) | 4 | 118 | 29 | 147 | 0 | 0 | 0 | 118 | 29 | 147 |
| Others (**Hi tech cultivation**) | 3 | 145 | 54 | 199 | 0 | 0 | 0 | 145 | 54 | 199 |
| Others ( **IFS**) | 5 | 203 | 92 | 295 | 0 | 0 | 0 | 203 | 92 | 295 |
| Others (**Organic vegetable cultivation**) | 6 | 71 | 63 | 134 | 0 | 0 | 0 | 71 | 63 | 134 |
| **b) Fruits** |  |  |  |  |  |  |  |  |  |  |
| Training and Pruning |  |  |  |  |  |  |  |  |  |  |
| Layout and Management of Orchards |  |  |  |  |  |  |  |  |  |  |
| Cultivation of Fruit |  |  |  |  |  |  |  |  |  |  |
| Management of young plants/orchards |  |  |  |  |  |  |  |  |  |  |
| Rejuvenation of old orchards |  |  |  |  |  |  |  |  |  |  |
| Export potential fruits |  |  |  |  |  |  |  |  |  |  |
| Micro irrigation systems of orchards |  |  |  |  |  |  |  |  |  |  |
| Plant propagation techniques |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **c) Ornamental Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery Management |  |  |  |  |  |  |  |  |  |  |
| Management of potted plants |  |  |  |  |  |  |  |  |  |  |
| Export potential of ornamental plants |  |  |  |  |  |  |  |  |  |  |
| Propagation techniques of Ornamental Plants |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **d) Plantation crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **e) Tuber crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **f) Spices** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **g) Medicinal and Aromatic Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Production and management technology |  |  |  |  |  |  |  |  |  |  |
| Post harvest technology and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Soil Health and Fertility Management** |  |  |  |  |  |  |  |  |  |  |
| Soil fertility management | 2 | 30 | 75 | 105 | 0 | 0 | 0 | 30 | 75 | 105 |
| Integrated water management |  |  |  |  |  |  |  |  |  |  |
| Integrated nutrient management | 2 | 161 | 56 | 217 | 0 | 0 | 0 | 161 | 56 | 217 |
| Production and use of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Management of Problematic soils | 2 | 45 | 15 | 60 | 0 | 0 | 0 | 45 | 15 | 60 |
| Micro nutrient deficiency in crops | 2 | 55 | 8 | 63 | 0 | 0 | 0 | 55 | 8 | 63 |
| Nutrient use efficiency | 1 | 19 | 6 | 25 | 0 | 0 | 0 | 19 | 6 | 25 |
| Balanced use of fertilizers | 1 | 25 | 10 | 35 | 0 | 0 | 0 | 25 | 10 | 35 |
| Soil and water testing | 3 | 108 | 44 | 152 | 6 | 4 | 10 | 114 | 48 | 162 |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Livestock Production and Management** |  |  |  |  |  |  |  |  |  |  |
| Dairy Management |  |  |  |  |  |  |  |  |  |  |
| Poultry Management |  |  |  |  |  |  |  |  |  |  |
| Piggery Management |  |  |  |  |  |  |  |  |  |  |
| Rabbit Management |  |  |  |  |  |  |  |  |  |  |
| Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| Animal Disease Management | 2 | 53 | 23 | 76 | 4 | 1 | 5 | 57 | 24 | 81 |
| Feed and Fodder technology | 1 | 36 | 24 | 60 | 6 | 4 | 10 | 42 | 28 | 70 |
| Production of quality animal products |  |  |  |  |  |  |  |  |  |  |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Home Science/Women empowerment** |  |  |  |  |  |  |  |  |  |  |
| Household food security by kitchen gardening and nutrition gardening | 1 | 170 | 85 | 255 | 0 | 0 | 0 | 170 | 85 | 255 |
| 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 | 2 | 1 | 52 | 53 | 0 | 0 | 0 | 1 | 52 | 53 |
| Gender mainstreaming through SHGs |  |  |  |  |  |  |  |  |  |  |
| Storage loss minimization techniques |  |  |  |  |  |  |  |  |  |  |
| Value addition | 2 | 15 | 47 | 62 | 0 | 0 | 0 | 15 | 47 | 62 |
| Women empowerment | 1 | 2 | 35 | 37 | 0 | 0 | 0 | 2 | 35 | 37 |
| 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 | 3 | 274 | 45 | 319 | 0 | 0 | 0 | 274 | 45 | 319 |
| Integrated Disease Management | 4 | 89 | 52 | 141 | 0 | 0 | 0 | 89 | 52 | 141 |
| Bio-control of pests and diseases |  |  |  |  |  |  |  |  |  |  |
| Production of bio control agents and bio pesticides | 1 | 45 | 7 | 52 | 0 | 0 | 0 | 45 | 7 | 52 |
| 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 | 3 | 28 | 82 | 110 | 6 | 8 | 14 | 34 | 90 | 124 |
| Apiculture | 1 | 38 | 14 | 52 | 0 | 0 | 0 | 38 | 14 | 52 |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Capacity Building and Group Dynamics** |  |  |  |  |  |  |  |  |  |  |
| Leadership development |  |  |  |  |  |  |  |  |  |  |
| Group dynamics |  |  |  |  |  |  |  |  |  |  |
| Formation and Management of SHGs | 2 | 0 | 51 | 51 | 0 | 0 | 0 | 0 | 51 | 51 |
| Mobilization of social capital |  |  |  |  |  |  |  |  |  |  |
| Entrepreneurial development of farmers/youths | 2 | 21 | 18 | 39 | 0 | 0 | 0 | 21 | 18 | 39 |
| Others (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **Agro-forestry** |  |  |  |  |  |  |  |  |  |  |
| Production technologies |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming Systems |  |  |  |  |  |  |  |  |  |  |
| Others (Pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **TOTAL** | **64** | **1897** | **1079** | **2976** | **59** | **61** | **120** | **1956** | **1140** | **3096** |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | | | | | | | | | |
| **General** | | | | | | **SC/ST** | | | | | | **Grand Total** | | | | |
| **Male** | **Female** | | **Total** | | | **Male** | | **Female** | | **Total** | | **Male** | | **Female** | | **Total** |
| Nursery Management of Horticulture crops |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Training and pruning of orchards |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Protected cultivation of vegetable crops |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Commercial fruit production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Integrated farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Seed production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Production of organic inputs |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Planting material production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Vermi-culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Mushroom Production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Bee-keeping |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Sericulture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Repair and maintenance of farm machinery and implements |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Value addition |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Small scale processing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Post Harvest Technology | 1 | 8 | | 0 | | 8 | 0 | | 0 | | 0 | | 8 | | 0 | | 8 | |
| Tailoring and Stitching |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Rural Crafts |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Production of quality animal products |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Dairying |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Sheep and goat rearing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Quail farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Piggery |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Rabbit farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Poultry production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Ornamental fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Composite fish culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Freshwater prawn culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Shrimp farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Pearl culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Cold water fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fish harvest and processing technology |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fry and fingerling rearing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Any other (pl. specify) |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| **TOTAL** | **1** | **8** | | **0** | | **8** | **0** | | **0** | | **0** | | **8** | | **0** | | **8** | |

**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 | 1 | 2 | | 6 | | 8 | 14 | 10 | 24 | 16 | 16 | 32 |
| Commercial fruit production |  |  | |  | |  |  |  |  |  |  |  |
| Integrated farming |  |  | |  | |  |  |  |  |  |  |  |
| Seed production |  |  | |  | |  |  |  |  |  |  |  |
| Production of organic inputs |  |  | |  | |  |  |  |  |  |  |  |
| Planting material production |  |  | |  | |  |  |  |  |  |  |  |
| Vermi-culture |  |  | |  | |  |  |  |  |  |  |  |
| Mushroom Production | 1 | 6 | | 35 | | 41 | 0 | 10 | 10 | 6 | 45 | 51 |
| Bee-keeping |  |  | |  | |  |  |  |  |  |  |  |
| Sericulture |  |  | |  | |  |  |  |  |  |  |  |
| Repair and maintenance of farm machinery and implements |  |  | |  | |  |  |  |  |  |  |  |
| Value addition | 2 | 7 | | 40 | | 47 | 0 | 0 | 0 | 7 | 40 | 47 |
| Small scale processing | 1 | 19 | | 26 | | 45 | 0 | 0 | 0 | 19 | 26 | 45 |
| Post Harvest Technology | 1 | 2 | | 32 | | 34 | 0 | 0 | 0 | 2 | 32 | 34 |
| Tailoring and Stitching |  |  | |  | |  |  |  |  |  |  |  |
| Rural Crafts |  |  | |  | |  |  |  |  |  |  |  |
| Production of quality animal products |  |  | |  | |  |  |  |  |  |  |  |
| Dairying |  |  | |  | |  |  |  |  |  |  |  |
| Sheep and goat rearing |  |  | |  | |  |  |  |  |  |  |  |
| Quail farming |  |  | |  | |  |  |  |  |  |  |  |
| Piggery |  |  | |  | |  |  |  |  |  |  |  |
| Rabbit farming |  |  | |  | |  |  |  |  |  |  |  |
| Poultry production |  |  | |  | |  |  |  |  |  |  |  |
| Ornamental fisheries |  |  | |  | |  |  |  |  |  |  |  |
| Composite fish culture |  |  | |  | |  |  |  |  |  |  |  |
| Freshwater prawn culture |  |  | |  | |  |  |  |  |  |  |  |
| Shrimp farming |  |  | |  | |  |  |  |  |  |  |  |
| Pearl culture |  |  | |  | |  |  |  |  |  |  |  |
| Cold water fisheries |  |  | |  | |  |  |  |  |  |  |  |
| Fish harvest and processing technology |  |  | |  | |  |  |  |  |  |  |  |
| Fry and fingerling rearing |  |  | |  | |  |  |  |  |  |  |  |
| Any other (pl. specify) |  |  | |  | |  |  |  |  |  |  |  |
| **TOTAL** | **6** | **36** | | **139** | | **175** | **14** | **20** | **34** | **50** | **159** | **209** |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | | | |
| **General** | | | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | | **Total** | | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| Productivity enhancement in field crops |  |  | |  | |  |  |  |  |  |  |  |
| Integrated Pest Management | 1 | 1 | | 3 | | 4 | 0 | 0 | 0 | 1 | 3 | 4 |
| Integrated Nutrient management |  |  | |  | |  |  |  |  |  |  |  |
| Rejuvenation of old orchards |  |  | |  | |  |  |  |  |  |  |  |
| Protected cultivation technology |  |  | |  | |  |  |  |  |  |  |  |
| Production and use of organic inputs |  |  | |  | |  |  |  |  |  |  |  |
| Care and maintenance of farm machinery and implements |  |  | |  | |  |  |  |  |  |  |  |
| Gender mainstreaming through SHGs |  |  | |  | |  |  |  |  |  |  |  |
| Formation and Management of SHGs |  |  | |  | |  |  |  |  |  |  |  |
| Women and Child care |  |  | |  | |  |  |  |  |  |  |  |
| Low cost and nutrient efficient diet designing |  |  | |  | |  |  |  |  |  |  |  |
| Group Dynamics and farmers organization |  |  | |  | |  |  |  |  |  |  |  |
| Information networking among farmers |  |  | |  | |  |  |  |  |  |  |  |
| Capacity building for ICT application |  |  | |  | |  |  |  |  |  |  |  |
| Management in farm animals |  |  | |  | |  |  |  |  |  |  |  |
| Livestock feed and fodder production |  |  | |  | |  |  |  |  |  |  |  |
| Household food security |  |  | |  | |  |  |  |  |  |  |  |
| Any other (pl. specify) |  |  | |  | |  |  |  |  |  |  |  |
| **Total** | **1** | **1** | | **3** | | **4** | **0** | **0** | **0** | **1** | **3** | **4** |

