**ANNUAL**

**PROGRESS REPORT**

**(01.04.2018 to 31.03.2019)**

***SUBMITTED TO:***

**THE DIRECTOR**

**ICAR-ATARI, ZONE-VIII**

**COLLEGE OF AGRICULTURE CAMPUS**

**SHIVAJINAGAR, PUNE 411 005**

***SUBMITTED BY:***

**THE Sr.Scientist & Head**

**KRISHI VIGYAN KENDRA (PIRENS)**

**BABHALESHWAR, TAL. RAHATA**

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**ICAR-ATARI, Pune**

**DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2018-19**

**(1st April 2018 to 31st March 2019)**

1. GENERAL INFORMATION ABOUT THE KVK

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Address with PIN code | Telephone | | E mail | Website address & No. of visitors (hits) |
| Krishi Vigyan Kendra (PIRENS), At.Po. Babhaleshwar,  Tal. Rahata,  Dist. Ahmednagar – 413 737 | Office | Fax | kvkahmednagar@yahoo.com | www.kvk.pravara. com  235594 |
| 02422-252414, 253612 | - |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Address | Telephone | | E mail | Website address |
| Office | FAX |
| Pravara Institute of Research and Education in Natural and Social Sciences (PIRENS),  At.Po.Loni, Tal. Rahata,  Dist. Ahmednagar -413 736 | 02422-273492, 273493 | 02422-273693 | director@pirens.org | www.pirensibma. com |

1.3. Name of the Senior Scientist and Head with phone & mobile no.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Telephone / Contact | | |
| Dr.S.D.Nalkar,  Sr.Scientist & Head | Office | Mobile | Email |
| 02422-252414, 253612 | 9890577525 | kvkahmednagar@yahoo.com  samnalkar@gmail.com |

1.4. Year of sanction: 1992

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**1.5. Staff Position (as on March 31, 2019)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sl.  No. | Sanctioned post | Name of the incumbent | Discipline | If Permanent, Please indicate | |  | If Temporary, pl. indicate the consolidated amount paid (Rs./month) |
| Current  Pay Band | Current Grade Pay | Date of joining |
|  | Senior Scientist and Head | Dr.S.D.Nalkar | Dairy Science | 38800 | 9000 | 01-08-2017 | - |
|  | Subject Matter Specialist | Sh.P.D.Hendre | Horticulture | 31960 | 5400 | 04-08-1993 | - |
|  | Subject Matter Specialist | Sh.S.V.Borude | Extension | 31960 | 5400 | 04-12-1993 | - |
|  | Subject Matter Specialist | Sh.S.S.Sonawane | Soil Science | 31210 | 5400 | 05-07-1996 | - |
|  | Subject Matter Specialist | Sh.S.S.Deshmukh | Agronomy | 31210 | 5400 | 13-07-1996 | - |
|  | Subject Matter Specialist | Sh.B.T.Dawange | Plant Protection | 28960 | 5400 | 17-05-1999 | - |
|  | Subject Matter Specialist | Ms.A.G. Wandhekar | Home Science | 15600 | 5400 | 01-06-2018 | - |
|  | Programme Assistant | Dr.V.M.Vikhe | Animal Husbandry | 21360 | 4200 | 29-11-1994 | - |
|  | Computer Programmer | Sh.K.L.Londhe | Computer | 21840 | 4200 | 22-05-1994 | - |
|  | Farm Manager | Sh.I.N.Shaikh | Horticulture | 11940 | 4200 | 07-09-2012 | - |
|  | Accountant/Superintendent | Sh.A.K.Pachore | Admin. | 21840 | 4200 | 07-06-1993 | - |
|  | Stenographer | Sh.R.D.Sambare | Admin. | 14300 | 2400 | 01-06-1996 | - |
|  | Driver 1 | Sh.J.R.Totre | Jeep Driver | 11610 | 2000 | 19-08-1993 | - |
|  | Driver 2 | vacant | Tractor Driver | -- | -- | - | Retired from 27.01.2019 |
|  | Supporting staff 1 | Sh.S.N.Pawar | Watchman | 9320 | 1800 | 01-04-1996 | - |
|  | Supporting staff 2 | Sh.A.T.Dabhade | peon | 9470 | 1800 | 01-01-1993 | - |

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**1.6. Total land with KVK (in ha) : 24.00 ha**

|  |  |  |
| --- | --- | --- |
| S. No. | Item | Area (ha) |
| 1 | Under Buildings | 1.0 |
| 2. | Under Demonstration Units | 1.0 |
| 3. | Under Crops | 22.0 |
| 4. | Horticulture | - |
| 5. | Pond | - |
| 6. | Others if any | - |

**1.7. Infrastructural Development:**

**A) Buildings**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.  No. | Name of building | Source of  funding | Stage | | | | | |
| Complete | | | Incomplete | | |
| Completion  Year | Plinth area (Sq.m) | Exp (Rs.) | Starting year | Plinth area  (Sq.m) | Status of construction |
| 1. | Administrative  Building | ICAR | 24.5.1995 | 750 | 17.65 | - | - | - |
| 2. | Farmers Hostel | ICAR | 24.5.1995 | 305 | 10.33 | - | - | - |
| 3. | Staff Quarters (6) | ICAR | 28.4.1996 | 530 | 24.75 | - | - | - |
| 4. | Demonstration Units (2) | ICAR | 27.9.1994 | 300 | 3.50 | - | - | - |
| 5 | Fencing | ICAR | 20.9.2010 | 2550 | 19.00 | - | - | - |
| 6 | Rain Water harvesting system | ICAR | 28.3.2007 |  | 9.64 | - | - | - |
| 7 | Threshing floor | Threshing floor | - | - | - | - | - | - |
| 8 | Farm godown | Farm godown | - | - | - | - | - | - |
| 9 | ICT lab |  |  |  |  |  |  |  |
| 10 | Other |  |  |  |  |  |  |  |

**B) Vehicles**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of vehicle** | **Year of purchase** | **Cost (Rs.)** | **Total kms. Run** | **Present status** |
| Tractor | 2005 | 554000 | 1806 hrs | Good condition |
| Jeep-Mahindra Bolero | 2011 | 645675 | 207598 km | Needs replacement |

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**C) Equipments& AV aids**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name of the equipment / Implements** | **Year of purchase** | **Cost (Rs. In lakh)** | **Present status** |
| Office tables | 1993 | 0.35 | Needs Replacement |
| Office chairs | 1993 | 0.06 | Needs Replacement |
| Cupboards | 1993 | 0.21 | Needs Replacement |
| Racks | 1993 | 0.12 | Needs Replacement |
| Slide projector | 1993 | 0.13 | Needs Replacement |
| Over Head projector | 1993 | 0.09 | Needs Replacement |
| Plastic chairs | 1995 | 0.25 | Needs Replacement |
| Photo camera | 1995 | 0.28 | Needs Replacement |
| Benches | 1996 | 1.00 | Needs Replacement |
| Refrigerator | 1996 | 0.42 | Needs Replacement |
| Submersible pump set | 1996 | 0.45 | Needs Replacement |
| Soil Lab Equipments | 2005 | 8.60 | Good condition |
| Generator | 2005 | 2.00 | Good condition |
| Tractor | 2006 | 5.54 | Good condition |
| LCD Projector | 2006 | 1.00 | Good condition |
| Video Camera | 2006 | 0.42 | Good condition |
| Amplifier System | 2007 | 0.20 | Good condition |
| Camera Digital | 2010 | 0.22 | Good condition |
| Computer | 2013 | 1.08 | Good condition |
| Computer with printer | 2013 | 1.30 | Good condition |
| LCD Projector Sony | 2013 | 0.36 | Good condition |
| Voice Recorder | 2016 | 0.07 | Good condition |
| Tablet Samsung | 2017 | 0.09 | Good condition |
| Tablet I boll | 2017 | 0.10 | Good condition |
| LCD Projector Epson | 2017 | 0.31 | Good condition |
| Router Jio | 2019 | 0.15 | Good condition |
| **Total** |  | **24.8** |  |

**1.8. Details SAC meeting conducted in the year - NIL**

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Name and Designation of Participants | Salient Recommendations | Action taken |
| - | - | - | - |

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**2. DETAILS OF DISTRICT**

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

|  |  |
| --- | --- |
| S. No | Farming system/enterprise |
| 1 | Enterprise 1. Agriculture  2. Horticulture  3. Animal Husbandry and Dairying  4. Non-farm sector Farming SystemsMajor farming Systems are Irrigated situation – 1. Agriculture + horticulture + dairying  2. Horticulture + agriculture + dairying  3. Agriculture + dairying  4. Dairying + agriculture + horticulture  5. Dairying + animal husbandry + agriculture  Rainfed situation 1. Agriculture + horticulture + dairying  2. Agriculture + dairying + Daily wages |

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

a) Agro-climatic Zone

|  |  |  |
| --- | --- | --- |
| S. No | Agro-climatic Zone | Characteristics |
| 1 | Scarcity Zone | Out of 14 tehsils of Ahmednagar district 13 tehsils comes under this zone. Rainfall ranges from 500-700 mm received within 45-60 rainy days, maximum rainfall between June-Sept., maximum temperature 40-440c  Soils – Reddish brown to dark gray  Light to medium  Known for drought prone area  Major crops – Bajra, Soghum, Safflower, Sunflower, Gram, Wheat, Sugarcane, Onion |
| 2 | Plain (Transition) Zone | -This zone is confined only in eastern half part of Akole  - Consisting about 4 per cent of geographical area of the district - Rainfall 700-1250 mm per annum  Soils – Grayish black  Major crops- Horticulture crops  Rivers – Pravara river is flowing through this zone |
| 3 | Ghat (Hilly) Zone | This zone is situated in north-western part of the district, particularly Akole tehsil  This zone spread along with crest of Sahyadri ranges  Rainfall – 1500 to 3000 mm. per year  Forest – deciduous to semi-deciduous  Soils – Mostly acidic with poor fertility status  Crops – Paddy, Ragi, Niger, Pulses, Oilseeds |

Based on rainfall, soil types and source of irrigation there are mainly eight agro-ecological situations existed in the district. There are 14 blocks in the district. Each block consists of 2-3 agro-ecological situations. The details of each agro-ecological situation and its characteristics is as follows:

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**b) Agro ecological situation**

|  |  |  |
| --- | --- | --- |
| S. No | Agro ecological situation | Characteristics |
| 1 | Command area with assured irrigation and medium soils | This situation is spread over parts of Newasa, Rahuri, Shrirampur, Shevgaon and Shrigonda tehsils of the district. comprising 6 per cent of total cultivable area under Mula, Pravara and Ghod rivers command areas. The irrigated area is 24 per cent. The soils are medium black. Due to assured irrigation the crops mainly grown are sugarcane, wheat along with pulses and vegetables. |
| 2 | Command area with assured irrigation and light soil | This situation is observed only in the command area of Kukadi command area in parts of Parner tahsil. This situation has small area of only 2 per cent. The crops like flowers, groundnut, sugarcane, pulses and other cereals are mainly cultivated. |
| 3 | Command area with unassured irrigation and medium soils | This situation observed in parts of Kopargaon, Shrirampur and Newasa tehsils of the district comprising of 16 percent cultivated area. The major crops are bajra, jowar, wheat, gram, sugarcane, vegetables and fodder crops. |
| 4 | Command area with unassured irrigation and shallow soils | This situation is observed only in small parts of Kopargaon, Shrirampur and Newasa tehsils, only 1-2 percent area comes under this situation and 6-7 percent of irrigated area. |
| 5 | Non-command area with medium soils | The parts of Jamkhed, Nagar, Pathardi, Shrigonda, Karjat and Shevgaon tehsils falls under this situation, mainly rain fed area. The major source of irrigation is open well, 35 percent of total area. The crops like cotton, jowar, safflower, sunflower, green gram are mainly grown. |
| 6 | Non-command area with shallow soils | Undulating topographical situation with light soils, having maxiumum tehsils, low productivity, 35 percent area. |
| 7 | Transition (Plain) zone with medium to shallow soils | Eastern parts of Akole tehsils, 2-3 percent area. |
| 8 | Hilly (Ghat) zone with light soils | Heavy rain fall Kharif crops is paddy, heavy erosion, 2-3 per cent area, light soil. |

2.3 Soil Types

|  |  |  |  |
| --- | --- | --- | --- |
| S. No | Soil type | Characteristics | Area in ha |
| 1. | Light Soil | * Poor water holding capacity * Soil pH ranges from 7.2-7.8, Ec less than 0.20meq/lit Organic carbon 0.20-45 %. * Available nutrients status shows low nitrogen, very low to low phosphorus and medium potassium. * Ferrous and zinc micronutrients deficient soils. | 5.00 lakh ha |
| 2. | Medium soil | * Medium water holding capacity and optimum drainage * Soil pH ranges from 7.5-8.2, Ec ranges from 0.40-0.80 mmhos/cm, organic carbon 0.40-0.60 % * Available nutrients status shows low to medium nitrogen, low to medium phosphorus and medium to high potassium. Ferrous and zinc micronutrients deficient soils. | 5.40 lakh ha |

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|  |  |  |  |
| --- | --- | --- | --- |
| 3. | Deep black Soil | * High water holding capacity, poor drainage capacity. Soil under canal command area soils becomes alkali. * Soil pH ranges from 8.2-9.0, Ec ranges from 0.80-2.0 mmhos/cm even more in some regionsorganic carbon 0.45-0.65 %. * Available nutrients status shows low to medium nitrogen, * Low phosphorus and very high potassium and also high in calcium and magnesium. * Ferrous and zinc micronutrients deficient soils. | 2.77 lakh ha |