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

7.G. Sponsored training programmes conducted

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S.No.** | **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **1** | **Crop production and management** |  |  |  |  |  |  |  |  |  |  |
| 1.a. | Increasing production and productivity of crops | 1 | 2 | 32 | 34 | 0 | 0 | 0 | 2 | 32 | 34 |
| 1.b. | Commercial production of vegetables | 1 | 30 | 1 | 31 | 1 | 1 | 2 | 31 | 2 | 33 |
| 1.c. | Integrated Pest and Disease Management | 6 | 106 | 69 | 175 | 27 | 32 | 59 | 133 | 101 | 234 |
| **2** | **Production and value addition** |  |  |  |  |  |  |  |  |  |  |
| 2.a. | Fruit Plants |  |  |  |  |  |  |  |  |  |  |
| 2.b. | Ornamental plants |  |  |  |  |  |  |  |  |  |  |
| 2.c. | Spices crops |  |  |  |  |  |  |  |  |  |  |
| **3.** | **Soil health and fertility management** | 4 | 33 | 54 | 87 | 0 | 0 | 0 | 33 | 54 | 87 |
| **4** | **Production of Inputs at site** | 1 | 47 | 53 | 100 | 0 | 0 | 0 | 47 | 53 | 100 |
| 4.a. | Mushroom production | 4 | 21 | 13 | 34 | 0 | 0 | 0 | 21 | 13 | 34 |
| **5** | **Methods of protective cultivation** | 1 | 2 | 32 | 34 | 0 | 0 | 0 | 2 | 32 | 34 |
| **6** | **Others (Banana cultivation)** | 2 | 23 | 0 | 23 | 0 | 0 | 0 | 23 | 0 | 23 |
| **7** | **Post harvest technology and value addition** |  |  |  |  |  |  |  |  |  |  |
| 7.a. | Processing and value addition | 5 | 21 | 37 | 58 | 7 | 3 | 10 | 28 | 40 | 68 |
| 7.b. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **8** | **Farm machinery** |  |  |  |  |  |  |  |  |  |  |
| 8.a. | Farm machinery, tools and implements |  |  |  |  |  |  |  |  |  |  |
| 8.b. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **9.** | **Livestock and fisheries** |  |  |  |  |  |  |  |  |  |  |
| **10** | **Livestock production and management** |  |  |  |  |  |  |  |  |  |  |
| 10.a. | Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| 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 |  |  |  |  |  |  |  |  |  |  |
| 11.b. | Economic empowerment of women |  |  |  |  |  |  |  |  |  |  |
| 11.c. | Drudgery reduction of women |  |  |  |  |  |  |  |  |  |  |
| 11.d. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **12** | **Agricultural Extension** |  |  |  |  |  |  |  |  |  |  |
| 12.a. | Capacity Building and Group Dynamics |  |  |  |  |  |  |  |  |  |  |
| 12.b. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
|  | **Total** | **25** | **285** | **291** | **576** | **35** | **36** | **71** | **320** | **327** | **647** |

**Details of sponsoring agencies involved**

1. Coffee Board

2. Dept. of Agriculture

3. ATMA

4. Kudumbasree, Idukki

5. NSS College, Rajakumary

6. GVHSS, Rajakumary

7. MBVHSS, Senapathy

8. NHRDF

9. RAWE

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

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **1** | **Crop production and management** |  |  |  |  |  |  |  |  |  |  |
| 1.a. | Commercial floriculture |  |  |  |  |  |  |  |  |  |  |
| 1.b. | Commercial fruit production |  |  |  |  |  |  |  |  |  |  |
| 1.c. | Commercial vegetable production |  |  |  |  |  |  |  |  |  |  |
| 1.d. | Integrated crop management |  |  |  |  |  |  |  |  |  |  |
| 1.e. | Organic farming |  |  |  |  |  |  |  |  |  |  |
| 1.f. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **2** | **Post harvest technology and value addition** |  |  |  |  |  |  |  |  |  |  |
| 2.a. | Value addition |  |  |  |  |  |  |  |  |  |  |
| 2.b. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **3.** | **Livestock and fisheries** |  |  |  |  |  |  |  |  |  |  |
| 3.a. | Dairy farming |  |  |  |  |  |  |  |  |  |  |
| 3.b. | Composite fish culture |  |  |  |  |  |  |  |  |  |  |
| 3.c. | Sheep and goat rearing |  |  |  |  |  |  |  |  |  |  |
| 3.d. | Piggery |  |  |  |  |  |  |  |  |  |  |
| 3.e. | Poultry farming |  |  |  |  |  |  |  |  |  |  |
| 3.f. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **4.** | **Income generation activities** |  |  |  |  |  |  |  |  |  |  |
| 4.a. | Vermi-composting |  |  |  |  |  |  |  |  |  |  |
| 4.b. | Production of bio-agents, bio-pesticides,  bio-fertilizers etc. |  |  |  |  |  |  |  |  |  |  |
| 4.c. | Repair and maintenance of farm machinery  and implements |  |  |  |  |  |  |  |  |  |  |
| 4.d. | Rural Crafts |  |  |  |  |  |  |  |  |  |  |
| 4.e. | Seed production |  |  |  |  |  |  |  |  |  |  |
| 4.f. | Sericulture |  |  |  |  |  |  |  |  |  |  |
| 4.g. | Mushroom cultivation |  |  |  |  |  |  |  |  |  |  |
| 4.h. | Nursery, grafting etc. |  |  |  |  |  |  |  |  |  |  |
| 4.i. | Tailoring, stitching, embroidery, dying etc. |  |  |  |  |  |  |  |  |  |  |
| 4.j. | Agril. para-workers, para-vet training |  |  |  |  |  |  |  |  |  |  |
| 4.k. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **5** | **Agricultural Extension** |  |  |  |  |  |  |  |  |  |  |
| 5.a. | Capacity building and group dynamics |  |  |  |  |  |  |  |  |  |  |
| 5.b. | Others (Agricultural entrepreneurship development training) | 4 | 51 | 48 | 99 | 4 | 9 | 13 | 55 | 57 | 112 |
|  | Others (Kudumbasree, Idukki) | 1 | 1 | 8 | 9 | 0 | 0 | 0 | 1 | 8 | 9 |
|  | Others (EDP training on processing and value addition) | 2 | 0 | 27 | 27 | 0 | 0 | 0 | 0 | 27 | 27 |
|  | **Grand Total** | **7** | **52** | **83** | **135** | **4** | **9** | **13** | **56** | **92** | **148** |

**PART VIII – EXTENSION ACTIVITIES**

**Extension Programmes (including extension activities undertaken in FLD programmes)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Nature of Extension Programme** | **No. of Programmes** | **No. of Participants (General)** | | | **No. of Participants**  **SC / ST** | | | **No.of extension personnel** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| Field Day | 5 | 28 | 15 | 43 | 0 | 0 | 0 | 2 | 5 | 7 |
| Kisan Mela |  |  |  |  |  |  |  |  |  |  |
| Kisan Ghosthi |  |  |  |  |  |  |  |  |  |  |
| Exhibition | 2 | 100 | 50 | 150 | 0 | 0 | 0 | 22 | 17 | 39 |
| Film Show |  |  |  |  |  |  |  |  |  |  |
| Method Demonstrations | 1 | 2 | 10 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farmers Seminar |  |  |  |  |  |  |  |  |  |  |
| Workshop (Speciality fertilizers for balanced nutrition) | 1 | 150 | 49 | 199 | 0 | 0 | 0 | 5 | 1 | 6 |
| Group meetings |  |  |  |  |  |  |  |  |  |  |
| Lectures delivered as resource persons | 1 | 23 | 0 | 23 | 0 | 0 | 0 | 6 | 2 | 8 |
| Newspaper coverage | 5 | - | - | - | - | - | - | - | - | - |
| Radio talks | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TV talks |  |  |  |  |  |  |  |  |  |  |
| Popular articles |  |  |  |  |  |  |  |  |  |  |
| Extension Literature | 4 | - | - | - | - | - | - | - | - | - |
| Advisory Services | 101 | 66 | 34 | 100 | 0 | 0 | 0 | 0 | 4 | 4 |
| Scientific visit to farmers field | 45 | 45 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farmers visit to KVK | 100 | 150 | 84 | 234 | 0 | 0 | 0 | 50 | 20 | 70 |
| Diagnostic visits | 17 | 16 | 1 | 17 | 0 | 0 | 0 | 0 | 0 | 0 |
| Exposure visits | 1 | 1 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ex-trainees Sammelan | 2 | 7 | 12 | 19 | 0 | 0 | 0 | 0 | 0 | 0 |
| Soil health Camp |  |  |  |  |  |  |  |  |  |  |
| Animal Health Camp |  |  |  |  |  |  |  |  |  |  |
| Agri mobile clinic |  |  |  |  |  |  |  |  |  |  |
| Soil test campaigns | 1 | 80 | 35 | 115 | 0 | 0 | 0 | 5 | 0 | 5 |
| Farm Science Club Conveners meet |  |  |  |  |  |  |  |  |  |  |
| Self Help Group Conveners meetings | 1 | 34 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mahila Mandals Conveners meetings |  |  |  |  |  |  |  |  |  |  |
| Celebration of important days (World food day) | 1 | 60 | 48 | 108 | 0 | 0 | 0 | 16 | 34 | 50 |
| Any Other (FFS) | 3 | 98 | 10 | 108 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **293** | **860** | **356** | **1216** | **0** | **0** | **0** | **100** | **81** | **181** |