**2.4. Area, Production and Productivity of major crops cultivated in the district (2018-19)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S. No | Crop | Area (ha) | Production (MT.) | Productivity (Qt./ha) |
| 1 | Soybean | 70688 | 88,500 | 15.0 |
| 2 | Pearl millet | 110271 | 1,83,105 | 9.39 |
| 3 | kharif Maize | 44423 | 3,19,925 | 35.75 |
| 4 | cotton | 95295 | 1,42,500 | 4.75 |
| 5 | Red gram | 32001 | 3,22,015 | 7.70 |
| 6 | Black gram | 31658 | 1,12,205 | 9.70 |
| 7 | Green gram | 37107 | 2,21,011 | 6.31 |
| 8 | Rabi sorghum | 219823 | 82,015 | 9.30 |
| 9 | Wheat | 36370 | 32,99,925 | 5.75 |
| 10 | Bengal gram | 49299 | 1,17,021 | 6.70 |
| 11 | Rabi maize | 7309 | 82,010 | 8.70 |
| 12 | Sugarcane | 125000 | 6,63,00,000 | 780 |

**2.5. Weather data (2018-19)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Month | Rainfall (mm) | Temperature 0 C | | Relative Humidity (%) | |
| Maximum | Minimum | Maximum | Minimum |
| April 18 | 0 | 38.5 | 22.6 | 54.7 | 18.7 |
| May | 0 | 39.4 | 24.9 | 63.8 | 22.1 |
| June | 163.6 | 33.4 | 23.6 | 89.3 | 54.3 |
| July | 25.4 | 28.9 | 22.8 | 92.2 | 70.1 |
| August | 72 | 28.2 | 22.2 | 92.8 | 70.1 |
| September | 30.80 | 31.4 | 21.2 | 91.8 | 53.0 |
| October | 0 | 33.3 | 20.7 | 71.5 | 31.5 |
| November | 55.6 | 31.6 | 17.7 | 77.0 | 35.5 |
| December | 0.00 | 28.0 | 13.6 | 71.7 | 35.8 |
| January 2019 | 0 | 28.7 | 12.8 | 65.0 | 29.8 |
| February | 0 | 31.5 | 15.9 | 62.5 | 26.9 |
| March | 0 | 35.1 | 21.7 | 51.1 | 17.0 |
| Total | **347.4** | **32.3** | **20.0** | **73.6** | **38.7** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Population** | **Production** | | **Productivity** |
| **Cattle** | | | | |
| *Crossbred* | 14,01,001 | 17.29 lakh lit | | 8-10 liters/day |
| *Indigenous* | 5,80,872 | 8.71 lakh lit | | 1.5 – 3 lit/day |
| **Buffalo`** | 2,17,802 | 10.90 lakh lit | | 7-8 lit/day |
| **Sheep** | | | | |
| Crossbred | 35,56,74 | - | | 1 kid/day |
| *Indigenous* | 3,57,305 | - | | 1 kid/day |
| **Goats** | 7,91,756 | - | | 1-2 kids/day |
| **Pigs** |  |  | |  |
| *Crossbred* | 150 | Figures not available | | - |
| *Indigenous* | 38,100 | " | | - |
| **Rabbits** | - | " | | - |
| **Poultry** | | | | |
| Hens | - | " | | - |
| *Desi* | 3,05,221 | " | | - |
| *Improved* | 7,65,553 | " | | - |
| Ducks | - | - | | - |
| Turkey and others | - | - | | - |
| Fish | - | | - | - |
| *Marine* | - | | - | - |
| *Inland* | 10,580 ha | | 2200 MT | 4.80 MT/ha |
| Prawn | - | | - | - |
| Scampi | - | | - | - |
| Shrimp | - | | - | - |

**2.7. Details of Operational area / Villages**

| **Taluka** | **Name of the block** | **Name of the village** | **Major crops & enterprises** | **Major problems identified** | **Identified Thrust Areas** |
| --- | --- | --- | --- | --- | --- |
| Rahata | Rahata | Mamdapur | Soybean  Pomegranate  Hand Cultivator  Okra cutter  Nutritional Kitchen Garden | Less use and clogging problem using powder form bio-fertilizers inoculants  Nutrients deficiency in plant.  Flower dropping /poor setting.  Drudgery reduction  Finger Injuries  Less consumption of leafy vegetables  Imbalance diet | Liquid bio-fertilizers Inoculants seed treatment  Leaf test based nutrient management  Nutrition management |
| Rajuri | Pomegranate  Sugarcane | Nutrients deficiency in plant.  Flower dropping /poor setting  Less fertilizers use efficiency | Leaf test based nutrient management  Fertigation |
| Hanumantgaon | Sugarcane | Low yield in vertisol due to soil compaction and poor drainage | Use of subsoiler before sugarcane planting |

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|  |  |  | Soybean , sugarcane,  wheat | low productivity of sugarcane  Heavy infestation of spodoptera in soybean  Imbalance nutrient management  high weed intensity | Weed Management |
| --- | --- | --- | --- | --- | --- |
| Loni bk | Sugarcane | Less fertilizers use efficiency | Fertigation |
| Dadh bk | Sugarcane | Low yield in vertisol due to soil compaction and poor drainage | Use of subsoiler before sugarcane planting |
| Soybean , sugarcane, wheat, onion | low productivity of sugarcane  Heavy infestation of spodoptera in soybean  Imbalance nutrient management  high weed intensity | Weed Management |
| Nimgaon korhale | soybean, wheat, sugarcane, onion | Low productivity  Use conventional/old varieties  Heavy infestation of spodoptera in soybean  Heavy infestation of heliothis  leaf yellowing in soybean  less use of nutrients | Integrated Crop Management  Varietal evolution |
| Savalivihir | soybean, wheat, sugarcane, onion | Low productivity  Use conventional/old varieties  Heavy infestation of spodoptera in soybean  Heavy infestation of heliothis  leaf yellowing in soybean  less use of nutrients | Integrated Crop Management  Varietal evolution |
| Bhagvati pur | Soybean , sugarcane, Maize | low productivity  Heavy infestation of spodoptera  Imbalance nutrient management  high weed intensity in soybean | Weed Management |
| Astagaon | soybean, Maize, chick pea, wheat | Low productivity  Use conventional/old varieties  Heavy infestation of heliothis  Heavy infestation of spodoptera in soybean  less use of nutrients | Integrated Crop Management  Integrated Nutrient Management |

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|  |  | Loni | Soybean , sugarcane, wheat | low productivity of sugarcane  Heavy infestation of spodoptera in soybean  Imbalance nutrient management  high weed intensity | Weed Management |
| --- | --- | --- | --- | --- | --- |
| Broiler poultry | Flies infestation | Health management |
| Wakadi | Okra | Low productivity  Use conventional/old varieties  Heavy infestation of spodoptera in soybean  Heavy infestation of heliothis  Imbalanced nutrients | Integrated Crop Management  Varietal evolution  Integrated Nutrient Management |
| Ambi | Onion | Low productivity  Use conventional/old varieties  Imbalanced use of nutrients  Heavy infestation of thrips  Alternaria blight | Plant growth regulator use  Integrated Nutrient Management  Weed Management  IPM  IDM |
| Kesapur | Garlic | Excess vegetative growth declining yield  Heavy infestation of sucking pests  Imbalance nutrient management  high weed intensity | Varietal introduction  Integrated Nutrient Management  Integrated Crop Management  Weed management |
| Nimgaon Jali | Capsicum | Low productivity  Heavy infestation of thrips, heliothis  leaf yellowing in capsicum  Imbalanced nutrients | Integrated Crop Management  Varietal evolution  Integrated Nutrient Management  Integrated Pest Management |
| Kolhar, Ranjangaon | Guava | Low productivity  Heavy infestation of fruitfly and canker  Improper canopy management  Imbalanced nutrients | Canopy management with regular pruning at 3-4 months  Integrated Crop Management  Varietal evolution  Integrated Nutrient Management |

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|  |  | Loni, Pathare, Kolhar Bk., Bhagwati pur, Lohagaon | Sugarcane | White grub, white fly, brown leaf spot | Integrated pest management and integrated disease management |
| --- | --- | --- | --- | --- | --- |
| Rahata | Rahata | Nirmal Pimpari, Rajuri, Adgaon, Pimpari Lokai, | Pomegranate | Colletotricum fruit spot and bacterial blight | Integrated disease management |
| Sadatpur, Aurangpur | Onion | Purple blotch | Integrated disease management |
| Kelwad, Astagaon,  Pimpri Lokai | Capsicum | Thrips | Integrated pest management |
| Dadh Bk, Durgapur | Brinjal | White fly and fruit borer | Integrated pest management |
| Sakuri, Nandurkhi, Shirdi, Astagaon | Guava | Root knot nematodes | Integrated nematode management |
| Tisgaon | Goat | Pot belly appearance,less weight | Health management |
| Astagaon | Poultry | Less market price | Breed management |
| Durgapur ,Chinchpur, Anapwadi, Mamdapur | Fodder crop | Less nutrient | Health management |
| Durgapur | Broiler poultry | Flies infestation | Health management |
| Adgaon,  Pimpri lokai | Dairy | Lack of green fodder | Health management |
| Khadakewake | Broiler poultry | Flies infestation | Health management |
| Rahuri | Rahuri | Kendal | Wheat | Imbalance fertilizer use, less or no use micronutrients/Bio-fertilizers | Integrated Nutrient Management |
| Chandka pur | Wheat | Imbalance fertilizer use, less or no use micronutrients/Bio-fertilizers | Integrated Nutrient Management |
| Ambi, Kesapur, Dawangaon | Okra | Yellow vein mosaic | Integrated disease management |
| Dhanore, | Dairy | Tick Infestation | Disease Management |
| Kandagaon | Broiler poultry | Flies infestation | Health management |

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| Sangamner | Sangamner | Chinchpur | Sugarcane ratoon | Low yield and less return from ratoon. Unbalance use fertilizers. | Spray of multimacronutrient and mulimicronutrent |
| --- | --- | --- | --- | --- | --- |
| soybean, Maize, pearl millet, chick pea, wheat , onion | Low productivity  Use conventional/old varieties  Heavy infestation of heliothis  Heavy infestation of spodoptera in soybean  less use of nutrients | Integrated Crop Management |
| Pratappur | Sugarcane, wheat, onion , Maize | Low productivity of sugarcane  high weed intensity  use conventional/old varieties  less use of nutrient | Weed Management |
| Manoli | Hybrid Maize | Soil fertility degradation | Soil test based balance nutrients management |
| Chinchpur, Ashvi Bk,Umbari Shiblapur, Dadh kh | Sugarcane | White grub and white fly | Integrated pest management |
| Sadatpur | Dairy | Tick Infestation | Disease Management |
| Aurangpur | Broiler poultry | Flies infestation | Health management |
| Shrirampur | Shrirampur | Khandala | Onion | Storage losses are high. Less use potash and sulfur | Additional application of 30Kg/ha potash & sulfur |
| Padhegaon,Karegaon | Onion | Purple blotch | Integrated disease management |
| Mahankal Wadgaon,Khandala | Capsicum | Thrips | Integrated pest management |
| Ukkalgaon, Belapur | Water melon | Root knot nematodes and fruit fly | Integrated pest management |
| Kopargaon | Kopargaon | Ravande, Takali, Sangvi | Tomato | Fruit borer | Integrated pest management |
| Apegaon, Dhotre, Bhojade,  Talegaon Male,  Lauki | Bt Cotton | Sucking pests | Integrated pest management |

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**2.8. Priority thrust areas:**

|  |  |  |
| --- | --- | --- |
| **Sr.No.** | **Crop/Enterprise** | **Thrust area** |
| 1 | Soybean | Integrated Crop Management  Liquid bio-fertilizers Inoculants seed treatment |
| 2 | Chickpea | Integrated Crop Management  varietal evolution |
| 3 | Sugarcane | * Weed management * Fertigation/Subsoiler use * Integrated pest management |
| 4 | Cotton | Weed management  Additional application of 30Kg/ha potash & sulfur |
| 5 | Hybrid Maize | Soil test based balance nutrients management |
| 6 | Pomegranate | Leaf test based nutrient management  Integrated disease management |
| 7 | Sugarcane ratoon | Spray of multi-micronutrient and multi-macronutrient |
| 8 | Wheat | Integrated Nutrient Management |
| 9 | Onion | Integrated Crop Management, PGR use  Integrated disease management |
| 10 | Guava | Canopy management  Biological control |
| 11 | Okra | Varietal performance |
| 12 | Capsicum | Integrated Nutrient Management |
| 13 | Okra | Integrated disease management |

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**3. TECHNICAL ACHIEVEMENTS**

**3.1. 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** |
| 15 | 15 | 106 | 106 | 18 | 18 | 260 | 261 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Training** | | | | **Extension Programmes** | | | |
| **3** | | | | **4** | | | |
| **Number of Courses** | | **Number of Participants** | | **Number of Programmes** | | **Number of participants** | |
| **Targets** | **Achievement** | **Targets** | **Achievement** | **Targets** | **Achievement** | **Targets** | **Achievement** |
| 64 | 67 | 1421 | 2600 | 22 | 30 | 1532 | 2129 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Seed Production (Qtl.)** | | **Planting materials (Nos.)** | |
| **5** | | **6** | |
| **Target** | **Achievement** | **Target** | **Achievement** |
| 0.1 | 0.41 | 96000 | 150316 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Poultry strains – Chicks (No.)** | | **Bio-products (Kg)** | |
| **7** | | **8** | |
| **Target** | **Achievement** | **Target** | **Achievement** |
| 5000 | 2771 | Bio-fertilizers -10000Kg | 7798 Kg |
|  |  | Bio-pesticides 15000 kg | 14416 kg |

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**3.1. B. Operational areas details during 2018-19**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S.No. | Major crops & enterprises being practiced in cluster of villages | Prioritized problems in these crops/ enterprise | Extent of area (ha/No.) affected by the problem in the district | Name of Cluster Villages identified for interventions | Interventions (OFT, FLD, Training, extension activity etc.)\* |
| **Agronomy** | | | | | |
| 1 | Soybean | * Dry spell occurred during crop growth * Heavy Spodoptera infestation * Imbalance nutrient management * Low yield of conventional varieties * Excess vegetative growth in black cotton soil in irrigation condition * Improper Weed management | 50000 ha | Savalivihir  Nimgaon Korhale  Bhagvatipur | FLD  OFT  Training  Field day |
| 2 | Chick pea | - Low productivity  - Heavy heliothis infestation  - Imbalance nutrient management  - Use conventional varieties  - Water stress during flowering & pod filling stage | 60000 ha | Astagon  Chinchpur | FLD  OFT  Training  Field day |
| 3 | Sugarcane | - Heavy white grub infestation  - Higher cost on weed mngt.  - No proper control of cyprus  - Imbalance nutrient management  - Water scarcity  - Low productivity of ratoon crop | 80000ha | Belapur  Hasnapur  Loni  Hanmantgaon  Dadh bk | FLD  Training |
| 4 | Cotton | - Imbalance nutrient management  - Leaf reddening  - less adoption of IPM  - High intensity of weed  - Pink bollworm infestation | 75000 ha | Adgaon  Galnimb | Training |
| 5 | Rabi sorghum | - Drought condition  - Use conventional varieties  - Use single variety in all type of soil | 150000 ha | Adgaon  Pimpri lokai | Training |
| **Horticulture** | | | | | |
| 1 | Guava | Low fruit set, poor canopy management | 750 ha | Kolhar, Ranjangaon | Assessment &Training |
| 2 | Garlic | Poor clove yield | 450 ha | Rajuri, Chinchpur | Training and FLD |
| 3 | Capsicum in Prote-cted cultivation | Poor yield | 60 ha | Nimgaon Jali | Training and FLD |
| 4 | Onion | Imbalanced fertilizer use and poor bulb size | 65000 | Khandala, Ambi | Assessment and FLD |
| 5 | Okra | Poor yield and incidence of YVM | 1200 ha | Wakadi | Assessment |

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Plant Protection** | | | | | |
| 1 | Sugarcane | White grub, White fly, brown leaf spot | 1000 ha | Mamdapur, Rajuri,Nandur  Chinchpur,Bhagwatipur | Training , Literature, radio talk, news paper articles |
| 2 | Okra | Yellow vein mosaic | 300 ha | Ambi, Kesapur | OFT, Field day, Training |
| 3 | Pomegranate | Colletotricum fruit spot,BBD | 5000 ha | Kankuri,Adgaon | FLD, Training, Field visits, radio talk,literature |
| 4 | Guava | Root knot nematodes | 1500 ha | Khandala | FLD, Training, Field visits, literature |
| 5 | Onion | Purple blotch and thrips | 1000 ha | Durgapur | FLD, Training, Field day, field visits, radio talk |
| 6 | Bt cotton | Pink boll worm ,Sucking pests | 20000 ha | Galnimb,Fattyabad,Kuranpur,  Apegaon,Talegaon male,  Dhotre,Bhojade,Lauki | Training, literature, news paper articlesradio talk |
| 7 | Capsicum | Powdery mildew and damping off | 50 ha | Kelwad,Pimpari lokai,Adgaon,Khandala | Training, Field visits |
| 8 | Tomato | Fusarium wilt | 400 ha | Ravande,Takli,Sangvi | Training, literature |
| 9 | Brinjal | White fly and fruit borer | 500 ha | Dadh Bk,Durgapur | Training, Field visits, literature, radio talk |
| 10 | Water melon | Root knot nematodes and fruit fly | 250 ha | Ukkalgaon, Belapur | Training, Field visits |
| 11 | Lucern | Spodoptera | 150 ha | Kolhar,rampur | Training, Field visits, literature |
| **Soil Science** | | | | | |
| 1. | Soybean | Less use of bio-fertilizers for seed treatment | 35000 | Mamdapur | OFT  Training |
| 2. | Maize | Soil degradation due to imbalance use of fertilizers | 20000 | Walki ,Gogalgaon,Manoli | FLD  Training  Field day |
| 3. | Sugarcane | Soil Compaction  Less nutrient use efficiency  Low yield and less return from ratoon. Unbalance use fertilizers. | 22000 | Rajuri,Hanumantgaon,Loni bk, Chinchpur,Dadh bk,Chinchpur | FLD  OFT  Training |
| 4. | Pomegranate | Nutrients deficiency in plant.Flower dropping /poor setting. | 12000 | Mamdapur, Rajuri | FLD  Training |
| 5. | Onion | High losses in storage. Less use potash and sulfur | 45000 | Khandala | OFT  Training |
| 6. | Wheat | Imbalance fertilizer use, less or no use micronutrients/Bio-fertilizers | 18000 | Kendal, Chandkapur | FLD, Training, Field day |

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Veterinary Science** | | | | | |
| 1 | Dairy | Tick infestations | 336754 | Sadatpur ,Dhanore | FLD |
| 2 | Backyard Poultry | Less market for egg and live weight | 230000 | Astagoan | OFT |
| 3 | Goat | Worm load | 231000 | Tisgaon | FLD |
| 4. | Fodder crop | Less yield of fodder | 3500 | Durgapur ,Chinchpur, Anapadi, Mamdapur | OFT |
| 5 | Fodder crop | Less fodder yield | 40410 | Adgaon, Pimpri Lokai | FLD |
| 6 | Broiler Poultry | Flies infestation | 1200 | Loni kd, Aurangpur, Khadkewake, Durgapur, Kanadgaon | OFT |
| Home Science | | | | | |
| 1 | Onion | Hand cultivator | - | Mamdapur | OFT |
| 2 | Okra | Bhendi cutter | - | Mamdapur | FLD |
| 3 | Leafy Vegetables | Seed kit | - | Mamdapur | FLD |

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**3.2. Technology Assessment**

**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 | - | 01 | 01 | 02 | 01 | - | - | - | - | 05 |
| Varietal Evaluation |  |  |  |  | 01 |  |  |  |  | 01 |
| Integrated Pest Management |  |  |  | 01 |  | 01 |  |  |  | 02 |
| Integrated Crop Management |  |  |  |  | 01 |  |  |  |  | 01 |
| Integrated Disease Management |  |  |  |  | 01 |  |  |  |  | 01 |
| Small Scale Income Generation Enterprises |  |  |  |  |  |  |  |  |  |  |
| Weed Management | 01 |  |  |  |  |  |  |  |  | 01 |
| Resource Conservation Technology |  |  |  |  |  |  |  |  |  |  |
| Farm Machineries |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming System |  |  |  |  |  |  |  |  |  |  |
| Seed / Plant production |  |  |  |  |  |  |  |  |  |  |
| Value addition |  |  |  |  |  |  |  |  |  |  |
| Drudgery Reduction |  |  |  |  | 01 |  |  |  |  | 01 |
| Storage Technique |  |  |  |  |  |  |  |  |  |  |
| Mushroom cultivation |  |  |  |  |  |  |  |  |  |  |
| **Total** | **01** | **01** | **01** | **03** | **05** | **01** | **-** | **-** | **-** | **12** |

**A2. Abstract on the number of technologies assessed in respect of livestock enterprises**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Thematic areas** | **Cattle** | **Poultry** | **Piggery** | **Rabbitry** | **Fisheries** | **TOTAL** |
| Evaluation of Breeds |  | 1 |  |  |  | 1 |
| Nutrition Management |  |  |  |  |  |  |
| Disease of Management |  |  |  |  |  |  |
| Value Addition |  |  |  |  |  |  |
| Production and Management |  | 1 |  |  |  | 1 |
| Feed and Fodder | 1 |  |  |  |  |  |
| Small Scale income generating enterprises |  |  |  |  |  | 1 |
| **TOTAL** | 1 | 2 |  |  |  | 3 |

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**B. Achievements on technologies Assessed**

**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 trial covering all the Techno logical Options)** |
| Integrated Nutrient Management | Soybean | To assess the liquid bio-fertilizers formulation used for  soybean as a seed treatment | 06 | 06 | 02.40 |
| Sugarcane  ratoon | To assess the spray of multi-macronutrient and multi-micronutrient on ratoon sugarcane | 06 | 06 | 02.40 |
| Onion | To assess the additional application of potash and sulfur for rabi onion to improve the keeping quality | 06 | 06 | 02.40 |
| Sugarcane | To assess the fertigation schedule for pre seasonal sugarcane | 06 | 06 | 02.40 |
| Chick pea | Foliar application of zinc sulphate in zinc deficient soil at flowering and pod setting stage | 06 | 06 | 02.40 |
| Varietal Evaluation | Okra | Assessment of Phule Vimukta with Arka Anamika for higher yield | 06 | 06 | 01.20 |
| Integrated Pest Management | Sugarcane | To test the effectiveness of Light Trap developed by IISR  for management of White grub in Sugarcane | 06 | 06 | 02.40 |
| Integrated Crop Management | Onion | Assessment for testing the bulb size enlargement using CCC at 60 and 75 days after planting | 06 | 06 | 02.40 |
| Guava | Assessment on canopy management using 50% shoot pruning of current season growth | 06 | 06 | 02.40 |
| Integrated Disease Management | Okra | To see the performance of Phule Vimukta okra variety against yellow vein mosaic disease | 06 | 06 | 02.40 |
| Weed Management | Soybean | Use of Herbicide- Propaquizafop + Imazethapyr in soybean for timely weed management | 06 | 06 | 02.40 |
| Drudgery reduction | Onion | Assessment of hand cultivator in onion | 10 | 10 | 04.00 |
| **Total** |  |  | **76** | **76** | **29.20** |

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**B.2. 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 | Backyard poultry | To assess the performance of Kadaknath breed of back poultry for meat and egg purpose | 10 | 10 |
| Production and Management | Broiler Poultry | To assess the performance ofBeauveria bassiana against fly control in broiler shed | 10 | 10 |
| Feed and Fodder management | Dairy | To cultivate the Phule Gunwanth fodder as a perinnial green fodder for crossbred cows | 10 | 10 |
| **Total** | | | **30** | **30** |

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**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 |
| **Agronomy** | | | | | | | | | | | |
| Soybean | Black cotton soil with assured rainfed/protective irrigation | Heavy weed intensity observed during one month after sowing | To assess the performance of herbicide propaquizafop +Imazethapyr for weed management in soybean | 06 | spray herbicide propaquizafop +Imazethapyr@ 75 gm a.i./ha at 7-21 DAS | -Cost on weed management (Rs/ha)  -Yield q/ha  -B:C ratio | **Assessment**-Cost on weed (Rs/ha)  2575  -100 grain wt (gm) – 13.25  **Local check**  -Cost on weed (Rs/ha)  4707  -100 grain wt (gm) – 13.23 | **Assessment**  -Yield q/ha-21.46  -B:C ratio 1.73  **Local check**  -  -Yield q/ha-20.98  -B:C ratio 1.60 | -Herbicide spray timely manage the weed, enhance the vegetative , flowering and increase the crop yield  -It save cost on weed management | - | - |
| Chick pea | Medium – heavy soil with rainfed/ protective irrigation | -Low yield  -Imbalance nutrient management  -Zinc deficiency in soil | To assess the performance of bengal foliar application of zinc sulphate in chick pea on yield under zinc deficient soil | 06 | Foliar application of zinc sulphate @0.5% at flowering and pod filling stage | -100 grain wt (gm)  -No. of -pods/plant  -Yield q/ha  -B:C ratio | **Assessment** -100 grain wt (gm)-20.2  -No. of -pods/plant- 114.8  **Local check**  --100 grain wt (gm) 20.03  -No. of -  pods/plant- 94.7 | **Assessment**  -Yield q/ha-21.35  -B:C ratio 2.08  **Local check**  -Yield q/ha-19.9  -B:C ratio 1.98 | Foliar application zincs ulphate , visually show higher crop growth and increases seed size | - | - |

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|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Horticulture** | | | | | | | | | | | |
| Okra | Irrigated medium soils | Low picking and yield | Varietal performance of Okra Phule Vimukta | 06 | Improved Okra variety Phule Vimukta | No. of Pickings and Yield | Assessment:  o. of Pickings 27.7 and Yield 198.3 q/ha Avg Fruit length 6.97cm  Farmers Practice:  Pickings 24.8 and Yield 175.5 q/ha Avg Fruit length 8.73cm | The variety Okra Phule Vimukta is better than Arka Anamika in terms of yield and quality and hence can be grown in irrigated areas | High picking and good yield small fruits have better market acceptance | Nil |  |
| Onion | Irrigated heavy black soils | Low bulb size and larger neck perimeter causing poor marketable yield | Use of CCC 3000 ppm on onion to improved bulb size | 01 | Use of CCC 3000 ppm for improving bulb size in rabi onion | Bulb dia in mm  Neck perimeter cm | Assessment:  Bulb dia 56.8 mm  Neck perimeter cm 1.68 Yield 378.3 q/ha  Farmers Practice:  Bulb dia 49.03 mm  Neck perimeter cm 2.17 Yield 331.7 q/ha | Use of CCC 3000 ppm at 60 and 75 days after transplantation is better for maintaining bulb size and reducing neck perimeter and improving averall yield in rabi onion | CCC @ 3000 in rabi onion is found to be better in onion cultivated under deep black heavy soils in terms of improving yield | Nil | - |
| Guava | Irrigated medium soils | Poor fruit set and yield | Pruning at 50% of mature shoots for balanced canopy management for increased fruitset and yield in guava | 06 | Demonstration:  50% pruning of mature shoots at 3-4 months period  Farmers’ Practice:  75% shoot removal at 5-6 months | 75% shoot removal at 5-6 months | Demonstration:  Yield-183.2q/ha  Avg. Fruit No. 75.5/pl  Avg Fruit Wt:  191 g  Farmers’ Practice:  Yield-148.9q/ha  Avg. Fruit No. 67.2/pl  Avg Fruit Wt:  175 g | The timely pruning with 50% shoot under demo. has improved fruit set and yield due to uniform utilization of sunlight | Pruning at 3-4 months period with 50% shoot pruning of mature canes improves fruit set and yield | Nil | - |