**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 | - | 0.02 | 4000 | 150 |
|  | Cowpea | Yard long bean | NS-621 | 0.0080 | 1100 | 100 |
|  | Cowpea | Kashi Baramasi | - | 0.0040 | 400 | 20 |
| Commercial crops |  |  |  |  |  |  |
| Vegetables |  |  |  |  |  |  |
|  | Tomato | Pusa Ruby | - | 0.0030 | 3000 | 1000 |
|  | Bitter gourd | F1 | NS-435 | 0.005 | 1500 | 5 |
|  | Bitter gourd | Priyanka | - | 0.02 | 3600 | 15 |
|  | Bitter gourd | Preethi | - | 0.02 | 3600 | 18 |
|  | Snake gourd | Kaumudi | - | 0.02 | 3000 | 200 |
|  | Snake gourd | F1 Lavanya | - | 0.01 | 4800 | 25 |
|  | Carrot | Improved Kuroda | - | 0.01 | 500 | 50 |
|  | Carrot | Nantes | - | 0.01 | 2800 | 100 |
|  | Beet root | Action | - | 0.0010 | 500 | 50 |
|  | Beet root | Madhur | - | 0.005 | 3000 | 200 |
|  | Cauliflower | NS60 | - | 0.0004 | 640 | 25 |
|  | Cauliflower | Pusa Sakthi | - | 0.0002 | 250 | 20 |
|  | Cauliflower | Pusa Sarath | - | 0.0002 | 200 | 21 |
|  | Cauliflower | Deepika | - | 0.0050 | 1700 | 50 |
|  | Cabbage | Pusa Drum Head | - | 0.005 | 2400 | 50 |
|  | Cabbage | Golden Acre | - | 0.0040 | 2000 | 28 |
|  | Cabbage | Pride of India | - | 0.003 | 2250 | 34 |
|  | Cabbage | Maharani | F1 | 0.001 | 880 | 10 |
|  | Cabbage | Parvati super cross | - | 0.0025 | 1200 | 25 |
|  | Chilli | Pusa Jwala | - | 0.005 | 900 | 25 |
|  | Chilli | HYW HOT | - | 0.005 | 1100 | 31 |
|  | Onion | Neelam black | - | 0.0001 | 560 | 20 |
|  | Cucumber | RK-40 Summer | - | 0.005 | 800 | 42 |
|  | Brinjal | NS-797 | F1 | 0.005 | 600 | 30 |
|  | Ladies finger | Arka anamica | - | 0.01 | 320 | 18 |
|  | Sambar cucumber | Sushmita | - | 0.005 | 900 | 16 |
|  | Drum stick | PKM-1 | - | 0.002 | 520 | 31 |
|  | Water melon | Sugar baby | - | 0.005 | 1250 | 42 |
| Flower crops |  |  |  |  |  |  |
|  | African Marigold | Local | - | 0.001 | 450 | 5 |
|  | Marigold | Local | - | 0.0001 | 550 | 10 |
|  | Celosia Plumosa | Local | - | 0.001 | 450 | 7 |
|  | Celosia | Local | - | 0.0005 | 450 | 10 |
|  | Celosia | Local | - | 0.00025 | 550 | 15 |
|  | Gerbera | - | F10 | 0.002 | 900 | 10 |
|  | Vinca | - | Pacifica mix | 0.001 | 450 | 10 |
|  | Ageratum | - | Dwarf ball mix | 0.005 | 450 | 15 |
|  | Pansy | Matrix mix | F1 | 0.00025 | 750 | 10 |
|  | Zinnia | - | Dream land mix | 0.0001 | 750 | 10 |
|  | Dianthus | - | Double mix | 0.001 | 450 | 10 |
|  | Portulaca | - | Double mix | 0.0005 | 450 | 10 |
|  | Salvia | - | Vista mix | 0.00025 | 550 | 10 |
|  | Gazania | - | Day break mix | 0.00015 | 550 | 15 |
|  |  |  |  |  |  |  |
| Spices |  |  |  |  |  |  |
| Fodder crop seeds |  |  |  |  |  |  |
| Fiber crops |  |  |  |  |  |  |
| Forest Species |  |  |  |  |  |  |
| Others (specify) |  |  |  |  |  |  |
| **Total** |  |  |  | **0.2125** | **58,020** | **2,598** |

# 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 |  |  |  |  |  |  |
|  | Pulasan | - | - | 4 | 1000 | 4 |
|  | Durian | - | - | 6 | 600 | 6 |
|  | Mangosteen | - | - | 13 | 2275 | 10 |
| Ornamental plants |  |  |  |  |  |  |
|  | Balsam | - | - | 500 | 2500 | 50 |
|  | Golden Cyprus | - | - | 10 | 250 | 5 |
|  | Dianthus | - | - | 10 | 150 | 5 |
|  | Poinsettia | - | - | 25 | 625 | 25 |
|  | Bougainvillea | - | - | 10 | 150 | 10 |
|  | Table palm | - | - | 10 | 250 | 10 |
|  | Anthurium | - | - | 15 | 225 | 10 |
|  | Peperomia | - | - | 20 | 200 | 10 |
|  | Marigold | - | - | 20 | 200 | 10 |
|  | Jasmine | - | - | 25 | 125 | 15 |
|  | Coleus | - | - | 25 | 125 | 10 |
|  | Bud rose | - | - | 5 | 250 | 5 |
|  | Begonia | - | - | 25 | 1250 | 20 |
| Medicinal and Aromatic |  |  |  |  |  |  |
| Plantation |  |  |  |  |  |  |
| Spices |  |  |  |  |  |  |
|  | Black pepper | Panniyoor-1 | - | 900 | 6300 | 90 |
|  |  | Panniyoor-2 | - | 518 | 3626 | 52 |
|  |  | Panniyoor-4 | - | 823 | 5761 | 65 |
|  |  | Panniyoor-5 | - | 2022 | 14154 | 135 |
|  |  | Panniyoor-6 | - | 1418 | 9926 | 54 |
|  |  | Panniyoor-7 | - | 1003 | 7021 | 80 |
|  |  | Chengannoor | - | 25 | 175 | 6 |
|  |  | Karimunda | - | 150 | 1050 | 15 |
|  |  | Kottanadan | - | 7860 | 55020 | 25 |
|  |  | Malabar excel | - | 148 | 1036 | 20 |
|  |  | Pournami | - | 150 | 1050 | 32 |
|  |  | Panchami | - | 180 | 1260 | 20 |
|  |  | IISR Shakthi | - | 135 | 945 | 12 |
|  |  | IISR Thevam | - | 367 | 2569 | 30 |
|  |  | Sreekara | - | 130 | 910 | 18 |
|  |  | Subhakara | - | 112 | 784 | 14 |
|  |  | Thekken | - | 125 | 875 | 13 |
| Tuber |  |  |  |  |  |  |
| Fodder crop saplings |  |  |  |  |  |  |
| Forest Species |  |  |  |  |  |  |
| Others(specify) |  |  |  |  |  |  |
| **Total** |  |  |  | **16,789** | **1,22,637** | **886** |

**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 | 3 | 240 | 12 |
| Bio-pesticide | EPN | 22550 nos. | 33825 | 56 |
|  | Beauveria | 100 kg | 15000 | 43 |
|  | Metarhizium | 40 litre | 6000 | 25 |
| Bio-fungicide | Pseudomonas | 1550 litre | 155000 | 340 |
|  | Trichoderma | 164 litre | 14400 | 91 |
|  | Mushroom spawn | 710.5 kg | 85260 | 250 |
| Bio Agents |  |  |  |  |
| Others (specify) |  |  |  |  |
| **Total** |  |  | **3,09,725** | **817** |

# 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 | Sasso | 291 | 32010 | 30 |
| Duals (broiler and layer) |  |  |  |  |
| Japanese Quail |  |  |  |  |
| Turkey |  |  |  |  |
| Emu |  |  |  |  |
| Ducks |  |  |  |  |
| Others (Pl. specify) |  |  |  |  |
| **Piggery** |  |  |  |  |
| Piglet |  |  |  |  |
| Others (Pl.specify) |  |  |  |  |
| **Fisheries** |  |  |  |  |
| Fingerlings |  |  |  |  |
| Others (Pl. specify) |  |  |  |  |
| **Total** |  | **291** | **32,010** | **30** |

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

**DROUGHT MITIGATION**

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

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

Six month Interval & 1000 copies distributed

(B) Literature developed/published

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **Title** | **Authors name** | **Number** |
| Research papers | - | - | - |
| Technical reports | - | - | - |
| News letters | - | - | 1000 |
| Technical bulletins | - | - |  |
| Popular articles | - | - | - |
| Extension literature | Oyster Mushroom Cultivation | Dr. Benjamin Mathew & Dr. Binu John Sam | 1000 |
| Strawberry Cultivation | Dr. Benjamin Mathew | 1000 |
| Strawberry Pest & Disease Managements | Dr. Benjamin Mathew | 1000 |
| Food security through Balanced nutrition | Ms. Jayisy Joseph | 500 |
| Others (Pl. specify) | - | - | - |
| **TOTAL** |  |  | **3000** |

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

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

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

**1) Castor Based Herbal extract for control of rodents and wild boars (Ecodon)**

KVK conducted an On Farm Trial during 2011-12 in Tapioca field for control of rodents. Castrol based herbal extract (ecodon) was used as one technology option. It was found very effective in controlling not only rodents but also wild boars. There was a heavy attack of wild boars in many areas in Idukki district. Keeping this in mind KVK conducted a field day for farmers’ and conducted a method demonstration for farmers. More than 50 farmers attended the field day.

***KVK Intervention:***

* Trainings
* Method Demonstration

***Impact:***

The farmers gave good response regarding Ecodon and more than 200 farmers have adopted the technology. The technology is horizontal expanded through ATMA Idukki to cover various blocks of Idukki Dist.

**2) 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 demonstration on balanced fertilizer application. Soil test based fertilizer recommendations along with organic manure were demonstrated. A field day was conducted with the harvest of the crop.

***KVK Intervention:***

* Trainings
* Demonstration

***Impact:***

The farmers were benefitted with the soil test based fertilizer recommendations. By adopting soil test based fertilization helps the farmers to reduce the cost of inputs (chemical fertilizers) to half.

**3) Biological Control of Cardamom Root Grub management with Entomopathogenic Nematodes**

Cardamom root grub is a serious pest damaging cardamom roots, causing 10 - 70% yield loss under various levels of infestation. The pest has been managed with chemical pesticides viz. Chloripyriphos or Phorate. Since insecticides like phorate and carbofuran are highly toxic, and the government of Kerala has banned these pesticides, biopesticides is an alternative and eco-friendly tool for sustainable management of this pest of cardamom. We conducted on farm trials and Front Line Demonstration in about 25 farmers’ field from 2011 to 2013 on the EPN technology. The menace can be successfully managed with EPN was observed in the farmers field. We have also started the mass production and made available the EPN to the farmers at KVK.

***KVK Intervention:***

* On Farm Trial
* Front Line Demonstration
* Field day
* Demonstration

***Impact:***

Around 500 farmers are practicing the technology in over 1350 ha area in Idukki district.

**4) Biological Control of Banana Pseudo Stem Weevil with Microbial Bio-pesticides**

Banana pseudo stem weevil (*Odoiporus longicollis* Oliver) is considered as major pest causing considerable damage in Banana. This pest alone causes 10- 90 per cent reduction in yield of banana. Banana cultivars such as Nendran, Poovan, Karpuravalli, Red banana, etc. are found to be highly susceptible to this pest. We conducted on farm trials and Front Line Demonstration in about 25 farmers’ field from 2011 to 2013. Banana pseudo stem trapping smeared with *Beaveria bassiana* @ 100 traps/ ha was evaluated. This is can be used for monitoring as well as controlling the weevils. It is a simple technology can be adopt easily by the farmers.

***KVK Intervention:***

* On Farm Trial
* Front Line Demonstration
* Field day
* Demonstration

***Impact:***

Around 75 farmers are practicing the technology in over 35 ha area in Idukki district.

**Farmers Field School on IPDM in cardamom**

Farmers Field School on Integrated Pest and Disease Management in cardamom was conducted at Haritha farmers club, Estate Poopara , Santhanpara Panchayath ,Idukki, Kerala. The field school consists of a group of 15 to 30 farmers divided into subgroups of 5 to 6 Farmers were selected on a voluntary basis and agreed to meet once in a month for 4 to 5 hours for field activities.