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|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Plant Protection** | | | | | | | | | | | |
| Sugarcane | Medium to heavy soils with well and canal irrigation | Heavy infestation of white grub | To test the effectiveness of Light Trap developed by IISR Lucknow  for management of White grub in Sugarcane | 06 | **T1 – Farmers Practice-**  Soil application of insecticides like Phorate 10G Or Chloropyriphos 20EC  **T2 – Technology assessed –**  Use of Combo Trap of IISR  immediately after first heavy rain | i.Pest intensity (%)  ii.Yield  (t/ha) | **T1 – Farmers Practice**  i.Pest intensity  30%  ii.Yield (t/ha)  95.0  **T2 – Tech-nology assessed –**  i.Pest intensity  5%  ii.Yield (t/ha)  127.5 | **Farmers Practice**  i.Yield(t/ha)  95.0  B:C Ratio  1.46  **T2 – Tech-nology assessed**  i.Yield(t/ha)  127.5  B:C Ratio 2.05 |  | - | - |
| Okra | Medium to heavy soils with well irrigation | High incidence of yellow vein mosaic diseasse | To see the performance of Phule Vimukta okra variety against yellow vein mosaic disease | 06 | **T1 – Farmers Practice-**  Sowing of Arka Anamika/private okra varieties  **T2 – Technology assessed** –  Introduction of Phule Vimukta okra variety | i.Per cent disease intensity  ii.Yield (t/ha) | **T1 – Farmers Practice**  i.Per cent disease intensity-24.9  ii.Yield (t/ha)  8.34  **T2 – Tech-nology assessed –**  i. Per cent disease intensity-4.3%  ii.Yield (t/ha)  9.13 | **T1 – Farmers Practice**  i.Yield (t/ha)  8.34  ii.B:C Ratio 3.20  **T2 – Tech-nology assessed-**  i.Yield(t/ha)  9.13  ii. .B:C Ratio 3.88 | 90-95% reduction in yellow vein mosaic disease on Phule Vimukta okra variety | - | - |

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|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Soil Science** | | | | | | | | | | | |
| Soybean | Medium black soil with protective irrigation | Less use of powder form of bio-fertilizers for seed treatment | To assess the liquid bio-fertilizers formulation  used for soybean as a seed treatment**.** | 06 | Liquid bio-fertilizers as a seed treatment | Root nodulation  Number of pods/ 100grain wt | **Farmers practice-**  Root nodulation/plant-72.67  Number of pods/plant-74.22  100grain wt(gm)- 12.12  **Recom. practice-Powder bio-fertilizers**  Root nodulation/plant-87.67  Number of pods/plant-76.22  100grain wt(gm)- 12.30  **Recom. practice-Liquid bio-fertilizers**  Root nodulation/plant-108.44  Number of pods/plant-81.89  100grain wt(gm)- 12.50 | Yield increased  by 11.83% against farmers practice and 7.76% against powder bio-fertilizers | Liquid bio-fertilizers easy for seed treatment and increased the root nodulation | - | - |

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|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sugarcane  Ratoon | Medium black soil with well/canal irrigation | Low yield and less return from ratoon. Unbalance fertilizers use | To assess the spray of multimacronutrient and mulimicronutrinet on ratoon sugarcane | 06 | Spray of multimacronutrient and mulimicronutrinet | No.of tillers  No.of internodes  Length of internodes  Leaf NPK contents | **Far. Practice**  No.of tillers-6.50  No.of internodes-21.06  Length of internodes-10.37cm  Leaf NPK content-  N-2.40%,P-0.14%,  K-1.08%  **Recom. Practice**  No.of tillers-6.67  No.of internodes-22.83  Length of internodes-10.86cm  Leaf NPK content-  N-2.82%,P-0.16%,  K-1.21% | Yield increased  by 15.66% against farmers | Spray of multimacronutrient and mulimicronutrinet  helps to increased the leaf colour, number of internodes and length of internodes | - | - |
| Onion  (Rabi) | Medium black soil with well/canal irrigation | High losses in storage. Less use potash and sulfur | To assess the additional 30Kg/ha application of potash and sulfur to improve the  keeping quality | 06 | Additional 30Kg/ha application of potash and sulfur | Bulb size  Bulb weight  Leaf KS contents  Storage losses | **Far. Practice**  Bulb size(mm)-47.83  Bulb weight(gm)-72.24  Leaf KS content-  K-2.09%,S-0.89%  Storage losses-produce kept in storage for losses observation  **Recom. Practice**  Bulb size(mm)-52.66  Bulb weight(gm)-76.00  Leaf KS content-  K-2.52%,S-1.13%  Storage losses- produce kept in storage for losses observation | Yield increased  by 15.73% against farmers | Additional 30Kg/ha application of potash and sulfur helps to increased the bulb size and weight. Less neck size may help to reduced the losses in storage | - | - |

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|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sugarcane | Medium black soil with well/canal irrigation | Less response to soil application of fertilizers | To assess the fertigation schedule for pre seasonal sugarcane (80%RDF**)** | 06 | Fertigation schedule for pre seasonal sugarcane (80%RDF) | No.of tillers  Leaf NPK content | **Far. Practice**  No.of tillers-8.17  Leaf NPK content-  N-1.92%,P-0.15%,  K-1.51%  **Recom. Practice**  No.of tillers-9.17  Leaf NPK content-  N-2.19%,P-0.18%,  K-1.72% | Crop is yet to harvest for yield data but expecting 18-20 per cent higher yield | Fertigation helps to increased the number of tillers, saving of fertilizers and labour cost on fertilizers application | - | - |
| **Veterinary Science** | | | | | | | | | | | |
| Poultry | Irrigated | Fly infestation | To assess the performance of Beauveria bassiana against fly control in broiler shed | 20 | Fungal spraying of Beauveria bassiana liquid at 5 ml /lit of water over litter. | Fly control | T1.- Control-35 nos/sq. ft  T2.- Control-5 nos per sq.ft | Fly control by 95 percent FCR also improved | Spraying of Beauveria bassiana liquid is safe for flies control in broiler shed | - | - |
| Backyard poultry | Semi intensive | Less market price for egg and live birds | To assess the performance of Kadaknath breed of back poultry for meat and egg purpose | 8 | Rearing of Kadaknath poultry for egg and meat | Egg production  Live weight | T1. 64.37 egg/bird/year    T2.53.73/bird/year | Rs.  3339.64 | Kadaknath egg saled at rs15-20 and birds sale at the rate of rs.500 per bird | - | - |
| Fodder crop | Irrigated | Less yield | To cultivate the Phule Gunwanth fodder as a perennial green fodder for crossbred cows | 10 | Cultivation of Phule Gunwant grass | 1.No.of tiller  2.fodder yield | T1..No.of tiller-12  2.fodder yield—107.5 t/ha  T2.No.of tiller-26  2.Fodder yield-137.5t/ha | Fodder yield =137.5 tone/ha | Gunwant is better than jaywant and DHN-6 | - | - |
| **Home Science** | | | | | | | | | | | |
| Onion | Irrigated | Take more time and more spend money on labor injuries in hands and fingers | To assess the effectiveness of hand cultivator in onion farm | 10 | Improved Hand cultivator | 1.time taken to clean land  2.occure injuries | Existing practice-Manual  Recommended practice- hand cultivator | 1. Reduce day or time cleaning /acres  And reduce tha hand injuries. | Hand cultivator is use for prepare seedbed for crop to be planted, it is use to turn the soil where you plan on planting. and increase work efficiency | - | - |

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**Contd..**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Technology Assessed** | **Source of Technology** | **Production** | **Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/ palm/ yr)** | **Net Return (Profit) in Rs. / unit** | **BC Ratio** |
| **Agronomy 1** |  |  |  |  |  |
| Technology option 1 (Farmer’s practice)- Hand weeding/spray herbicide Imazethapyr @01.kg a.i. /ha at 7-21 DAS) | - | 2098 | kg/ha | 24776 | 1.60 |
| Technology option 2-(Assessment)spray herbicide propaquizafop +Imazethapyr@ 75 gm a.i./ha at 7-21 DAS | JVV, Jabalpur | 2146 | kg/ha | 28414 | 1.73 |
| **Agronomy – 2** | | | | | |
| Technology option 1 (Farmer’s practice)- Basal dose 25:50:30 kg N:P:K /ha | - | 1990 | kg/ha | 40758 | 1.98 |
| Technology option 2-(Assessment)Basal dose 25:50:30 kg N:P:K /ha+ Foliar application of zinc sulphate @0.5% at flowering and pod filling stage | PDKV, Akola | 2135 | kg/ha | 45754 | 2.08 |
| **Horticulture 1** | | | | | |
| Technology option 1 (Farmer’s practice) | - | 175.5 | q/ha | 152333.3 | 2.10 |
| Technology option 2 | MPKV Rahuri | 198.3 | q/ha | 185141.7 | 2.30 |
| Technology option 3 |  |  |  |  |  |
| **Horticulture 2** | | | | | |
| Technology option 1 (Farmer’s practice) | - | 331.7 q/ha | Bulb yield in q.ha | 57568.2 | 1.63 |
| Technology option 2 | MPKV Rahuri | 378.3 q/ha | Bulbyield in q.ha | 77718.8 | 1.84 |
| Technology option 3 | - | - | - | - | - |
| **Horticulture 3.** | | | | | |
| Technology option 1 (Farmer’s practice) 75% shoot removal at 5-6 months | - | 148.9 | Fruit yield in q.ha | 155006.1 | 2.47 |
| Technology option 2 50% pruning of mature shoots at 3-4 months period | Dr MPKV Rahuri | 183.2 | Fruit yield in q.ha | 207143.4 | 2.83 |
| **Plant Protection 1** | | | | | |
| **T1 – Farmers Practice-**  Soil application of insecticides like Phorate 10G Or Chloropyriphos 20EC |  | 95.0 | t/ha | Rs 75000 per ha | 1.46 |
| **T2 – Technology assessed –**  Use of Combo Trap of IISR  immediately after first heavy rain | IISR Lucknow | 127.5 | t/ha | Rs.163750 per ha | 2.05 |
| **Plant Protection 2** | | | | | |
| **T1 – Farmers Practice-**  Sowing of Arka Anamika/private okra varieties |  | 8.34 | t/ha | Rs 143100 per ha | 3.20 |
| **T2 – Technology assessed –**  Introduction of Phule Vimukta okra variety | MPKV Rahuri | 9.13 | t/ha | Rs.169675 per ha | 3.88 |

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Soil Science - 1** | | | | | |
| ***Farmers Practice-*** *(46*:68:27 NP2O5K2O  Kg/ha ) | - | 21.98 | q/ha | 38594/ha | 2.21 |
| ***Technology Assessed -***  *(*50:75:30 NP2O5K2O Kg/ha + Rhizobium & PSB @1875gm (Powder form) | - | 22.81 | q/ha | 41010/ha | 2.27 |
| ***Technology Assessed***  *(*50:75:30 NP2O5K2O Kg/ha + Rhizobium & PSB @375ml/ha (Liquid form*)* | RCOF ,Nagpur / Centre of bio-fertilizers | 24.58 | q/ha | 46158/ha | 2.41 |
| **Soil Science – 2** | | | | | |
| T1. Farmers practice - 270:120:90 N:P2O5:K2OKg/ha | - | 103.75 | t/ha | 166104.00 | 3.29 |
| T2. Assessment– 250:115:115 N:P2O5:K2O Kg/ha +multimacronutrient and multimicronutrient spray @5 lit each at 60days and 7.5 lit /ha each at 90 days | M.P.K.V.,Rahuri 2016 | 120.00 | t/ha | 200292.00 | 3.65 |
| **Soil Science – 3** | | | | | |
| T1. Farmers practice - 90:60:40:20 N:P2O5:K2O:SKg/ha | - | 325.83 | q/ha | 130308.00 | 2.04 |
| T2. Assessment– 100:50:80:50 N:P2O5:K2O:SKg/ha | NCR Onion & Garlic 2008-09 | 377.08 | q/ha | 169170.00 | 2.35 |
| **Soil Science - 4** | | | | | |
| T1. Farmers practice - 350:150:100Kg NPK/ha through conventional Fertilisers soil application | - | Crop is yet to harvest for yield data ,expected harvest in the month of February 2019 | | | |
| T2. Assessment– Fertigation 80%RDF (272:136:136KgNPK/ha)Through urea,phosphoric acid and MOP | M.P.K.V.,Rahuri 2015 |
| **Veterinary Science. 1** | | | | | |
| Technology option 1 (Farmer’s practice)- No use of any chemical | - | 9470.1 kg | Live weight /lot | 17250 | 1.71 |
| Technology option 2- Fungal spraying of Beauveria basiana 5 ml/ lit over litter. | MAFSU-Nagpur | 10421.7 | Live weight /lot | 21012 | 1.85 |
| **Veterinary Science 2** | | | | | |
| Technology option 1 (Farmer’s practice)- Rearing of local birds | - | 64.37 eggs per bird year | No./ 9+1 bird flock | Rs.834 | 1.10 |
| Technology option –Rearing of Kadaknath 9+1 birds | MAFSU-Nagpur | 53.73 eggs per per bird yr | No.9+ 1/flock | Rs.3139.64 | 1.34 |
| **Veterinary Science 3** | | | | | |
| Technology option 1 (Farmer’s practice)- Cultivation of DHN-6 | - | 162.7 t/ha | Tone/ha | 114485 | 4.59 |
| Technology option –Cultivation of Phule Gunwant | MPKV-Rahri | 173.7 t/ha |  | 124561 | 4.92 |
| **Home Science 1.** | | | | | |
| Technology option 1 (Farmer’s practice) manual | - | - | q///hr | 77000 | 1.78 |
| Technology option 2 –Hand cultivator | KVK, Nadurbar | - | q/hr | 82000 | 1.87 |
| Technology option 3 | - | - | - | - |  |

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

**Agronomy 1.**

**1. Title of Technology Assessed To assess the performance of herbicide propaquizafop +Imazethapyr for weed management in soybean**

2. Problem Definition Soybean is kharif crop , cultivated during rainy season . due to rain timely weeding is not possible, similarly hand weeding require higher expenditure. Herbicide like Imazethapyr is using farmers, but it did not control all weeds, hence additional manual weeding require at pod filling stgae, that increases expenditure on weed management

3.Details of technologies selected for assessment Spraying herbicide propaquizafop +Imazethapyr@ 75 gm a.i./ha at 7-21 DAS, when weeds are at 3-4 leaf stage.

T1 Farmers practice: hand weeding/spray herbicide Imazethapyr @01.kg a.i. /ha at 7-21 DAS

T2-Assessmen: spray herbicide propaquizafop +Imazethapyr@ 75 gm a.i./ha at 7-21 DAS.

4. Source of technology JVV, Jabalpur

5. Production system and thematic area Kharif soybean followed by rabi chick pea

Kharif soybean followed by wheat/onion /preseasonal sugarcane

6. Thematic area Weed Management

Performance of the Technology with performance indicators

**Table: Performance of the technology**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Technology Option | No. of trials | Yield (qt/ha) | Net Returns  (Rs. lakh./ha) | B:C ratio | Cost on weed management (Rs/ha) | 100 grain wt. (gm) |
| Farmers Practice: Hand weeding/spray herbicide Imazethapyr @01.kg a.i. /ha at 7-21 DAS | 06 | 20.98 | 0.24776 | 1.60 | 4707 | 13.23 |
| Technology1 spray herbicide propaquizafop +Imazethapyr@ 75 gm a.i./ha at 7-21 DAS | 21.46 | 0.28414 | 1.73 | 2575 | 13.25 |

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

-Herbicide spray control weeds timely enhance the vegetative growth, flowering and resulted in higher yield

-Herbicide spray save cost on weed management by Rs 2132/ha

- Timely weed management increases crop yield by 2.26%

8. Final recommendation for micro level situation-

Foliar spray of herbicide propaquizafop +Imazethapyr@ 75 gm a.i./ha at 7-21 DAS at 3-4 leaf stage help in timely weed management

9. Constraints identified and feedback for research - Nil

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**10. Process of farmers participation and their reaction**

KVK has established farmers clubs in each village of operational area. KVK first identified problems, its intensity and affected area. Organized the group meeting, identified gaps, problems. Based on these problems, explain the technology to be demonstrated. Select the farmers who are interested in conducting demonstration, involve and interested in technology adoption. after selected organized farmers training, method demonstrations, recorded observation.

**Agronomy 2.**

**1. Title of Technology Assessed To assess the performance of bengal foliar application of zinc sulphate in chick pea on yield under zinc deficient soil**

2. Problem Definition In Ahmednagar district 70- 80 percent soil is zinc deficit. Imbalance nutrient management in chick pea affected crop vegetative and reproductive growth, decline crop productivity. Farmers are unaware about nutrient management specially secondary, micronutrients.

3. Details of technologies selected for assessment In addition to basal dose, Foliar application of zinc sulphate @0.5% at flowering and pod filling stage

T1 Farmers practice: Basal dose 25:50:30 kg N:P:K /ha

T2-Assessmen Basal dose 25:50:30 kg N:P:K /ha+ Foliar application of zinc sulphate

@0.5% at flowering and pod filling stage

4. Source of technology PDKV, Akola

5. Production system and thematic area Kharif soybean/pearl millet followed by rabi chickpea

Thematic area : Integrated Nutrient Management

6. Performance of the Technology with performance indicators

**Table: Performance of the technology**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Technology Option | No. of trials | Yield (qt/ha) | Net Returns  (Rs.in lakh./ha) | B:C ratio | 100 grain wt (gm) | No. of pods/  plant |
| Farmers Practice Basal dose 25:50:30 kg N:P:K /ha | 06 | 19.90 | 0.40758 | 1.98 | 20.03 | 94.7 |
| Technology1: Basal dose 25:50:30 kg N:P:K /ha+ Foliar application of zinc sulphate @0.5% at flowering and pod filling stage | 21.35 | 0.45754 | 2.08 | 20.20 | 114.8 |

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

- Zinc sulphate spray at flowering and pod filling stgae showed increases flowering and pod size, weight.

8. Final recommendation for micro level situation Zinc sulphate spray @0.5% at flowering and pod setting may be

recommended under zinc deficit soil.

9. Constraints identified and feedback for research Nil

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**10. Process of farmers participation and their reaction**

KVK has established farmers clubs in each village of operational area. KVK first identified problems, its intensity and affected area. Organized the group meeting, identified gaps, problems. Based on these problems, explain the technology to be demonstrated. Select the farmers who are interested in conducting demonstration, involve and interested in technology adoption. after selected organized farmers training, method demonstrations, recorded observation. For increasing adoption and diffusion organized field days, shivar pheri.

**Horticulture 1**

1. **Title To assess the performance of Okra variety Phule Vimukta for increasing yield**
2. Problem diagnose/defined There is poor yield of fruits due to increased susceptibility to virus disease

when crop is grown from August to January

3. Details of technologies selected for assessment/refinement:

T1: Arka Anamika - Farmers Practice

T2: Phule Vimukta

4. Source of technology Jt Agresco MPKV, 2016

5. Production system thematic area Vegetable farming system

6. Thematic area Integrated Crop management

7. Performance of the Technology with performance indicators

The assessment on using Phule Vimukta okra has shown better marketable yields as compared to Arka Anamika in terms of no. of pickings and fruit yield. Phule Vimukta okra has shown better pickings(27.7) as compared to 24.8 in Arka Anamika okra. The yield also

is better in Phule Vimukta(198.3 q/ha) as compared to Arka Anamika(175.5 q/ha).

1. Final recommendation for Use of 2 Phule Vimukta okra under irrigated medium to light soil conditions is better than

micro level situation: Arka Anamika in terms of yield and no. of pickings.

9. Constraints identified and feedback for research:

The no. of pickings and fruit quality is better in Phule Vimukta okra as compared to Arka Anamika and has been observed to retain maximum marketable fruit quality with alternate day pickings. The fruit remains marketable even after a delay of 1 or 2 days while the quality of fruit remains unmarketable in Arka Anamika okra when compared with Phule Vimukta.

10. **Process of farmers participation and their reaction**

The farmers have undertaken okra cultivation as a major vegetable crop in Rahata block. Around 90% crop is grown as late kharif crop where the crop gets afflicted with virus and sucking pests incidence at an early stage in farmers practice using prevailing okra varieties like Arka Anamika. Hence the farmers were convinced regarding the Phule Vimukta okra to be grown in the farming situation which is more tolerant to virus. The farmers were organized and suggested about use of Phule Vimukta okra and it was later suggested to form a okra growers group. The farmers were convinced about the poor quality of fruits and high incidence of sucking pests in prevailing okra variety like Arka anamika and were suggested to adopt the Phule Vimukta okra The farmers were then convinced to undertake an assessment if the treatments suits in their environments and may address their problem

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**Horticulture 2.**

1. **Title To assess the performance of CCC 3000 ppm at 60 and 75 days after transplant for**

**increasing bulb yield in rabi onion**

1. Problem diagnose/defined There is heavy fertilization in the crop grown earlier which is mainly maize or fodder.

Subsequent onion crop is further fertilized heavily leading to excessive vegetative growth and thickening or enlargement of bulb necks which has very poor storability and therefore needs to be immedietely marketed.

3. Details of technologies selected for assessment/refinement:

T1: F1 RDF 150:50:50 N:P:K kg/ha and SOP foliar spray of 0.5%

T2: CCC 3000 ppm @ 60 and 75 days after transplantation

Application of CCC at 3000 ppm has been recommended for control of excessive vegetative growth and thickening of bulb necks. The application of CCC 3000 ppm is done at 60 days and 75 days after transplantation in the field. The farmers practice include increasing the K fertilizer application.

4. Source of technology Jt Agresco MPKV, 2016

5. Production system thematic area Soybean Onion farming system

6. Thematic area Integrated Crop management

7. Performance of the Technology with performance indicators

The cultivation of onion is carried out with minimum available resources with the farmer. The available resource include land water,labour and organic matter. The rest of external inputs like fertilizers, pesticides and weedicides have to be brought from outside. The other important input that is important and is dependent from outside source is the labour for transplant and weeding operation which directly affects the productivity and yield of onion. The application of CCC 3000 ppm has been significantly effective in increasing bulb diameter and reducing the bulb neck size considerably owing to accumulation of photosynthates in bulbs and reduced the utilization of the photosynthates for vegetative growth purposes. There has been an increase in yield of 14.0 per cent due to application of CCC 3000 ppm at 60 days and 75 days after transplant. Theapplication of CCC 3000 ppm has been significantly increased the net return under demonstration i.e. Rs 77718.8/ha as against Rs 57568.2 /ha increasing the the BC ratio from 1.63 in control to 1.84 under demonstration.

1. Final recommendation for micro level situation: Use of CCC 3000 ppm at 60 days and 75 days after transplant under irrigated black

heavy soils can be used where onion is grown after soybean or maize crop and where bulb neck size is thicker and poor bulb size with significant improvement in yield.

1. Constraints identified and feedback for research:

The farmers have to adequately supply the fertilizers in 3 splits the application of which if done in excess or at timings other than critical stages then the effectivity of application of CCC will have reduced or minute results. Similarly the transplanting of seedlings continues for more than 12 to 15 days for one hectare onion transplantation due to paucity of labour which affects the critical timings at which application of CCC is required to be done as the 60 DAT may be further extended or delayed by 15 days and hence may have null and void effect.

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1. **Process of farmers participation and their reaction**

The farmers have undertaken onion cultivation as a cash crop in black heavy irrigated soils after soybean and maize. It is a major vegetable crop in Rahata block. Around 90% crop is grown as late kharif or rabi crop. There are serious bulb size reduction issues when it is grown in heavy black soil which leads to poor bulb development. Hence the farmers were convinced regarding the application of CCC 3000 ppm at 60 days and 75 days after transplant to be grown in the irrigated and heavy lack soils farming situation. The farmers were organized and suggested about use of CCC 3000 ppm and it was later suggested to form a onion growers group. The farmers were convinced about the poor quality of bulbs and scope for improving yield using CCC 3000 ppm The farmers were then convinced to undertake an assessment if the treatments suits in their environments and may address their problem.

**Horticulture 3**

1. **Title To assess the performance of pruning at 50% of mature shoots for balanced canopy**

**management for increased fruitset and yield in guava**

1. Problem diagnose/defined There is heavy pruning practiced under farmers check wherein there is removal of 75%

mature canes removing bearing shoots and reducing the canopy cover. The delayed pruning of mature sticks leads to imbalanced canopy cover altering the C:N ratio ultimately leading to poor fruit set and yield.

3. Details of technologies selected for assessment/refinement:

T1: Farmers’ practice- - 75% shoot removal at 5-6 months

T2:Assessment: 50% pruning of mature shoots at 3-4 months period

Application of pruning 50% mature sticks at 3-4 months period is recommended for improved fruitset and canopy cover.

4. Source of technology : Jt Agresco MPKV, 2016

5. Production system thematic area : Orchard Management

6. Thematic area : Integrated Crop management

7. Performance of the Technology with performance indicators

The practice of 75% shoot removal at 5-6 months period leads to improper fruit to shoot ratio and excessive removal of shoots. The application of 50% removal of shoots at 3-4 months stage leads to development of uniform canopy cover and

utilization of sunlight for better fruit set and yield. The application of 50% removal of shoots at 3-4 months stage is significantly effective in increasing fruitset and yield owing to accumulation of maximum photosynthates in shoots. There has been an increase in yield of 23.0 per cent due to 50% removal of shoots at 3-4 months stage. The application of 50% removal of shoots at 3-4 months stage has significantly increased the net return under demonstration i.e. Rs 207143.4/ha as

against Rs 155006.1 /ha increasing the the BC ratio from 2.47 in control to 2.83 under demonstration.

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8. Final recommendation for micro level situation:

The application of 50% removal of shoots at 3-4 months stage in guava under high density plantation leads to development of uniform canopy cover and utilization of sunlight for better fruit set and yield.

9. Constraints identified and feedback for research:

The identification of right stage of pruning 50% mature shoots in guava is rather tedious and requires skills to identify the right stage. The KVK needs to provide the training for pruning skills in guava for improved yield.

10. Process of farmers participation and their reaction :

The farmers have undertaken guava cultivation as a cash crop in black heavy irrigated soils. It is a major orchard fruit crop in Rahata block. Around 90% crop conducts pruning at improper stage leading to maximum removal of mature shoots. There are serious poor flowering and fruitset issues when it is pruned in at improper stage which leads to poor fruit set and yield. Hence the farmers were convinced regarding the application of 50% removal of shoots at 3-4 months stage in guava under high density plantation. The farmers were organized and suggested about use of right stage and method of pruning and it was later suggested to form a guava growers group. The farmers were convinced about the poor fruit set and yield under farmers practice and emphasized the scope for improving yield using 50% mature shoots in guava The farmers were then convinced to undertake an assessment if the treatments suits in their environments and may address their problem.

**Plant Protection 1**

1. **Title of Technology Assessed To test the effectiveness of Light Trap developed by IISR Lucknow for**

**management of White grub in Sugarcane**

2 Problem Definition There is considerable area under sugarcane crop in Ahmednagar district. Since

last two years there is heavy infestation of white grub in sugarcane after onset of monsoon. Timely installation of Combo light trap developed by IISR is an effective tool for mass trapping of beetles of white grub and can minimize the grub infestation to considerable extent.