The schedule of FFS prepared for every month and the following activities were conducted.

|  |  |  |
| --- | --- | --- |
| **Period** | **Crop Stage** | **Lessons/Activities to be taught.** |
| **-** | - | Selection of village and farmers, Farmers meeting to explain about FFS programme, Bench Mark survey & IPDM technique. |
| **1st Month** | 2 year & 3 month old plant | Inauguration, Group formation and Leader selection |
| **2th Month** | 2 year & 4 month old plant | Field walk, Studying & assessing of pests & diseases, Message passing to farmers. |
| **3th Month** | 2 year & 5 month old plant | Sampling techniques & introduction to Agro-Eco System Analysis (AESA), Defoliation, Group dynamics & IPDM Mantra. |
| **4th Month** | 2 year & 6 month old plant | Symptoms of Macro and Micro nutrient deficiency, Pest population count & Preparation of Bio-pesticides. |
| **5th Month** | 2 year & 7 month old plant | IPDM approaches for root grub management & micro-enterprises development on EPN production. |
| **6th Month** | 2 year & 8 month old plant | Training on INM approaches, Beekeeping & micro-enterprises development programme |
| **7th Month** | 2 year & 9 month old plant | Sprayed and non-sprayed fields study in cardamom pests and diseases and their management, Group dynamics, Role of predators and parasites. |
| **8th Month** | 2 year & 10 month old plant | Yield comparison between IPDM and non IPDM fields. |
| **Field day** | - | Closing ceremony, Interaction of FFS with non-FFS farmers in IPDM stalls and exhibition & certificate distribution. |

Observations of the soil conditions, plant growth and development, pest and disease attack symptoms and types of pests and their natural enemies and environmental conditions around the field were recorded. Comparisons were made between the number of pests, the number of natural enemies at different growing stage of the plant. Special topics based on local agricultural problems and conditions help supported the agro-ecosystem analysis by delving more deeply into specific issues relating to agro-ecology, crop development, IPDM principles, and symptoms of Macro and Micro nutrient deficiency, Pest population count and preparation of bio-pesticides, training on INM approaches, beekeeping and micro-enterprises development programme.

A field day was also organized in FFS field and had discussions with yield comparison between non IPDM and IPDM fields. Field schools developed within farmers, solidarity (even after the school), self-discovery, group cohesiveness and critical skills. Throughout the training, participants practice some exercises to build group trust and coherence. After the training farmers can easily identify cardamom insect pests, disease and the beneficial insects. They can also prepare botanical pesticides, EPN, Trichoderma, Pseudomonas, Beauveria, Metarhizium.

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

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

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Crop / Enterprise** | **ITK Practiced** | **Purpose of ITK** |
|  |  |  |  |

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

- Identification of courses for farmers/farm women

- Rural Youth

- Inservice personnel

**10.G. Field activities**

i. Number of villages adopted : 19

ii. No. of farm families selected : 77

iii. No. of survey/PRA conducted : 1

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

Status of establishment of Lab : Functioning.

1. Year of establishment : 2005-06

2. List of equipments purchased with amount :

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No | Name of the Equipment | Qty. | Cost |
| 1. | LPG Cylinder | 1 | 4600.00 |
| 2. | Water bath WDB-2 350’400’100mm 12 holes | 1 | 4815.00 |
| 3. | Machinery for Homogensing (khan shaker) Model LKS2 platform size 75cmx43cmx10cm | 1 | 20,880.00 |
| 4. | Rotary Shaker | 1 | 16,200.00 |
| 5. | Machinery for drying (Hot air oxen) 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 | 1305 | 718 | 59 | 62360.00 |
| Water Samples | 15 | 13 | 12 | 750.00 |
| Plant samples | 0 | 0 | 0 | 0.00 |
| Manure samples | 4 | 3 | 1 | 200.00 |
| Others (Soil test campaigns) | 200 | 200 | 2 | 60000.00 |
| Total | 1524 | 234 | 64 | 1,23,310.00 |

Details of samples analyzed during the 2013-14:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Details | No. of Samples analyzed | No. of Farmers benefited | No. of Villages | Amount realized (Rs.) |
| Soil Samples | 380 | 289 | 50 | 19000.00 |
| Water Samples | 2 | 2 | 1 | 100.00 |
| Plant samples | 0 | 0 | 0 | 0.00 |
| Manure samples | 0 | 0 | 0 | 0.00 |
| Others (Soil test campaigns) | 100 | 100 | 1 | 30000.00 |
| Total | 482 | 391 | 52 | 49,100.00 |

**10.I. Technology Week celebration during 2013-14 Yes/No, If Yes**

Period of observing Technology Week : 20/11/2013 to 23/11/2013

Total number of farmers visited : 615

Total number of agencies involved : 4

Number of demonstrations visited by the farmers within KVK campus : 6

Other Details

| **Types of Activities** | **No. of**  **Activities** | **Number of**  **Farmers** | **Related crop/livestock technology** |
| --- | --- | --- | --- |
| Gosthies |  |  |  |
| Lectures organized | 7 | 615 |  |
| Exhibition | 11 | 600 |  |
| Film show |  |  |  |
| Fair |  |  |  |
| Farm Visit | 4 | 615 | Pepper, Cardamom, Vegetables, Ornamental plants |
| Diagnostic Practical’s |  |  |  |
| Supply of Literature (No.) | 615 |  |  |
| Supply of Seed (q) | 0.1125 | 475 | Vegetable & Flower seeds |
| Supply of Planting materials (No.) | 2428 | 324 | Pepper, ornamental plants |
| Bio Product supply (Kg) |  |  |  |
| Bio Fertilizers (q) |  |  |  |
| Supply of fingerlings |  |  |  |
| Supply of Livestock specimen (No.) |  |  |  |
| Total number of farmers visited the technology week |  | **615** |  |

**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 for rodents & Wild boar bio control | 25 | 90 | - | - |

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

**11.B. Cases of large scale adoption**

**(Please furnish detailed information for each case)**

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

**PART XII - LINKAGES**

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

|  |  |
| --- | --- |
| **Name of organization** | **Nature of linkage** |
| Fertilizer Association of India, Chennai | Soil Health Enhancement programme(Agricultural promotional programme)- Demonstrations |
| Fertilizer Association of India, Chennai | Workshops on Speciality fertilizers for balanced nutrition |

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

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of the scheme** | **Role of KVK** | **Date/ Month of initiation** | **Funding agency** | **Amount (Rs.)** |
| Soil Health Enhancement programme (Agricultural promotional programme) | To create among farmers about soil test based fertilizer recommendations | April 2013 | Fertilizer Association of India, Chennai | 40,000.00 |
| Soil health campaigns | To create awareness among farmers regarding soil testing and its importance | May 2013 | Fertilizer Association of India, Chennai | 30,000.00 |
| Crop Health Management | To help the  farmers from various pests and disease problem by implementing effective pest  surveillance based crop advisory system | March 2014 | Dept. of agriculture, Kerala | 6,00,000.00 |

**12.C. Details of linkage with ATMA**

a) Is ATMA implemented in your district: Yes.

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

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

**Coordination activities between KVK and ATMA during 2013-14**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Programme** | **Particulars** | **No. of programmes attended by KVK staff** | **No. of programmes Organized by KVK** | **Other remarks (if any)** |
| **01** | **Meetings** | MTA | 6 | 2 |  |
| **02** | **Research projects** |  |  |  |  |
|  |  |  |  |  |  |
| **03** | **Training programmes** | Various trainings | 6 |  |  |
|  |  |  |  |  |  |
| **04** | **Demonstrations** |  |  |  |  |
|  |  |  |  |  |  |
| **05** | **Extension Programmes** |  |  |  |  |
|  | Kisan Mela |  |  |  |  |
|  | Technology Week | 1 | 6 | 1 |  |
|  | Exposure visit |  |  |  |  |
|  | Exhibition |  |  |  |  |
|  | Soil health camps | Awareness about soil health management | 5 | **-** | **-** |
|  | Animal Health Campaigns |  |  |  |  |
|  | Others (Pl. specify) |  |  |  |  |
| **06** | **Publications** |  |  |  |  |
|  | Video Films |  |  |  |  |
|  | Books |  |  |  |  |
|  | Extension Literature |  |  |  |  |
|  | Pamphlets |  |  |  |  |
|  | Others (Pl. specify) |  |  |  |  |
| **07** | **Other Activities** (Pl. specify) |  |  |  |  |
|  | Watershed approach |  |  |  |  |
|  | Integrated Farm Development |  |  |  |  |
|  | Agri-preneurs development |  |  |  |  |
|  |  |  |  |  |  |

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

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

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

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

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

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

**12. G Kisan Mobile Advisory Services**

|  |  |  |  |
| --- | --- | --- | --- |
| **Month** | **No. of SMS sent** | **No. of farmers to which SMS was sent** | **No. of feedback / query on SMS sent** |
| **April 2013** |  |  |  |
| **May** |  |  |  |
| **June** |  |  |  |
| **July** |  |  |  |
| **August** |  |  |  |
| **September** |  |  |  |
| **October** |  |  |  |
| **November** |  |  |  |
| **December** |  |  |  |
| **January 2014** |  |  |  |
| **February** |  |  |  |
| **March 2014** |  |  |  |
| **Total for the year 2013-14** |  |  |  |

**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 m2 | Oyster mushroom var. CO1 | Mushroom | 0.5795 q | 2318.00 | 17385.00 | Revolving Fund |
| 2. | Mushroom Spawn production unit | 2009 | 10 m2 | Var. CO1, CO2 & Florida | Spawn | 2842 packets | 19894.00 | 85260.00 | Funded by SHM |
| 3. | Mist Chamber | 2009 | 96 m2 | Panniyoor-1, 2, 4, 5, 6 & 7 Sreekara  Subhakara  Panchami  Pournami  IISR Thevam  IISR Shakthi  Excel  Kottanadan  Karimunda  Chengannoor | Pepper vines | 16066 rooted cuttings | 9500.00 | 112462.00 | Funded by SHM |
| 4. | Rain Shelter | 2009 | 50 m2 | - | Ornamental plants | 700 nos. | 1400.00 | 6300.00 | Funded by SHM |
| 5. | Terrace cultivation of vegetables | 2010 | 170 m2 | - | Tomato | 1.40 q | 1100.00 | 5600.00 | Revolving Fund |
|  |  |  |  | - | Cabbage |
|  |  |  |  | - | Garden Beans |
|  |  |  |  | - | Cauliflower |
|  |  |  |  | - | Cowpea |
|  |  |  |  | - | Carrot |
|  |  |  |  | - | Beetroot |
|  |  |  |  | - | Cowpea |
|  |  |  |  | - | Cucumber |

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

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 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 | 1550 litres | 74,400.00 | 1,55,000.00 | - |
| 2. | Trichoderma | 164 litres | 9,348.00 | 16,400.00 | - |
| 3. | EPN | 22550 nos. | 15,785.00 | 33,825.00 | - |
| 4. | Metarhizium | 40 litres | 4,000.00 | 6,000.00 | - |
| 5. | Beauveria | 100 kg | 10,000.00 | 15,000.00 | - |

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

**13.E. Utilization of hostel facilities:** NA.

**13.F. Database management**

|  |  |  |
| --- | --- | --- |
| **S. No** | **Database target** | **Database created** |
|  | Farmers database | Farmers database 2011 onwards |

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

**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 | Chairperson | 57060837003 | - | SBTR0000453 |
| With KVK | State Bank of Travancore | Rajakumary | 453 | Chairperson & Programme Coordinator | 57060836995 | - | SBTR0000453 |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.**  **No.** | **Particulars** | **Sanctioned** | **Released** | **Expenditure** |
| **A. Recurring Contingencies** | | | | |
| 1 | **Pay & Allowances** | 75.20 | 75.20 | 74.50572 |
| 2 | **Traveling allowances** | 1.30 | 1.30 | 1.25 |
| 3 | **Contingencies** | | | |
| *A* | Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines) | 2.65 | 2.65 | 2.65002 |
| *B* | POL, repair of vehicles, tractor and equipments | 1.63 | 1.63 | 1.63 |
| *C* | Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained) | 0.75 | 0.75 | 0.75 |
| *D* | Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training) | 0.70 | 0.70 | 0.70 |
| *E* | Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year) | 2.70 | 2.70 | 2.70 |
| *F* | On farm testing (on need based, location specific and newly generated information in the major production systems of the area) | 0.60 | 0.60 | 0.60 |
| *G* | Training of extension functionaries | 0.25 | 0.25 | 0.25 |
| *H* | Maintenance of buildings | 0.50 | 0.50 | 0.50007 |
| *I* | Establishment of Soil, Plant & Water Testing Laboratory | 0.00 | 0.00 | 0.00 |
| *J* | Library | 0.05 | 0.05 | 0.05005 |
| *K* | Extension Activities | 0.50 | 0.50 | 0.50 |
| *L* | Farmers Field School | 0.30 | 0.30 | 0.30 |
| **TOTAL (A)** | | **87.13** | **87.13** | **86.38586** |
| **B. Non-Recurring Contingencies** | |  |  |  |
| 1 | **Works** | 0.00 | 0.00 | 0.00 |
| 2 | **Equipments including SWTL & Furniture** | 0.00 | 0.00 | 0.00 |
| 3 | **Vehicle** (Four wheeler/Two wheeler, please specify) | 0.00 | 0.00 | 0.00 |
| 4 | **Library** (Purchase of assets like books & journals) | 0.00 | 0.00 | 0.00 |
| **TOTAL (B)** | | **0.00** | **0.00** | **0.00** |
| **C. REVOLVING FUND** | |  |  |  |
| **GRAND TOTAL (A+B+C)** | | **87.13** | **87.13** | **86.38586** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **Opening balance as on 1st April** | **Income during the year** | **Expenditure during the year** | **Net balance in hand as on 1st April of each year** |
| April 2011 to March 2012 | 2.80148 | 9.17622 | 7.95126 | 4.02645 |
| April 2012 to March 2013 | 4.11341 | 15.40938 | 12.65084 | 6.87195 |
| April 2013 to March 2014 | 6.87195 | 11.54556 | 14.54764 | 3.86987 |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of the staff** | **Designation** | Title of the training programme | Institute where attended | Dates |
| Jayisy Joseph | Programme Assistant  (Home Science) | Leadership skills for women executives | MANAGE, Hyderabad | 28th October, 2013 to 1st November, 2013 |
| Dr. S. Jayababu | Subject Matter Specialist (Animal Husbandry) | Extension approaches for scaling out recent developments in live stock production technologies | Veterinary college, Shimoga, Karnataka Veterinary & Animal Sciences University | 7th to 9th January, 2014 |
| FMD sensitization workshop | IVRI, Bangalore | 1st February, 2014 |
| Dr. Benjamin Mathew | Programme Coordinator i/c. | Agriculture Extension Management for the Extension scientist’s of KVK’s | MANAGE, Hyderabad | 10th to 19th May 2013 |
| Food Safety & Supply Chain Management of Spices & Botanical Ingredients | Spices Board & CII FACE | 18th & 19th October 2013 |
| Dr. Binu John Sam | Subject Matter Specialist (Horticulture) | Hi-Tech Agriculture | CTI, KAU Mannuthy | 18th to 21st February 2014 |
| Mr. Sudhakar Soundarajan | Subject Matter Specialist  (Plant Protection) | Mass production & Quality control of Trichoderma and Pseudomonas | NBAII, Bangalore | 12th June 2013 |

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

**SUMMARY FOR 2013-14**

# I. TECHNOLOGY ASSESSMENT

**Summary of technologies assessed under various crops**

|  |  |  |  |
| --- | --- | --- | --- |
| **Thematic areas** | **Crop** | **Name of the technology assessed** | **No. of trials** |
| Integrated Nutrient Management | Black pepper | Management of berry drop in black pepper | 3 |
|  |  |  |
| Varietal Evaluation | Cardamom | Varietal trial of Root grub resistant Cardamom variety | 5 |
| Black Pepper | Assessment of suitable Black Pepper Foot rot (Quick wilt) resistant variety for Idukki District | 5 |
| Integrated Pest Management | Cardamom | Management of shoot fly, *Formosina flavipes* Mall. in small cardamom | 5 |
| Banana | Assessment of Banana Pseudostem Weevil with Cassava based bio-pesticides | 5 |
| Integrated Crop Management | Black Pepper | Use of concrete poles as standards in Black Pepper | 3 |
|  |  |  |
| Integrated Disease Management |  |  |  |
|  |  |  |
| Small Scale Income Generation Enterprises | Mushroom | Alternate media for growing oyster mushrooms | 3 |
|  |  |  |
| Weed Management |  |  |  |
|  |  |  |
| Resource Conservation Technology |  |  |  |
|  |  |  |
| Farm Machineries |  |  |  |
|  |  |  |
| Integrated Farming System |  |  |  |
|  |  |  |
| Seed / Plant production |  |  |  |
|  |  |  |
| Value addition |  |  |  |
|  |  |  |
| Drudgery Reduction |  |  |  |
| Storage Technique |  |  |  |
|  |  |  |
| Others (Pl. specify) |  |  |  |
|  |  |  |
| **Total** | | | **29** |

**Summary of technologies assessed under livestock**

|  |  |  |  |
| --- | --- | --- | --- |
| **Thematic areas** | **Name of the livestock enterprise** | **Name of the technology assessed** | **No. of trials** |
| Disease Management | Dairy cattle | Fertility management in repeat breeder cows following double PGF2 α injection | 10 |
| Evaluation of Breeds |  |  |  |
| Feed and Fodder management |  |  |  |
| Nutrition Management | Dairy cattle | Effect of rumen specific yeast (*Saccromyces cervisiae*) on growth, disease resistance & milk production in lactating animals | 5 |
| Production and Management |  |  |  |
| Others (Pl. specify) |  |  |  |
| **Total** | | | **15** |

**Summary of technologies assessed under various enterprises:** Nil.

**Summary of technologies assessed under home science:** Nil.

# II. TECHNOLOGY REFINEMENT: Nil.

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

**Summary of technologies refined under various enterprises:** Nil**.**

**Summary of technologies refined under home science:** Nil**.**

**III. FRONTLINE DEMONSTRATION**

**Crops**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop | Thematic area | Name of the technology demonstrated | No. of KVKs | No. of Farmer | Area  (ha) | Yield (q/ha) | | % change in yield | Other parameters | | \*Economics of demonstration (Rs./ha) | | | | \*Economics of check  (Rs./ha) | | | |
| Demons  ration | Check |  | Demonstration | Check | Gross  Cost | Gross  Return | Net Return | \*\*  BCR | Gross  Cost | Gross  Return | Net Return | \*\*  BCR |
| Cereals |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Millets |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Oilseeds |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pulses |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Vegetables** | Integrated Nutrient Management | Use of microbial consortium for organic production of cowpea | 1 | 10 | 0.8 | 110 | 80 | 37.5 | Plants more green in colour.  No major pest or disease incidence. | Normal stand of the crop.  Aphids and Serpentine leaf miner found in almost 75% area. | 135000 | 220000 | 85000 | 1.62 | 142000 | 160000 | 18000 | 1.12 |
| Unscientific Nutrient Management | Demonstration o f PGPR – Mix 1 on productivity of Bitter Gourd | 1 | 10 | 1 | 210.2 | 178.2 | 17.96 | - | - | 165000 | 293000 | 128000 | 1.78 | 142000 | 232000 | 90000 | 1.63 |
| Unscientific Nutrient Management | Demonstration o f of IIHR Vegetable Nutrient mixture in cow pea Var. Vellayani Jothika | 1 | 10 | 1 | 175.6 | 118.6 | 48.06 | - | - | 156500 | 256700 | 100200 | 1.64 | 134500 | 214300 | 79800 | 1.59 |
| Indiscriminate use of PP chemical | Pheromone traps for management of fruit fly in Bitter gourd | 1 | 5 | 2 | 168.4 | 123.4 | 36.47 | - | - | 134300 | 243500 | 109200 | 1.81 | 126300 | 214700 | 88400 | 1.70 |
| **Flowers** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Ornamental** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Fruit** | IPM | Biological control of banana pseudo stem weevil | 1 | 10 | 1 | 288.5 | 227.3 | 26.92 | - | - | 250610 | 386000 | 135390 | 1.54 | 214200 | 304300 | 90100 | 1.42 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Fibres like Cotton** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Spices and condiments** | INM | Microbial Consortium bio fertilizers in black pepper | 1 | 10 | 0.4 | 2.6 | 2.1 | 23.81 | - | - | 185000 | 365000 | 180000 | 1.97 | 152000 | 264000 | 112000 | 1.73 |
| IPM | Popularization of apiculture and EPN for increase in productivity and reducing root grub menace in cardamom | - | 10 | 3.5 | 72 | 57 | 26.32 | - | - | 154000 | 3150000 | 161000 | 2.04 | 132000 | 236000 | 1040000 | 1.78 |
| Integrated Nutrient Management | INM in Cardamom | - | 10 | 1 | 89 | 70 | 27 | - | - | 285000 | 712000 | 427000 | 2.49 | 285000 | 560000 | 275000 | 1.96 |
| Integrated Nutrient Management | Effective application of azospirillum & VAM for better rooting in black pepper nursery | - | 10 | 0.02 | - | - | - | - | - | 10000 | 18500 | 8500 | 1.85 | 8000 | 12300 | 4300 | 1.53 |
| **Commercial crops** | Productivity improvement of major crops | High Density Planting in Banana | 1 | 10 | 2.0 | *Ongoing* | | | | | | | | | | | | |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Medicinal and aromatic** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Fodder** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Plantation** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Fibre** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Others (pl.specify)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Total** | |  |  |  |  | | | | | | | | | | | | |

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

\*\* BCR= GROSS RETURN/GROSS COST

Livestock: Nil.

Fisheries: Nil.

Other enterprises: Nil.