3. Details of technologies selected for assessment-

T1 – Farmers Practice Soil application of insecticides like Phorate 10G Or Chloropyriphos 20EC

T2 – Technology assessed To test the effectiveness of Light Trap developed by IISR Lucknow for

management of White grub in Sugarcane

4. Source of technology IISR Lucknow

5. Production system and thematic area Agriculture (Commercial crop), IPM

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**6. Performance of the Technology with performance indicators**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Technology Option** | **No.of trials** | **Yield (t/ha)** | **Net Returns**  **(Rs. in lakh./ha)** | **B:C ratio** | **Data on Other performance indicators\*** |
| **Farmers Practice-** Use of chemicals like Propiconazole/ Tebuconazole/Propineb | 06 | 95.0 | 75000 | 1.46 | Pest intensity 30% |
| **Technology Assessed –**  Spraying of Difenoconazole 01.%+ Chlorothalonil 0.2 % (Two sprays at 10 days intervals after occurrence of disease) along with soil application of organic manures and biofertilizers | 127.5 | 163750 | 2.05 | Pest intensity 5% |

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

8 Final recommendation for micro level situation Use of Combo light trap developed by IISR, Lucknow After first heavy

rain

9 Constraints identified and feedback for research Nil

**10 Process of farmers participation and their reaction**

The group meeting of sugarcane growers was organized in the selected villages and PRA was done in those villages. This helped in identifying the major problems in sugarcane cultivation. Severe infestation of white grub was being observed from last two years after first heavy rain in My or june. The grubs feed on sugarcane roots and total setts were drying in October November. . Farmers are applying only chemical insecticides to control this peste. High cost of plant protection was noticed besides unsatisfactory pesr management. The effective remedy to manage this pest was suggested in the form of combo light trap and in consultation with sugarcane growers the treatments were finalized. The observations were recorded at all the replications for testing the efficacy of the light trap against white grub.

**Plant Prot 2**

**1 Title of Technology Assessed To see the performance of Phule Vimukta okra variety against yellow vein mosaic**

**disease**

**2** Problem Definition Okra is being cultivated on large area in Rahuri tahsil of Ahmednagar district during

summer season. Majority of the farmers are planting private okra varieties which are highly susceptible to yellow vein mosaic disease. Introduction of Phule Vimukta okra variety developed by MPKV Rahruri is resistant to yellow vein mosaic disease and hence can minimize the disease incidence to considerable extent.

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3 Details of technologies selected for assessment-

T1 – Farmers Practice – Sowing of Arka Anamika/private okra varieties

T2 – Technology assessed – Introduction of Phule Vimukta okra variety\

4 Source of technology MPKV Rahuri

5 Production system and thematic area Vegetable cultivation, IDM

**6 Performance of the Technology with performance indicators**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Technology Option | No.of trials | Yield (t/ha) | Net Returns  (Rs. in lakh./ha) | B:C ratio | Data on Other performance indicators\* |
| Farmers Practice- Sowing of Arka Anamika / private okra varieties | 06 | 8.34 | 143100 | 3.20 | Per cent disease intensity 24.9% |
| Technology Assessed –  Introduction of Phule Vimukta okra variety | 9.13 | 169675 | 3.88 | Per cent disease intensity 4.3% |

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

**8 Final recommendation for micro level situation** Phule Vimukta okra variety may be planted during summer season to

get rid of yellow vein mosaic disease

**9 Constraints identified and feedback for research** Nil

**10 Process of farmers participation and their reaction**

The group meeting of okra growers was organized in the selected villages and PRA was done in those villages. This helped in identifying the major problems in okra cultivation. Yields of okra are affected due to heavy incidence of yellow vein mosaic disease. Majority of the farmers are planting private okra varieties which are highly susceptible to yellow vein mosaic disease. Introduction of Phule Vimukta okra variety developed by MPKV Rahruri is resistant to yellow vein mosaic disease was suggested to overcome the problem .and in consultation with the okra farmers the treatments were finalized. The observations were recorded at all the replications for testing the performance of Phule Vimukta okra variety.

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**Soil Science 1**

**1 Title of Technology Assessed To assess the liquid bio-fertilizers inoculants for soybean as a seed treatment.**

**2 Problem Definition** Bio-fertilizers rhizobium and phosphate solubilizing bacteria play an important role in soybean for N-fixation and P availability. But the Farmers are using less or no use of bio- fertilizers for soybean as seed a treatment. The reason behind this is that the most of the farmers are using tractor drawn seed drill for the sowing of soybean. Those farmers using powder form of bio-fertilizers seed treatment reported clogging problems of seed drill and because of that the bio-fertilizers seed treatment is not practice by the farmers. Liquid formulation may overcome this problem and the efficiency of the liquid inoculants is also high than the powder form of inoculants. The intensity of the problem is about 42 % in particular farming situation. So that the assessment on the liquid bio- fertilizers inoculants was proposed

**3. Details of technologies selected for assessment:** :

T1 – Farmers practice 46:68:27 NP2O5K2O Kg/ha

T2 - Technology assessed 50:75:30 NP2O5K2O Kg/ha + Rhizobium & PSB @1875ml/ha (Powder form)

T2 - Technology assessed 50:75:30 NP2O5K2O Kg/ha + Rhizobium & PSB @375ml/ha (Liquid form)

**4 Source of technology** RCOF ,Nagpur 2011 / Centre of bio-fertilizers 2014

**5 Production system and thematic area :** Soybean-Wheat/Soybean-Sugarcane, Integrated Nutrient Management

**6 Performance of the Technology with performance indicators:**

The results shows that the highest grain yield of soybean was recorded in the assessment technology of using liquid form of Rhizobium and Phosphate Solubilizing Bacteria (PSB) in addition to the recommendation of NPK (50:75:30kg/ha). The assessment technology coupled with the recommended dose of NPK reported the grain yield (24.58 q/ha) as in powder form of bio-fertilizers(22.81q/ha) and in farmers practice (19.95 q/ha). The yield data shows an increase in yield of 11.83 per cent over the farmer’s practice and 7.76 per cent over the powder form of bio-fertilizers. The leaf nutrient status shows the increase the availability and uptake of nitrogen, phosphorus and potassium by 7.60 per cent, 11.11 per cent and 3.57 per cent over powder form of bio-fertilizers and by 13.53 per cent, 25.00 per cent and 7.40 per cent over farmers practice respectively.

The data on root nodulation recorded 108.44/plant in assessment treatment as 86.67/plant in powder bio-fertilizers and in farmers 72.67/plant in farmers practice and it shows 23.69 and 49.22 per cent increased in nodulation against powder bio-fertilizers and farmers practice respectively. The number of pods/plant and 100‐grain weight were found superior in liquid bio-fertilizers applied treatments as compared to the farmers practice. The number of pods/plant and 100 grain weight in soybean were increased by 10.33 per cent and 3.13 per cent as compared with farmers practice respectively The assessment practice recorded net returns Rs.46158/ha as against Rs.41080/ha in powder form of bio-fertilizers and Rs.38594/ha in the farmers practice . The assessment practice gave highest B: C ratio 2.41, powder bio-fertilizers 2.27 and farmer’s practice 2.21

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

Liquid bio-fertilizers seed treatment not reported the clogging problem of tractor drawn seed drill, easy to apply and shows good results on initial crop growth. Liquid bio-fertilizers inoculants as seed treatment for soybean reported

satisfactory results on increasing root nodulation and leaf NPK levels.

8 **Final recommendation for micro level situation:** Liquid bio-fertilizers seed treatment work satisfactory. The assessment is discontinued and the technology is included in front line demonstration.

9 **Constraints identified and feedback for research:** Availability of liquid bio-fertilizers at village level

10 **Process of farmers participation and their reaction**

Farmers are involved for identification of problems in the particular farming situation and implementation as per trial and recording the observations. Similarly the feedback of the farmers also reported that the use of liquid bio-fertilizes shows improvement in root nodulation and yield.

**Soil Science 2.**

**1. Title of on-farm trials To assess the spray of multi-macronutrient and multi-micronutrient on ratoon sugarcane**

2. Problem diagnosed Ahmednagar district having 34000 ha area under ratoon sugarcane with 80t/ha yield. Low yield due to imbalance fertilizer application. Most of the farmers are using major nutrient and less or no use of micronutrients to the ratoon sugarcane. The less availability and uptake of applied nutrients due to the soil problems especially high pH and calcium carbonate in the soil. The standing crops shows the nutrient deficiency symptoms which results in to the low yield and less economic benefits from the ratoon sugarcane.

3. Details of technologies selected for assessment: Multimacronutrient and mulimicronutrinet foliar application

4. Source of technology MPKV,Rahuri 2016

5. Production system and Theamatic area Sugarcane-Soybean ,Integrated Nutrient Management

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

techniques - Multimacronutrient and mulimicronutrinet foliar application for sugarcane ratoon reported satisfactory results on increasing leaf NPK levels, number of internodes, length internodes and yield.

**7. Performance of the Technology with performance indicators:**

The results shows that the highest cane yield of ratoon sugarcane is recorded in the assessment technology of multimacronutrient and mulimicronutrinet foliar application in addition to the recommendation of NPK (250:115:115 NPK kg/ha). The assessment technology coupled with the recommended dose of NPK reported the grain yield (120t/ha) as against the farmers practice (103.75t/ha). The yield data shows an increase in yield of 15.66 per cent over the farmer’s practice. The leaf nutrient status shows the increase the availability and uptake of nitrogen, phosphorus & potassium by 17.50 per cent, 14.29 per cent and 12.04 per cent respectively.

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The data on number of tillers recorded 6.67in assessment treatment as 6.50 in farmers practice and it shows 2.62 per cent increased. The number of internodes and length of internodes were found superior in multimacronutrient and mulimicronutrinet applied treatments as compared to the farmers practice. The The number of internodes and length of internodes in sugarcane were increased by 4.41 per cent and 4.73 per cent as compared with farmers practice respectively The assessment practice recorded net returns Rs. 166104/ha as against Rs. 200292/ha in the farmers practice. The assessment practice gave highest B: C ratio 3.29 and farmer’s practice 3.65.

**8. Final recommendation for micro level situation**

Multimacronutrient and mulimicronutrinet foliar application work satisfactory for ratoon sugarcane which helps to

increase the leaf nutrient status, number of internodes and length of internodes. The assessment should be continuing forone more year for the confirmation of the results in different agro ecological situation.

**9. Constraints identified and feedbacks for research-** No constraints

**10. Process of farmer’s participation and their reaction**

Farmers are involved for identification of problems in the particular farming situation and implementation as per trial and recording the observations. Similarly the feedback of the farmers also reported that multimacronutrient and mulimicronutrinet foliar application work satisfactory for ratoon sugarcane which helps to increase the leaf colour, number of internodes ,length of internodes and economic yield.

**Soil Science 3.**

**1. Title of on-farm trials To assess the additional 30Kg/ha application of potash and sulfur to improve the keeping**

**quality of Rabi onion**

2. Problem diagnosed Ahmednagar district having 82000 ha area under rabi onion. The Rabi onion is generally stored by the farmers in onion storage structure for 3-4 Months period. There is huge loss of onion bulb during the storage period due to poor keeping quality of the bulb. It has proved that the potassium and sulfur helps to increase the keeping quality of the bulb. The farmers are using less dose of potassium fertilizers and the light to medium soil reported the leaching losses of applied potassium .The most the farmers are not using sulfur secondary nutrient for the onion crop. Additional application of potassium and sulfur to rabi onion may help to increase yield as well as storage life of the onion bulb. The higher level of sulfur in the bulb during storage may reduced the fungal infection and damage of the onion bulb. The intensity of the problem is about 45 % in particular farming situation. So that the assessment on additional application of potassium and sulfur was conducted on rabi onion.

3. Details of technologies selected for assessment Additional 30Kg/ha application of potash and sulfur

4. Source of technology NRC for Onion & Garlic 2008-09

5. Production system and Theamatic area Soybean-Onion, Integrated Nutrient Management

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

Techniques - Additional 30Kg/ha application of potash and Sulfur helps to increase the bulb size and weight. Less neck size may help to reduce the losses in storage.

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**7. Performance of the Technology with performance indicators:**

The results shows that the highest bulb yield of onion was recorded in the assessment technology of additional 30 Kg/ha application of potassium and sulfur in combination with the recommendation of NPKS 100:50:50:20 N: P2O5:K2O: SKg/ha. The assessment technology coupled with the recommended level of NPKS reported the bulb yield (325.83 q/ha) as against the farmers practice (377.08 q/ha). The yield data shows an increase in yield by 15.73 per cent over the farmer’s practice. The bio-metric observations like bulb size (mm), bulb weight (gm), potassium and sulfur content in leaf was recorded. As per the data the bulb size and bulb weight was 52.66mm and 76.00gm in assessment treatment as against 47.83mm and 72.24gm in farmers practice respectively. Potassium and sulfur concentration in leaf was higher potassium (2.52% and sulfur (1.13%) in assessment treatments treatment as against farmers practice the potassium (2.09% and sulfur (0.89%). This shows the increased the availability and uptake of potassium and sulfur by 20.57 per cent and 26.97 per cent respectively. The assessment practice recorded net returns Rs. 130308/ha as against Rs. 169170/ha in the farmers practice.

The assessment practice gave highest B: C ratio 2.35and farmer’s practice 2.04.The onion bulb of assessment and farmers were kept for keeping quality observation for the period of four months.

**8. Final recommendation for micro level situation-**

Additional 30Kg/ha application of potash and sulfur to improve the keeping qualityof Rabi onion work satisfactory which helps to increase the leaf nutrient K and S status, bulb size and bulb weight . The assessment should be continuing forone more year for the confirmation of the results in different agro ecological situation.

**9. Constraints identified and feedbacks for research-** No constraints

**10. Process of farmer’s participation and their reaction**

Farmers are involved for identification of problems in the particular farming situation and implementation as per trial and recording the observations. Similarly the feedback of the farmers also reported that additional 30Kg/ha application of potash and sulfur helps to increased the bulb size and weight. Less neck size may help to reduced the losses in storage.

**Soil Science – 4**

**1. Title of on-farm trials To assess the fertigation schedule for pre seasonal sugarcane (80%RDF)**

2. Problem diagnosed Ahmednagar district having 35000 ha area under pre seasonal sugarcane with 120t/ha yield. Low yield due to imbalance fertilizer application. Most of the farmers are using conventional fertilizers in the soil with some quantity through fertigation and it has less use efficiency as well as labour problem for soil fertilizer application. Sugarcane grower now shifting toward the drip irrigation system thus need fertigation through drip. The intensity of the problem is about 52% under particular farming situation

3. Details of technologies selected for assessment Fertigation schedule for pre seasonal sugarcane (80%RDF)

4. Source of technology MPKV,Rahuri 2015

5. Production system and Theamatic area Sugarcane-Soybean, Nutrient Use Efficiency

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**6**. **Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques:**.

Fertigation helps to increased the number of tillers, saving of fertilizers and labour cost on fertilizers application

**7. Performance of the Technology with performance indicators:**

The assessed technology performance is satisfactory as per the initial bio-metric observation and leaf testing data. Assessment conducted on fertigation schedule for pre seasonal sugarcane (80%RDF)) at 7 farmer’s field on 01.40 ha area. Use of urea, phosphoric acid and white potash through the drip as a fertigation reported the increased in number of tillers at earthing up by 10.70 per cent and leaf NPK content by 10.73 per cent, 12.39 per cent and 5.88 per cent respectively over the farmers practice. Crop is yet to harvest for yield data but expecting 18-20 per cent increase in yield over the farmers practice.

**8. Final recommendation for micro level situation-** Fertigation of 80% recommended fertilizers dose using urea, phosphoric acid and white potash for pre seasonal sugarcane helps to increased the number of tillers and leaf size as well as colour. The assessment is discontinued and the technology is included in front line demonstration.

**9. Constraints identified and feedbacks for research-** Handling of phosphoric acid

**10. Process of farmer’s participation and their reaction**

Farmers are involved for identification of problems in the particular farming situation and implementation as per trial and recording the observations. Similarly the feedback of the farmers also reported that fertigation is using urea, phosphoric acid and white potash for pre seasonal sugarcane helps to increased the number of tillers, saving of fertilizers and labour cost on fertilizers application.

**Vety Sci. 1.**

1. **Title of Technology Assessed - To assess the performance of Beauveria bassiana against flies infestation in broiler shed**

2. Problem Definition In commercial broiler poultry ,there is high incidence of flies resulting in heavy economic

losses

3. Details of technologies selected for assessment- Use of beauveria bassiana is a biological control for house flies ,it is not

harmfull to the poultry and it can be sprayed over a litter, Due to Beauveria bassiana spraying on litter ,it causes infection to the maggots (larve) and after 4-5 days Flies are controlled ,In farmes practice farmer using chemical like ektra powder , for this purpose beauveria bassiana is selected for assessment

4. Source of technology MAFSU-Nagpur

5. Production system and thematic area Production management in broiler poultry

6. Performance of the Technology with performance indicators Flies contolled by 95 percent

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

techniques - Spraying of beauveria bassiana liquid is suitable for flies control in broiler poultry

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8.. Final recommendation for micro level situation

Beauveria bassiana is safe for flies control in commercial contract farming broiler poultry

9. Constraints identified and feedback for research-

Use of Beauveria bassiana is a biological control of flies, it is not harmful to the poultry birds and it can be sprayed in shed, due to Beauveria bassiana spraying flies production is minimized

10. Process of farmers participation and their reaction

KVK has established farmers clubs in each village of operational area. KVK first identified problems, its intensity and affected area. Organized the group meeting, identified gaps, problems. Based on these problems, explain the technology to be demonstrated. Select the farmers who are interested in conducting demonstration, involve and interested in technology adoption. after selected organized farmers training, method demonstrations, recorded observation.

**Veterinary Science 2**

**1. Title of Technology Assessed To assess the performance of Kadaknath breed of back poultry for meat and egg purpose**

2. Problem Definition Less market for egg and live bird

3. Details of technologies selected for assessment

Many farmer rearing non-discript back yard poultry which give less market price for egg and live birds .Few farmer rearing improved backyard poultry birds .There is huge market demand for kadaknath poultry meat .Egg and live birds sale at double rate, for this purpose Kadaknath is selected for assessment

4. Source of technology MAFSU-Nagpur

5. Production system and thematic area Semi intensive backyard poultry

6. Performance of the Technology with performance indicators-

T1.Egg production 64./bird ,Live bird Weight-1.3 ,/bird

T2..Egg production 54 /bird ,Live bird Weight-1.250/bird

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

techniques - Kadaknath poultry birds egg and live birds having huge demand and egg saled at Rs.15 and live birds at Rs.500

8. Final recommendation for micro level situation Nil

9. Constraints identified and feedback for research Nil

10. Process of farmers participation and their reaction-

Kadaknath poultry birds reared like local birds but its market demand is more due to taste of eat and Egg ,Birds scavenge their own feed and 50 percent feed is supplied viz.Maize ,jawar ,kitchen waste KVK has established farmers clubs in each village of operational area. KVK first identified problems, its intensity and affected area. Organized the group meeting, identified gaps, problems. Based on these problems, explain the technology to be demonstrated. Select the farmers who are interested in conducting demonstration, involve and interested in technology adoption. after selected organized farmers training, method demonstrations, recorded observation

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**Veterinary Science 3**

**1.** **Title of Technology Assessed To see the performance of perennial green fodder Var. Phule Gunwanth for**

**crossbred cows**

2. Problem Definition Low yield and less tiller

3.Details of technologies selected for assessment Many farmer rearing high yielding crossbred cows where neither recommended feeding nor good quality nutricious fodder provided to the cows.Farmers are feeding only grasses like DHN-6 and local napier grasses ,Thease grasses having less tillers ,for this purpose Phule Gunwant selected for assessment

4. Source of technology MPKV-Rahuri

5. Production system and thematic area Fodder management

6. Performance of the Technology with performance indicators-

T1..No.of tiller-12.fodder yield—162.7 t/ha

T2. No.of tiller-26 ,2.Fodder yield-173.7/ha

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

techniques Gunwant is better than jaywant and DHN-6

8. Final recommendation for micro level situation Nil

9. Constraints identified and feedback for research Nil

10. Process of farmers participation and their reaction-

KVK has established farmers clubs in each village of operational area. KVK first identified problems, its intensity and affected area. Organized the group meeting, identified gaps, problems. Based on these problems, explain the technology to be demonstrated. Select the farmers who are interested in conducting demonstration, involve and interested in technology adoption. after selected organized farmers training, method demonstrations, recorded observation. For increasing adoption and diffusion organized field days, shivar pheri

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**Home Science**

1. **Title of Technology Assessed To assess the effectiveness of hand cultivator in onion**
2. Problem Definition Take more time to clean land and Injuries in fingers during removing weeds
3. Details of technologies selected for assessment T1 Existing practice- traditional sickle

T2 Recommended practice- Improved hand cultivator

4. Source of technology Krishi Vigyan Kendra, Nadurbar

5 Production system and thematic area Drudgery reduction

6 Performance of the Technology with performance indicators-

|  |  |  |
| --- | --- | --- |
| Performance indicators | Treatment | |
| T1 - Existing practice | T2 – Technology assessed |
| Days taken for weeding (average 6 labors per ha) | 5 days/ha | 3 days /ha |
| Per cent of pain (Numerical rating scale) | 40 % | 28% |

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

Techniques

**Result:** Drudgery reduced improving comfort weeding operation.

8. Final recommendation for micro level situation- hand cultivator is use for prepare seedbed for crop to be planted, it is use to

turn the soil where you plan on planting. and increase work efficiency

9 Constraints identified and feedback for research- Nil

10 Process of farmers participation and their reaction

Initially PRA survey was conducted with the farmers and identified problems. Farm women were involved in treatment finalization, selection of beneficiaries for trial, implementation of trial on their field.

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**3.3. FRONTLINE DEMONSTRATION**

**A. Follow-up for results of FLDs implemented during previous years**

List of technologies demonstrated during previous year and popularized during 2018-19 and recommended for large scale adoption in the district

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S. No | Crop/  Enterprise | Thematic Area | Technology demonstrated | Details of popularization methods suggested to the Extension system | Horizontal spread of technology | | |
| **Agronomy** | | | | | | | |
| 1 | Soybean | Integrated Crop Management | Use of HYVs – MAUS 158  -Seed treatment with Rhizobium, PSB,  -Application of soil test based chemical fertilizers at the time of sowing  - Spary herbicide Imazythypyr @ 750ml/ha  -Spray foliar plant nutrient 19:19:19 @ 0.5%+ chelated ferrous@0.1% :  -Spray chemical pesticides as per need | Field days, shivar pheri, , use of mass media i.e. radio talk | 8 | 120 | 56 |
| 2 | Cotton | Weed Management | -Spray herbicides combination pyrithiobac sodium 750ml+ quizalofop ethyl 1liter/ha | Mass media i.e. radio talk, Training , | 15 | 148 | 54 |
| 3 | Bengal gram | Integrated Crop Management | -Use of HYVs – JAKI-9218  -Seed treatment with Rhizobium, PSB, trichoderma  -Application of soil test based chemical fertilizers at the time of sowing  -installed bird percahse  -Installation of pheromone traps @ 15 no./ha  -chemical pesticides spray as per need | Field days, shivar pheri, , use of mass media i.e. radio talk | 12 | 145 | 52 |
| **Horticulture** | | | | | | | |
| 1 | Onion | Weed management | Post emergence Weed control | Training, SMS and whatsapp messages | 15 | 300 | 160 ha |
| 2 | Pomegranate | ICM | Prevention of sunscorching of fruits with coverbags | Training, Demonstration, SMS and whatsapp | 15 | 240 | 270 |
| 3 | Mango | ICM | Foliar application of KNO3 for increased fruit set and yield | Training, Demonstration, SMS and whatsapp | 12 | 26 | 25 |
| **Plant Protection** | | | | | |  |  |
| 1 | Guava | Biological control | Integrated nematode management | Field visits, advisory, group discussions, radio talk, literature | 04 | 80 | 100 |
| 2 | Pomegranate | IDM | Integrated disease management of Colletotricum and cercospora | Field day, group discussion, Mobile SMS, Advisory, radio talk, literature, field visits | 08 | 175 | 120 |
| 3 | Onion | IDM | Purple blotch management in onion | Field day, group discussions, radio talk, literature, field visits | 07 | 152 | 90 |

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Soil Science** | | | | | | |  |
| 1 | Pomegranate | Integrated Nutrient Management | Use of bio-organic slurry | Literature, popular article, trainings, demonstration | 35 | 1100 | 750 |
| 2 | Sugarcane Ratoon | Integrated Nutrient Management | In situ trash composting | Literature, popular article, trainings, demonstration | 60 | 1200 | 2000 |
| **Veterinary Science** | | | | | | | |
| 1 | Goat | Feed mangaement | Hydroponic | Training, demonstration ,field days | 13 | 52 | - |
| 2 | Dairy | Health management | Propelene glycol | Training, demonstration ,field days | 19 | 95 | . |

**B. Details of FLDs implemented during 2018-19 (Information is to be furnished in the following three tables for each category i.e. cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sl.  No. | Crop | Thematic area | Technology Demonstrated | Season and year | Area (ha) | | No. of farmers/  demonstrations | | | Reasons for shortfall in achievement |
| Proposed | Actual | SC/ST | Others | Total |  |
| **Agronomy** | | | | | | | | | | |
| 1 | Sugarcane | Weed Management | -Spray herbicides halosulfuron methyl @60gm a.i. at 2-4 stage of Cyprus rotundus | Preseasonal 2018 | 2.0 | 2.0 | 2 | 8 | 10 | - |
| **Horticulture** | | | | | | | | | | |
| 1 | Capsicum | INM | Use of soil test based nutrient management in capsicum | Rabi 2018-19 | 1.0 | 1.0 | - | 10 | 10 | - |
| 2 | Onion | INM | Demonstration of fertigation and INM in drip irrigated onion | Rabi 2018-19 | 4.0 | 4.0 | - | 10 | 10 | - |
| 3 | Garlic | Improved Variety | Use of improved variety of garlic for improved yield and economic returns | Rabi 2018-19 | 1.5 | 1.5 | - | 15 | 15 | - |
| **Plant Protection** | | | | | | | | | | |
| 1 | Pomegranate | IDM | Integrated disease management | Kharif 2018 | 4.0 | 4.0 | 02 | 08 | 10 | - |
| 2 | Guava | Biological control | Integrated nematode management | Kharif 2018 | 4.0 | 4.0 | 01 | 09 | 10 | - |
| 3 | Onion | IDM | Purple blotch management | Rabi 2018 | 4.0 | 4.0 | 02 | 08 | 10 | - |

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Soil Science** | | | | | | | | | | |
| 1. | Hybrid maize | Integrated nutrient management | Soil test based balance nutrient management | Kharif 2018-19 | 4.00 | 4.00 | 00 | 10 | 10 | - |
| 2. | Wheat | Integrated nutrient management | Integrated nutrient management | Rabi 2018-19 | 4.00 | 4.00 | 03 | 07 | 10 | - |
| 3. | Pomegranate | Integrated nutrient management | Leaf test based nutrient management | Kharif 2018-19 | 4.00 | 4.00 | 00 | 10 | 10 | - |
| 4. | Sugarcane suru | Problematic soil management | Subsoiler use before planting | Rabi 2018-19 | 4.00 | 2.40 | 00 | 06 | 06 | Less planting due to drought condition |
| **Veterinary Science** | | | | | | | | | | |
| 1 | Goat | Health management | Deworming in goat | 2018/19 | 10 | 10 | 2 | 8 | 10 | - |
| 2 | Dairy | Health management | Metarrizium anisopalie | 2018/19 | 10 | 10 | 2 | 8 | 10 |  |
| 3.. | Fodder crop | Fodder management | Nutritious fodder crop | 2018/19 | 10 | 10 | 2 | 8 | 10 |  |