Women empowerment

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

Farm implements and machinery

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name of the implement | Crop | Name of the technology demonstrated | No. of KVKs | No. of Farmer | Area (ha) | Filed observation (output/man hour) | | % change in major parameter | Labor reduction (man days) | | | | Cost reduction (Rs./ha or Rs./Unit ect.) | | | |
| Demons  ration | Check |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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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

**Other enterprises**

**Demonstration details on crop hybrids:** Nil.

IV. Training Programme

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **Crop Production** |  |  |  |  |  |  |  |  |  |  |
| Weed Management |  |  |  |  |  |  |  |  |  |  |
| Resource Conservation Technologies |  |  |  |  |  |  |  |  |  |  |
| Cropping Systems |  |  |  |  |  |  |  |  |  |  |
| Crop Diversification |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming |  |  |  |  |  |  |  |  |  |  |
| Micro Irrigation/Irrigation |  |  |  |  |  |  |  |  |  |  |
| Seed production |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Crop Management |  |  |  |  |  |  |  |  |  |  |
| Soil and Water Conservation |  |  |  |  |  |  |  |  |  |  |
| Integrated Nutrient Management |  |  |  |  |  |  |  |  |  |  |
| Production of organic inputs |  |  |  |  |  |  |  |  |  |  |
| 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 | 1 | 2 | 32 | 34 | 0 | 0 | 0 | 2 | 32 | 34 |
| Others (Kitchen garden) | 1 | 30 | 1 | 31 | 1 | 1 | 2 | 31 | 2 | 33 |
| Others (**Banana cultivation**) | 2 | 23 | 0 | 23 | 0 | 0 | 0 | 23 | 0 | 23 |
| **b) Fruits** |  |  |  |  |  |  |  |  |  |  |
| Training and Pruning |  |  |  |  |  |  |  |  |  |  |
| Layout and Management of Orchards |  |  |  |  |  |  |  |  |  |  |
| Cultivation of Fruit |  |  |  |  |  |  |  |  |  |  |
| Management of young plants/orchards |  |  |  |  |  |  |  |  |  |  |
| Rejuvenation of old orchards |  |  |  |  |  |  |  |  |  |  |
| Export potential fruits |  |  |  |  |  |  |  |  |  |  |
| Micro irrigation systems of orchards |  |  |  |  |  |  |  |  |  |  |
| Plant propagation techniques |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **c) Ornamental Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery Management |  |  |  |  |  |  |  |  |  |  |
| Management of potted plants |  |  |  |  |  |  |  |  |  |  |
| Export potential of ornamental plants |  |  |  |  |  |  |  |  |  |  |
| Propagation techniques of Ornamental Plants |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **d) Plantation crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **e) Tuber crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **f) Spices** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **g) Medicinal and Aromatic Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Production and management technology |  |  |  |  |  |  |  |  |  |  |
| Post harvest technology and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Soil Health and Fertility Management** |  |  |  |  |  |  |  |  |  |  |
| Soil fertility management | 2 | 3 | 19 | 22 | 0 | 0 | 0 | 3 | 19 | 22 |
| Integrated water management |  |  |  |  |  |  |  |  |  |  |
| Integrated nutrient management | 1 | 30 | 0 | 30 | 0 | 0 | 0 | 30 | 0 | 30 |
| Production and use of organic inputs | 1 | 47 | 53 | 100 | 0 | 0 | 0 | 47 | 53 | 100 |
| Management of Problematic soils |  |  |  |  |  |  |  |  |  |  |
| Micro nutrient deficiency in crops | 1 | 0 | 35 | 35 | 0 | 0 | 0 | 0 | 35 | 35 |
| Nutrient use efficiency |  |  |  |  |  |  |  |  |  |  |
| Balanced use of fertilizers |  |  |  |  |  |  |  |  |  |  |
| Soil and water testing |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Livestock Production and Management** |  |  |  |  |  |  |  |  |  |  |
| Dairy Management |  |  |  |  |  |  |  |  |  |  |
| Poultry Management |  |  |  |  |  |  |  |  |  |  |
| Piggery Management |  |  |  |  |  |  |  |  |  |  |
| Rabbit Management |  |  |  |  |  |  |  |  |  |  |
| Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| Animal Disease Management |  |  |  |  |  |  |  |  |  |  |
| Feed and Fodder technology |  |  |  |  |  |  |  |  |  |  |
| Production of quality animal products |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Home Science/Women empowerment** |  |  |  |  |  |  |  |  |  |  |
| Household food security by kitchen gardening and nutrition gardening |  |  |  |  |  |  |  |  |  |  |
| Design and development of low/minimum cost diet |  |  |  |  |  |  |  |  |  |  |
| Designing and development for high nutrient efficiency diet |  |  |  |  |  |  |  |  |  |  |
| Minimization of nutrient loss in processing |  |  |  |  |  |  |  |  |  |  |
| Processing and cooking |  |  |  |  |  |  |  |  |  |  |
| Gender mainstreaming through SHGs |  |  |  |  |  |  |  |  |  |  |
| Storage loss minimization techniques | 1 | 1 | 16 | 17 | 7 | 3 | 10 | 8 | 19 | 27 |
| Value addition | 3 | 12 | 21 | 33 | 0 | 0 | 0 | 12 | 21 | 33 |
| 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 | 4 | 74 | 26 | 100 | 26 | 4 | 30 | 100 | 30 | 130 |
| Integrated Disease Management | 1 | 31 | 40 | 71 | 1 | 28 | 29 | 32 | 68 | 100 |
| Bio-control of pests and diseases |  |  |  |  |  |  |  |  |  |  |
| Production of bio control agents and bio pesticides |  |  |  |  |  |  |  |  |  |  |
| 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 | 4 | 21 | 13 | 34 | 0 | 0 | 0 | 21 | 13 | 34 |
| Apiculture |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Capacity Building and Group Dynamics** |  |  |  |  |  |  |  |  |  |  |
| Leadership development |  |  |  |  |  |  |  |  |  |  |
| Group dynamics |  |  |  |  |  |  |  |  |  |  |
| Formation and Management of SHGs |  |  |  |  |  |  |  |  |  |  |
| Mobilization of social capital |  |  |  |  |  |  |  |  |  |  |
| Entrepreneurial development of farmers/youths |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Agro-forestry** |  |  |  |  |  |  |  |  |  |  |
| Production technologies |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming Systems |  |  |  |  |  |  |  |  |  |  |
| Others (Pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **TOTAL** | **22** | **274** | **256** | **530** | **35** | **36** | **71** | **309** | **292** | **601** |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **Crop Production** |  |  |  |  |  |  |  |  |  |  |
| Weed Management |  |  |  |  |  |  |  |  |  |  |
| Resource Conservation Technologies |  |  |  |  |  |  |  |  |  |  |
| Cropping Systems |  |  |  |  |  |  |  |  |  |  |
| Crop Diversification |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming |  |  |  |  |  |  |  |  |  |  |
| Micro Irrigation/Irrigation |  |  |  |  |  |  |  |  |  |  |
| Seed production |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Crop Management |  |  |  |  |  |  |  |  |  |  |
| Soil and Water Conservation | 1 | 30 | 0 | 30 | 0 | 0 | 0 | 30 | 0 | 30 |
| Integrated Nutrient Management |  |  |  |  |  |  |  |  |  |  |
| Production of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Horticulture** |  |  |  |  |  |  |  |  |  |  |
| **a) Vegetable Crops** |  |  |  |  |  |  |  |  |  |  |
| Production of low value and high volume crop |  |  |  |  |  |  |  |  |  |  |
| Off-season vegetables |  |  |  |  |  |  |  |  |  |  |
| Nursery raising |  |  |  |  |  |  |  |  |  |  |
| Exotic vegetables |  |  |  |  |  |  |  |  |  |  |
| Export potential vegetables |  |  |  |  |  |  |  |  |  |  |
| Grading and standardization |  |  |  |  |  |  |  |  |  |  |
| Protective cultivation | 2 | 15 | 66 | 81 | 15 | 22 | 37 | 30 | 88 | 118 |
| Others (Organic farming) | 6 | 100 | 45 | 145 | 22 | 22 | 44 | 122 | 67 | 189 |
| Others (**Production technology**) | 4 | 118 | 29 | 147 | 0 | 0 | 0 | 118 | 29 | 147 |
| Others (**Hi tech cultivation**) | 3 | 145 | 54 | 199 | 0 | 0 | 0 | 145 | 54 | 199 |
| Others (**IFS**) | 5 | 203 | 92 | 295 | 0 | 0 | 0 | 203 | 92 | 295 |
| Others (**Organic vegetable cultivation**) | 6 | 71 | 63 | 134 | 0 | 0 | 0 | 71 | 63 | 134 |
| **b) Fruits** |  |  |  |  |  |  |  |  |  |  |
| Training and Pruning |  |  |  |  |  |  |  |  |  |  |
| Layout and Management of Orchards |  |  |  |  |  |  |  |  |  |  |
| Cultivation of Fruit |  |  |  |  |  |  |  |  |  |  |
| Management of young plants/orchards |  |  |  |  |  |  |  |  |  |  |
| Rejuvenation of old orchards |  |  |  |  |  |  |  |  |  |  |
| Export potential fruits |  |  |  |  |  |  |  |  |  |  |
| Micro irrigation systems of orchards |  |  |  |  |  |  |  |  |  |  |
| Plant propagation techniques |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **c) Ornamental Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery Management |  |  |  |  |  |  |  |  |  |  |
| Management of potted plants |  |  |  |  |  |  |  |  |  |  |
| Export potential of ornamental plants |  |  |  |  |  |  |  |  |  |  |
| Propagation techniques of Ornamental Plants |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **d) Plantation crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **e) Tuber crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **f) Spices** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **g) Medicinal and Aromatic Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Production and management technology |  |  |  |  |  |  |  |  |  |  |
| Post harvest technology and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Soil Health and Fertility Management** |  |  |  |  |  |  |  |  |  |  |
| Soil fertility management | 2 | 30 | 75 | 105 | 0 | 0 | 0 | 30 | 75 | 105 |
| Integrated water management |  |  |  |  |  |  |  |  |  |  |
| Integrated nutrient management | 2 | 161 | 56 | 217 | 0 | 0 | 0 | 161 | 56 | 217 |
| Production and use of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Management of Problematic soils | 2 | 45 | 15 | 60 | 0 | 0 | 0 | 45 | 15 | 60 |
| Micro nutrient deficiency in crops | 2 | 55 | 8 | 63 | 0 | 0 | 0 | 55 | 8 | 63 |
| Nutrient use efficiency | 1 | 19 | 6 | 25 | 0 | 0 | 0 | 19 | 6 | 25 |
| Balanced use of fertilizers | 1 | 25 | 10 | 35 | 0 | 0 | 0 | 25 | 10 | 35 |
| Soil and water testing | 3 | 108 | 44 | 152 | 6 | 4 | 10 | 114 | 48 | 162 |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Livestock Production and Management** |  |  |  |  |  |  |  |  |  |  |
| Dairy Management |  |  |  |  |  |  |  |  |  |  |
| Poultry Management |  |  |  |  |  |  |  |  |  |  |
| Piggery Management |  |  |  |  |  |  |  |  |  |  |
| Rabbit Management |  |  |  |  |  |  |  |  |  |  |
| Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| Animal Disease Management | 2 | 53 | 23 | 76 | 4 | 1 | 5 | 57 | 24 | 81 |
| Feed and Fodder technology | 1 | 36 | 24 | 60 | 6 | 4 | 10 | 42 | 28 | 70 |
| Production of quality animal products |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Home Science/Women empowerment** |  |  |  |  |  |  |  |  |  |  |
| Household food security by kitchen gardening and nutrition gardening | 1 | 170 | 85 | 255 | 0 | 0 | 0 | 170 | 85 | 255 |
| 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 | 2 | 1 | 52 | 53 | 0 | 0 | 0 | 1 | 52 | 53 |
| Gender mainstreaming through SHGs |  |  |  |  |  |  |  |  |  |  |
| Storage loss minimization techniques |  |  |  |  |  |  |  |  |  |  |
| Value addition | 2 | 15 | 47 | 62 | 0 | 0 | 0 | 15 | 47 | 62 |
| Women empowerment | 1 | 2 | 35 | 37 | 0 | 0 | 0 | 2 | 35 | 37 |
| 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 | 3 | 274 | 45 | 319 | 0 | 0 | 0 | 274 | 45 | 319 |
| Integrated Disease Management | 4 | 89 | 52 | 141 | 0 | 0 | 0 | 89 | 52 | 141 |
| Bio-control of pests and diseases |  |  |  |  |  |  |  |  |  |  |
| Production of bio control agents and bio pesticides | 1 | 45 | 7 | 52 | 0 | 0 | 0 | 45 | 7 | 52 |
| 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 | 3 | 28 | 82 | 110 | 6 | 8 | 14 | 34 | 90 | 124 |
| Apiculture | 1 | 38 | 14 | 52 | 0 | 0 | 0 | 38 | 14 | 52 |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Capacity Building and Group Dynamics** |  |  |  |  |  |  |  |  |  |  |
| Leadership development |  |  |  |  |  |  |  |  |  |  |
| Group dynamics |  |  |  |  |  |  |  |  |  |  |
| Formation and Management of SHGs | 2 | 0 | 51 | 51 | 0 | 0 | 0 | 0 | 51 | 51 |
| Mobilization of social capital |  |  |  |  |  |  |  |  |  |  |
| Entrepreneurial development of farmers/youths | 2 | 21 | 18 | 39 | 0 | 0 | 0 | 21 | 18 | 39 |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Agro-forestry** |  |  |  |  |  |  |  |  |  |  |
| Production technologies |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming Systems |  |  |  |  |  |  |  |  |  |  |
| Others (Pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **TOTAL** | **64** | **1897** | **1079** | **2976** | **59** | **61** | **120** | **1956** | **1140** | **3096** |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | | | | | | | | | |
| **General** | | | | | | **SC/ST** | | | | | | **Grand Total** | | | | |
| **Male** | **Female** | | **Total** | | | **Male** | | **Female** | | **Total** | | **Male** | | **Female** | | **Total** |
| Nursery Management of Horticulture crops |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Training and pruning of orchards |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Protected cultivation of vegetable crops |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Commercial fruit production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Integrated farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Seed production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Production of organic inputs |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Planting material production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Vermi-culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Mushroom Production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Bee-keeping |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Sericulture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Repair and maintenance of farm machinery and implements |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Value addition |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Small scale processing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Post Harvest Technology | 1 | 8 | | 0 | | 8 | 0 | | 0 | | 0 | | 8 | | 0 | | 8 | |
| Tailoring and Stitching |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Rural Crafts |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Production of quality animal products |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Dairying |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Sheep and goat rearing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Quail farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Piggery |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Rabbit farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Poultry production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Ornamental fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Composite fish culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Freshwater prawn culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Shrimp farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Pearl culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Cold water fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fish harvest and processing technology |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fry and fingerling rearing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Any other (pl. specify) |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| **TOTAL** | **1** | **8** | | **0** | | **8** | **0** | | **0** | | **0** | | **8** | | **0** | | **8** | |

**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 | 1 | 2 | | 6 | | 8 | | 14 | | 10 | | 24 | | 16 | | 16 | | 32 |
| Commercial fruit production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Integrated farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Seed production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Production of organic inputs |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Planting material production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Vermi-culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Mushroom Production | 1 | 6 | | 35 | | 41 | | 0 | | 10 | | 10 | | 6 | | 45 | | 51 |
| Bee-keeping |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Sericulture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Repair and maintenance of farm machinery and implements |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Value addition | 2 | 7 | | 40 | | 47 | | 0 | | 0 | | 0 | | 7 | | 40 | | 47 |
| Small scale processing | 1 | 19 | | 26 | | 45 | | 0 | | 0 | | 0 | | 19 | | 26 | | 45 |
| Post Harvest Technology | 1 | 2 | | 32 | | 34 | 0 | | 0 | | 0 | | 2 | | 32 | | 34 | |
| Tailoring and Stitching |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Rural Crafts |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Production of quality animal products |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Dairying |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Sheep and goat rearing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Quail farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Piggery |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Rabbit farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Poultry production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Ornamental fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Composite fish culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Freshwater prawn culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Shrimp farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Pearl culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Cold water fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fish harvest and processing technology |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fry and fingerling rearing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Any other (pl. specify) |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| **TOTAL** | **6** | **36** | | **139** | | **175** | **14** | | **20** | | **34** | | **50** | | **159** | | **209** | |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | | | |
| **General** | | | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | | **Total** | | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| Productivity enhancement in field crops |  |  | |  | |  |  |  |  |  |  |  |
| Integrated Pest Management | 1 | 1 | | 3 | | 4 | 0 | 0 | 0 | 1 | 3 | 4 |
| Integrated Nutrient management |  |  | |  | |  |  |  |  |  |  |  |
| Rejuvenation of old orchards |  |  | |  | |  |  |  |  |  |  |  |
| Protected cultivation technology |  |  | |  | |  |  |  |  |  |  |  |
| Production and use of organic inputs |  |  | |  | |  |  |  |  |  |  |  |
| Care and maintenance of farm machinery and implements |  |  | |  | |  |  |  |  |  |  |  |
| Gender mainstreaming through SHGs |  |  | |  | |  |  |  |  |  |  |  |
| Formation and Management of SHGs |  |  | |  | |  |  |  |  |  |  |  |
| Women and Child care |  |  | |  | |  |  |  |  |  |  |  |
| Low cost and nutrient efficient diet designing |  |  | |  | |  |  |  |  |  |  |  |
| Group Dynamics and farmers organization |  |  | |  | |  |  |  |  |  |  |  |
| Information networking among farmers |  |  | |  | |  |  |  |  |  |  |  |
| Capacity building for ICT application |  |  | |  | |  |  |  |  |  |  |  |
| Management in farm animals |  |  | |  | |  |  |  |  |  |  |  |
| Livestock feed and fodder production |  |  | |  | |  |  |  |  |  |  |  |
| Household food security |  |  | |  | |  |  |  |  |  |  |  |
| Any other (pl. specify) |  |  | |  | |  |  |  |  |  |  |  |
| **Total** | **1** | **1** | | **3** | | **4** | **0** | **0** | **0** | **1** | **3** | **4** |

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

**Sponsored training programmes**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S.No.** | **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **1** | **Crop production and management** |  |  |  |  |  |  |  |  |  |  |
| 1.a. | Increasing production and productivity of crops | 1 | 2 | 32 | 34 | 0 | 0 | 0 | 2 | 32 | 34 |
| 1.b. | Commercial production of vegetables | 1 | 30 | 1 | 31 | 1 | 1 | 2 | 31 | 2 | 33 |
| 1.c. | Integrated Pest and Disease Management | 6 | 106 | 69 | 175 | 27 | 32 | 59 | 133 | 101 | 234 |
| **2** | **Production and value addition** |  |  |  |  |  |  |  |  |  |  |
| 2.a. | Fruit Plants |  |  |  |  |  |  |  |  |  |  |
| 2.b. | Ornamental plants |  |  |  |  |  |  |  |  |  |  |
| 2.c. | Spices crops |  |  |  |  |  |  |  |  |  |  |
| **3.** | **Soil health and fertility management** | 4 | 33 | 54 | 87 | 0 | 0 | 0 | 33 | 54 | 87 |
| **4** | **Production of Inputs at site** | 1 | 47 | 53 | 100 | 0 | 0 | 0 | 47 | 53 | 100 |
| 4.a. | Mushroom production | 4 | 21 | 13 | 34 | 0 | 0 | 0 | 21 | 13 | 34 |
| **5** | **Methods of protective cultivation** | 1 | 2 | 32 | 34 | 0 | 0 | 0 | 2 | 32 | 34 |
| **6** | **Others (Banana cultivation)** | 2 | 23 | 0 | 23 | 0 | 0 | 0 | 23 | 0 | 23 |
| **7** | **Post harvest technology and value addition** |  |  |  |  |  |  |  |  |  |  |
| 7.a. | Processing and value addition | 5 | 21 | 37 | 58 | 7 | 3 | 10 | 28 | 40 | 68 |
| 7.b. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **8** | **Farm machinery** |  |  |  |  |  |  |  |  |  |  |
| 8.a. | Farm machinery, tools and implements |  |  |  |  |  |  |  |  |  |  |
| 8.b. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **9.** | **Livestock and fisheries** |  |  |  |  |  |  |  |  |  |  |
| **10** | **Livestock production and management** |  |  |  |  |  |  |  |  |  |  |
| 10.a. | Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| 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 |  |  |  |  |  |  |  |  |  |  |
| 11.b. | Economic empowerment of women |  |  |  |  |  |  |  |  |  |  |
| 11.c. | Drudgery reduction of women |  |  |  |  |  |  |  |  |  |  |
| 11.d. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **12** | **Agricultural Extension** |  |  |  |  |  |  |  |  |  |  |
| 12.a. | Capacity Building and Group Dynamics |  |  |  |  |  |  |  |  |  |  |
| 12.b. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
|  | **Total** | **25** | **285** | **291** | **576** | **35** | **36** | **71** | **320** | **327** | **647** |

**Details of Vocational Training Programmes carried out for rural youth**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S.No.** | **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **1** | **Crop production and management** |  |  |  |  |  |  |  |  |  |  |
| 1.a. | Commercial floriculture |  |  |  |  |  |  |  |  |  |  |
| 1.b. | Commercial fruit production |  |  |  |  |  |  |  |  |  |  |
| 1.c. | Commercial vegetable production |  |  |  |  |  |  |  |  |  |  |
| 1.d. | Integrated crop management |  |  |  |  |  |  |  |  |  |  |
| 1.e. | Organic farming |  |  |  |  |  |  |  |  |  |  |
| 1.f. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **2** | **Post harvest technology and value addition** |  |  |  |  |  |  |  |  |  |  |
| 2.a. | Value addition |  |  |  |  |  |  |  |  |  |  |
| 2.b. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **3.** | **Livestock and fisheries** |  |  |  |  |  |  |  |  |  |  |
| 3.a. | Dairy farming |  |  |  |  |  |  |  |  |  |  |
| 3.b. | Composite fish culture |  |  |  |  |  |  |  |  |  |  |
| 3.c. | Sheep and goat rearing |  |  |  |  |  |  |  |  |  |  |
| 3.d. | Piggery |  |  |  |  |  |  |  |  |  |  |
| 3.e. | Poultry farming |  |  |  |  |  |  |  |  |  |  |
| 3.f. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **4.** | **Income generation activities** |  |  |  |  |  |  |  |  |  |  |
| 4.a. | Vermi-composting |  |  |  |  |  |  |  |  |  |  |
| 4.b. | Production of bio-agents, bio-pesticides,  bio-fertilizers etc. |  |  |  |  |  |  |  |  |  |  |
| 4.c. | Repair and maintenance of farm machinery  and implements |  |  |  |  |  |  |  |  |  |  |
| 4.d. | Rural Crafts |  |  |  |  |  |  |  |  |  |  |
| 4.e. | Seed production |  |  |  |  |  |  |  |  |  |  |
| 4.f. | Sericulture |  |  |  |  |  |  |  |  |  |  |
| 4.g. | Mushroom cultivation |  |  |  |  |  |  |  |  |  |  |
| 4.h. | Nursery, grafting etc. |  |  |  |  |  |  |  |  |  |  |
| 4.i. | Tailoring, stitching, embroidery, dying etc. |  |  |  |  |  |  |  |  |  |  |
| 4.j. | Agril. para-workers, para-vet training |  |  |  |  |  |  |  |  |  |  |
| 4.k. | Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **5** | **Agricultural Extension** |  |  |  |  |  |  |  |  |  |  |
| 5.a. | Capacity building and group dynamics |  |  |  |  |  |  |  |  |  |  |
| 5.b. | Others (Agricultural entrepreneurship development training) | 4 | 51 | 48 | 99 | 4 | 9 | 13 | 55 | 57 | 112 |
|  | Others (Kudumbasree, Idukki) | 1 | 1 | 8 | 9 | 0 | 0 | 0 | 1 | 8 | 9 |
|  | Others (EDP training on processing and value addition) | 2 | 0 | 27 | 27 | 0 | 0 | 0 | 0 | 27 | 27 |
|  | **Grand Total** | **7** | **52** | **83** | **135** | **4** | **9** | **13** | **56** | **92** | **148** |

V. Extension Programmes

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Activities** | **No. of programmes** | **No. of farmers** | **No. of Extension Personnel** | **TOTAL** |
| Advisory Services | 101 | 100 | 8 | 108 |
| Diagnostic visits | 17 | 17 | 0 | 17 |
| Field Day | 5 | 43 | 7 | 50 |
| Group discussions | - | - | - | - |
| Kisan Ghosthi | - | - | - | - |
| Film Show | - | - | - | - |
| Self -help groups | 1 | 34 | 0 | 34 |
| Kisan Mela | - | - | - | - |
| Exhibition | 2 |  |  |  |
| Scientists' visit to farmers field | 45 | 45 | 0 | 45 |
| Plant/animal health camps | - | - | - | - |
| Farm Science Club | - | - | - | - |
| Ex-trainees Sammelan | 2 | 19 | 0 | 19 |
| Farmers' seminar/workshop (Speciality fertilizers for balanced nutrition) | 1 | 199 | 6 | 205 |
| Method Demonstrations | 1 | 12 | 0 | 12 |
| Celebration of important days (World food day) | 3 | 108 | 0 | 108 |
| Special day celebration | - | - | - | - |
| Exposure visits | 1 | 9 | 0 | 9 |
| Others (pl. specify) | - | - | - | - |
| **Total** | **179** | **586** | **21** | **607** |

Details of other extension programmes

|  |  |
| --- | --- |
| **Particulars** | **Number** |
| Electronic Media | - |
| Extension Literature | 3500 |
| News Letter | 1000 |
| News paper coverage | 10 |
| Technical Articles | - |
| Technical Bulletins | - |
| Technical Reports | - |
| Radio Talks | 2 |
| TV Talks | - |
| Animal health amps (Number of animals treated) | - |
| Others (pl. specify) | - |
| **Total** | **5012** |

1. **PRODUCTION OF SEED/PLANTING MATERIAL**

**Production of seeds by the KVKs**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Crop category | **Name of the crop** | **Name of the variety**  **(if hybrid pl. specify)** | **Quantity of seed**  **(q)** | **Value**  **(Rs)** | **Number of farmers** |
| Cereals |  |  |  |  |  |
| Oilseeds |  |  |  |  |  |
| Pulses |  |  |  |  |  |
|  | Cowpea | Lola | 0.0020 | 4000 | 150 |
|  | Cowpea | Yard long bean (NS-621) | 0.0080 | 1100 | 100 |
|  | Cowpea | Kashi Baramasi | 0.0040 | 400 | 20 |
| Commercial crops |  |  |  |  |  |
| Vegetables |  |  |  |  |  |
|  | Tomato | Pusa Ruby | 0.0030 | 3000 | 1000 |
|  | Bitter gourd | F1 (NS-435) | 0.0050 | 1500 | 5 |
|  | Bitter gourd | Priyanka | 0.0200 | 3600 | 15 |
|  | Bitter gourd | Preethi | 0.0200 | 3600 | 18 |
|  | Snake gourd | Kaumudi | 0.0200 | 3000 | 200 |
|  | Snake gourd | F1 Lavanya | 0.0100 | 4800 | 25 |
|  | Carrot | Improved Kuroda | 0.0100 | 500 | 50 |
|  | Carrot | Nantes | 0.0100 | 2800 | 100 |
|  | Beet root | Action | 0.0010 | 500 | 50 |
|  | Beet root | Madhur | 0.0050 | 3000 | 200 |
|  | Cauliflower | NS60 | 0.0004 | 640 | 25 |
|  | Cauliflower | Pusa Sakthi | 0.0002 | 250 | 20 |
|  | Cauliflower | Pusa Sarath | 0.0002 | 200 | 21 |
|  | Cauliflower | Deepika | 0.0050 | 1700 | 50 |
|  | Cabbage | Pusa Drum Head | 0.0050 | 2400 | 50 |
|  | Cabbage | Golden Acre | 0.0040 | 2000 | 28 |
|  | Cabbage | Pride of India | 0.0030 | 2250 | 34 |
|  | Cabbage | Maharani (F1) | 0.0010 | 880 | 10 |
|  | Chilli | Pusa Jwala | 0.0050 | 900 | 25 |
|  | Chilli | HYW HOT | 0.0050 | 1100 | 31 |
|  | Onion | Neelam black | 0.0001 | 560 | 20 |
|  | Cucumber | RK-40 Summer | 0.0050 | 800 | 42 |
|  | Brinjal | NS-797 (F1) | 0.0050 | 600 | 30 |
|  | Ladies finger | Arka anamica | 0.0100 | 320 | 18 |
|  | Sambar cucumber | Sushmita | 0.0050 | 900 | 16 |
|  | Drum stick | PKM-1 | 0.0020 | 520 | 31 |
|  | Water melon | Sugar baby | 0.0050 | 1250 | 42 |
| Flower crops |  |  |  |  |  |
|  | African Marigold | Local | 0.0010 | 450 | 5 |
|  | Marigold | Local | 0.0001 | 550 | 10 |
|  | Celosia Plumosa | Local | 0.0010 | 450 | 7 |
|  | Celosia | Local | 0.0005 | 450 | 10 |
|  | Celosia | Local | 0.00025 | 550 | 15 |
|  | Gerbera | F10 | 0.0020 | 900 | 10 |
|  | Vinca | Pacifica mix | 0.0010 | 450 | 10 |
|  | Ageratum | Dwarf ball mix | 0.0050 | 450 | 15 |
|  | Pansy | Matrix mix (F1) | 0.00025 | 750 | 10 |
|  | Zinnia | Dream land mix | 0.0001 | 750 | 10 |
|  | Dianthus | Double mix | 0.0010 | 450 | 10 |
|  | Portulaca | Double mix | 0.0005 | 450 | 10 |
|  | Salvia | Vista mix | 0.00025 | 550 | 10 |
|  | Gazania | Day break mix | 0.00015 | 550 | 15 |
| Spices |  |  |  |  |  |
| Fodder crop seeds |  |  |  |  |  |
| Fiber crops |  |  |  |  |  |
| Forest Species |  |  |  |  |  |
| Others |  |  |  |  |  |
| **Total** |  |  | **0.2125** | **58,020** | **2,598** |

# Production of planting materials by the KVKs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Crop category** | **Name of the crop** | **Name of the variety**  **(if hybrid pl. specify)** | **Number** | **Value (Rs.)** | **Number of farmers** |
| Commercial |  |  |  |  |  |
| Vegetable seedlings |  |  |  |  |  |
| Fruits |  |  |  |  |  |
|  | Pulasan | - | 4 | 1000 | 4 |
|  | Durian | - | 6 | 600 | 6 |
|  | Mangosteen | - | 13 | 2275 | 10 |
| Ornamental plants |  |  |  |  |  |
|  | Balsam | - | 500 | 2500 | 50 |
|  | Golden Cyprus | - | 10 | 250 | 5 |
|  | Dianthus | - | 10 | 150 | 5 |
|  | Poinsettia | - | 25 | 625 | 25 |
|  | Bougainvillea | - | 10 | 150 | 10 |
|  | Table palm | - | 10 | 250 | 10 |
|  | Anthurium | - | 15 | 225 | 10 |
|  | Peperomia | - | 20 | 200 | 10 |
|  | Marigold | - | 20 | 200 | 10 |
|  | Jasmine | - | 25 | 125 | 15 |
|  | Coleus | - | 25 | 125 | 10 |
|  | Bud rose | - | 5 | 250 | 5 |
|  | Begonia | - | 25 | 1250 | 20 |
| Medicinal and Aromatic |  |  |  |  |  |
| Plantation |  |  |  |  |  |
| Spices |  |  |  |  |  |
|  | Panniyoor-1 | - | 900 | 6300 | 90 |
|  | Panniyoor-2 | - | 518 | 3626 | 52 |
|  | Panniyoor-4 | - | 823 | 5761 | 65 |
|  | Panniyoor-5 | - | 2022 | 14154 | 135 |
|  | Panniyoor-6 | - | 1418 | 9926 | 54 |
|  | Panniyoor-7 | - | 1003 | 7021 | 80 |
|  | Chengannoor | - | 25 | 175 | 6 |
|  | Karimunda | - | 150 | 1050 | 15 |
|  | Kottanadan | - | 7860 | 55020 | 25 |
|  | Malabar excel | - | 148 | 1036 | 20 |
|  | Pournami | - | 150 | 1050 | 32 |
|  | Panchami | - | 180 | 1260 | 20 |
|  | IISR Shakthi | - | 135 | 945 | 12 |
|  | IISR Thevam | - | 367 | 2569 | 30 |
|  | Sreekara | - | 130 | 910 | 18 |
|  | Subhakara | - | 112 | 784 | 14 |
|  | Thekken | - | 125 | 875 | 13 |
| Tuber |  |  |  |  |  |
| Fodder crop saplings |  |  |  |  |  |
| Forest Species |  |  |  |  |  |
| Others |  |  |  |  |  |
| **Total** |  |  | **16,789** | **1,22,637** | **886** |

**Production of Bio-Products**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Bio Products** | **Name of the bio-product** | **Quantity** | **Value (Rs.)** | **No. of Farmers** |
| **Kg** |
| Bio Fertilizers | Azolla | 3 | 240 | 12 |
| Bio-pesticide | EPN | 22550 nos. | 33825 | 56 |
|  | Beauveria | 100 kg | 15000 | 43 |
|  | Metarhizium | 40 litre | 6000 | 25 |
| Bio-fungicide | Pseudomonas | 1550 litre | 155000 | 340 |
|  | Trichoderma | 164 litre | 14400 | 91 |
|  | Mushroom spawn | 710.5 kg | 85260 | 250 |
| Bio Agents |  |  |  |  |
| Others |  |  |  |  |
| **Total** |  |  | **309725** | **817** |

# 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 | Sasso | 291 | 32010 | 30 |
| Duals (broiler and layer) |  |  |  |  |
| Japanese Quail |  |  |  |  |
| Turkey |  |  |  |  |
| Emu |  |  |  |  |
| Ducks |  |  |  |  |
| Others (Pl. specify) |  |  |  |  |
| **Piggery** |  |  |  |  |
| Piglet |  |  |  |  |
| Others (Pl. specify) |  |  |  |  |
| **Fisheries** |  |  |  |  |
| Fingerlings |  |  |  |  |
| Others (Pl. specify) |  |  |  |  |
| **Total** |  | **291** | **32010** | **30** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Samples | **No. of Samples** | **No. of Farmers** | **No. of Villages** | **Amount realized (Rs.)** |
| Soil | 380 | 289 | 50 | 19000.00 |
| Water | 2 | 2 | 1 | 100.00 |
| Plant | 0 | 0 | 0 | 0.00 |
| Manure | 0 | 0 | 0 | 0.00 |
| Others (Soil test campaign) | 100 | 100 | 1 | 30000.00 |
| **Total** | 482 | 391 | 52 | 49,100.00 |

VIII. SCIENTIFIC ADVISORY COMMITTEE

|  |
| --- |
| **Number of SACs conducted: One** |
|  |

**IX. NEWSLETTER**

|  |
| --- |
| **Number of issues of newsletter published: 1000** |
|  |

**X. RESEARCH PAPER PUBLISHED**

|  |
| --- |
| **Number of research paper published** |
| NIL |

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

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

-------------XXXXXXX-------------