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**Details of farming situation**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Crop | Season | Farming situation (RF/Irrigated) | Soil type | Status of soil | | | Previous crop | Sowing date | Harvest date | Seasonal rainfall (mm) | No. of rainy days |
| N | P | K |
| **Agronomy** | | | | | | | | | | | |
| Sugarcane | Pre-seasonal | Irrigated | Medium to heavy | Low | Low | very high | Maize-4  fodder -2  Sugarcane -4 | Oct-Nov | yet to harvest | 276.9 | 16 |
| **Horticulture** | | | | | | | | | | | |
| Capsicum | Rabi | Irrigated | Light | Low N | Low P | High K | Cucumber | 16.09.18 | 05.05.19 | 86.4 | 05 |
| Onion | Rabi | Irrigated | Light | Low N | Low P | High K | Soybean | 30.11.18 | 04.03.19 | 55.6 | 03 |
| Garlic | Rabi | Irrigated | Light | Low N | Low P | High K | Maize | 15.11.18 | 15.03.19 | 55.6 | 03 |
| **Plant Protection** | | | | | | | | | | | |
| Pomegranate | Kharif 2018 | Irrigated (Micro irrigation) | Light to medium | Medium | Low | High | Pomegranate | March 2018 | Sept 2018 |  |  |
| Guava | Kharif 2018 | Irrigated (Micro irrigation) | Medium to heavy | Medium | Low | High | Guava | June 18 | Jan-March 2018 |  |  |
| Onion | Rabi 2018 | Irrigated | Medium | Medium | Low | High | Soybean,  maize,bajra | 15th N ov-15th Dec 2018 | Feb 18 |  |  |

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|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Soil Science** | | | | | | | | | | | |
| 1.Hybrid Maize | Kharif  2018-19 | Irrigated | Deep black-01  Medium black-09 | Low-10 | Low-10 | V.high-10 | Wheat/  Onion/ Soybean | 2018  June.I week-01  June.II week-04  June.III week-05 | 2018  Oct.I week-04  Oct.III week-04  Oct.IVweek-02 | 319.50 | 21 |
| 2.Wheat | Rabi  2018-19 | Irrigated | Deep black-04  Medium black-05  Light soil-01 | Low-10 | V.low-01  Low-09 | V.high-10 | Cotton/ Soybean/Maize | 2018  Nov.III week-05  Nov.IV week-05 | 2019  March.IIIweek-01  March.IVweek-05  April Iweek-04 | - | - |
| 3.Pomegranate | Kharif  2018-19 | Irrigated | Medium black-06  Light soil-05 | Low-10 | V.low-02  Low-07  Medium-01 | V.high-10 | Pomegranate | 2017  Dec.IIweek-03  Dec.IVweek-01  2018  March Iweek-02  March IIweek-01  March III week-03 | 2018  Sept.Iweek-02  Sept.IIweek-01  Sept.IIIweek-03  Sept.IVweek-01  Oct.Iweek-01  Oct.IIIweek-02 | 319.50 | 21 |
| 4.Sugarcane  Suru | Rabi  2018-19 | Irrigated | Deep black -04  Medium-02 | Low-10 | V.low-03  Low-03 | High-01  V.high-05 | Maize/  Sugarcane | 2019  Feb-III week-03  Feb-IV week-03 | 2020  Expected date of harvest in the month of  February/March 2020 | - | - |

**Technical Feedback on the demonstrated technologies**

|  |  |
| --- | --- |
| 1. | **Maize**  - Soil test based nutrient management helps to maintain the fertility status of the soil .While in farmers practice reported reduction in fertility status  - Increase in number grains/comb and grain weight. |
| 2. | **Wheat**  -Bio-fertilizers seed treatment helps to improve the germination  - Micronutrient use increased the grain filling and grain weigth |
| 2. | **Pomegranate**  - Leaf test helps in rescheduling the fertilizers doses in standing crop and correct the deficiency status in plant  - Improvement in fruit colour and weight |

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|  |  |
| --- | --- |
| 3. | **Sugarcane suru**  - Subsoiler before planting reported drainage improvement  - Improvement in germination and tillering |
| 4 | **Herbicide** –halosulfuron methyl control weed Cyprus rotundus by 60-70 percent in single spray, when spray at 2-4 leaf stage of weed |
| 5 | The corrected application of nitrogen and phosphorus which were low in soil test report have been found to increase the fruit set and fruit yield in capsicum |
| 6 | The bulb size obtained in balanced NPK as per soil test report in rabi onion is optimum and color of outer scales is attractive and helpful in getting higher market price. |
| 7 | The right stage of pruning at 50% removal of mature stick leads to improved yield in guava grown under high density plantation |

**Farmers’ reactions on specific technologies**

|  |  |
| --- | --- |
| 1. | **Maize -** Soil test based fertilizers management shows improvement in gain filling and yield and not affected the yield of rabi season crop. |
| 2. | **Wheat -**  Improvement in germination,leaf colour ,size and grain filling in spike |
| 3. | **Pomegranate -** Reduced the nutrient deficiency symptoms in crop  - Improvement in fruit size ,weight and quality |
| 4. | **Sugarcane suru -** Reduced the soil compaction - Good initial crop stand |
| 5 | Herbicide is very effective against the Cyprus rotundus, two spary of herbicide control the complete weed-cyprus rotundus |
| 6 | The corrected NPK doses have helped in increasing the fruit yield in capsicum and also led to better storability and optimum keeping quality |
| 7 | The cost of fertigation is very high due to use of micro-irrigation system however it can compensate the cost provided there is optimum market price of Rs 1500/quintals |
| 8 | The identification of right stage for pruning of mature shoots is important and need to be monitored frequently to obtain good fruit yield |
| 9 | No black fungal spots noticed on pomegranate fruits and it helped in fetching 15-18 per cent higher market price |
| 10 | **Guava –** No curly leaves observed on all guava tress and uniform fruit size was also observed due to timely and proper management of root knot nematodes |
| 11 | **Onion** – Cost of palt protection reduced by almost 50% due to timely and proper adoption of ICM practices in onion. |

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**Extension and Training activities under FLD**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl.No.** | **Activity** | **No. of activities organised** | **Date** | **Number of participants** | **Remarks** |
| **Agro** | | | | | |
| **1** | Farmers Training | 02 | 8/9/18, 23/10/18 | 53 |  |
| **Hort** | | | | | |
| 1 | Field days | 01 | 20.02.19 | 30 |  |
| 2 | Farmers Training | 01 | 19.03.19 | 23 |  |
| 3 | Media coverage | 02 | 12.05.19 | - |  |
| 4 | Training for extension functionaries | 01 | 29.11.18 | 23 |  |
| **Pl.Prot** | | | | | |
| 1 | Field days | 02 | 21.08.2019,02.02.2019 | 95 |  |
| 2 | Farmers Training | 03 | 09.07.18, 13.08.18 20.11.18 | 79 |  |
| 3 | Media coverage | 02 |  |  |  |
| 4 | Training for extension functionaries |  |  |  |  |
| **Soil Science** | | | | | |
| 1 | Field days | 02 | 01.09.2018  08.02.2019 | 24  19 |  |
| 2 | Farmers Training | 04 | 31.05.2018  01.06.2018  02.07.2018  05.09.2018 | 29  32  28  31 |  |
| 3 | Media coverage | 02 Radio talks | 30.06.2018  05.07.2018 | - |  |
| 4 | Training for extension functionaries |  | 02.02.2019 | 15 |  |

**Home Science**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1 | Farmers Training | 03 |  |  |  |
| * 2 | Workshop on nutritional kitchen garden | 01 | 04.08.2018 to 11.9.2018 | 25 |  |
| * 3 | Seminar on Nutritional kitchen garden | 01 | 8.10. 2018 | 40 |  |
| * 4 | Drudgery reduction demo on okra cutter | 01 | 3.8.2018 | 15 |  |

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**C. Performance of Frontline Demonstrations**

**Frontline demonstrations on Oilseed crops**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Thematic Area** | **technology demonstrated** | **Variety** | **No. of Farmers** | **Area**  **(ha)** | **Yield (q/ha)** | | | | **% Increase in yield** | **Economics of demonstration (Rs./ha)** | | | | **Economics of check**  **(Rs./ha)** | | | |
| **Demo** | | | **Check** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** |
| **High** | **Low** | **Average** |
| Groundnut |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sesamum |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mustard |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Toria |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Linseed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sunflower |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Soybean |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Soybean | Integrated Crop Management | Use of HYVs – MACS 1188  -Seed treatment with Rhizobium, PSB,  -Application of soil test based chemical fertilizers at the time of sowing  - Spary herbicide Imazythypyr @ 750ml/ha  -Spray foliar plant nutrient 19:19:19 @ 0.5%+ chelated ferrous@0.1% :  -Spray chemical pesticides as per need | MACS 1188 | 50 | 20 | 35 | 25 | 29.36 | 21.55 | 36.24 | 404466 | 92198 | 51732 | 2.28 | 38318 | 67667 | 29349 | 1.77 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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Frontline Demonstration on Pulse crops

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Thematic Area** | **Technology demonstrated** | **Variety** | **No. of Farmers** | **Area**  **(ha)** | **Yield (q/ha)** | | | | **% Increase in yield** | **Economics of demonstration (Rs./ha)** | | | | **Economics of check**  **(Rs./ha)** | | | |
| **Demo** | | | **Check** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** |
| **High** | **Low** | **Average** |
| Pigeonpea |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blackgram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Greengram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chick pea | Integrated Crop Management | -Use of HYVs –-Seed treatment with Rhizobium, PSB, trichoderma  -Application of soil test based chemical fertilizers at the time of sowing  -installed bird percahse  -Installation of pheromone traps @ 15 no./ha  -chemical pesticides spray as per need | -JAKI-9218 | 50 | 20.0 | 23.8 | 18.8 | 20.9 | 16.9 | 23.67 | 42076 | 86214 | 44138 | 2.04 | 40296 | 69921 | 29625 | 1.73 |
| Fieldpea |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lentil |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Horsegram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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**FLD on Other crops**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Category & Crop** | **Thematic Area** | **Name of the technology** | **No. of Farmers** | **Area (ha)** | **Yield (q/ha)** | | | | **% Change in Yield** | **Other Parameters** | | **Economics of demonstration (Rs./ha)** | | | | **Economics of check (Rs./ha)** | | | |
| **Demo** | | | **Check** | **Demo** | **Check** | **Gross Cost** | **Gross**  **Return** | **Net**  **Return** | **BCR**  **(R/C)** | **Gross**  **Cost** | **Gross**  **Return** | **Net**  **Return** | **BCR**  **(R/C)** |
| **High** | **Low** | **Average** |
| **Cereals** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Maize** | Integrated nutrient management | Soil test based balance nutrient management | 10 | 04.00 | 87.50 | 57.50 | 71.56 | 60.31 | 18.65 | Comb wt -279.47gm  No.of grains/ comb-677.40 100grain wt -32.11gm | Comb wt -237.48gm  No.of grains/ comb-613.52  100grain wt -29.67gm | 57001 | 84148 | 27148 | 1.48 | 54906 | 70922 | 16016 | 1.29 |
| **Wheat** | Integrated nutrient management | Integrated nutrient management | 10 | 04.00 | 55.00 | 40.00 | 46.63 | 39.25 | 18.80 | Germination%-89.63  No.of tillers-7.53  100grain wt(gm)-4.80 | Germination%-85.43  No.of tillers-7.00  100grain wt(gm)-4.45 | 49913 | 85206 | 35293 | 1.71 | 50084 | 71700 | 21617 | 1.43 |
| **Paddy** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Waterlogged Situation** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Coarse Rice** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Scented Rice** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Wheat** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Wheat Timely sown** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Wheat Late Sown** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Mandua** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Barley** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Maize** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Amaranth** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Millets** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Jowar** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Bajra** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Barnyard millet** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| **Finger millet** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Vegetables** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Bottlegourd** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Bittergourd** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Cowpea** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Spongegour** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Petha** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Tomato** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Frenchbean** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Capsicum** | INM | Use of soil test based INM | 10 | 1.0 | 715 | 570 | 644 | 563 | 14.3 | No. of pickings – 36.1  Fruit yield kg/plant-3.09  Yield 644 q/ha | No. of pickings – 30.2  Fruit yield kg/plant-2.65  Yield 563q/ha | 502646.6 | 1803200 | 1300553.4 | 3.58 | 514652 | 1576400 | 1071748 | 3.06 |
| **Chilli** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Brinjal** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Vegetable pea** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Softgourd** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Okra** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Colocasia (Arvi)** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Broccoli** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Cucumber** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Onion | INM | Application of 100% RDF through fertigation under drip irrigated onion | 10 | 4.0 | 415 | 355 | 387.5 | 347 | 11.7 | Bulb diameter- 56.1  Neck perimeter-1.85 cm  Yield 387.5q/ha | Bulb diameter- 51.2  Neck perimeter-2.04 cm  Yield 347q/ha | 114347 | 213125 | 98778 | 1.86 | 120187 | 190850 | 70663 | 1.58 |
| Garlic | Varietal Improvement | Varietal demoinstration of Phule Neelima gartlic for improved yield | 15 | 0.75 | 260 | 190 | 228.6 | 195.4 | 16.9 | **clove diameter- 44.6 mm**  **No. Of cloves/bulb-16.5**  **Yield 228.6q/ha** | **clove diameter- 35.3 mm**  **No. Of cloves/bulb-26.3**  **Yield 195.4q/ha** | **113242** | **274400** | **161158** | **2.42** | **109278** | **234560** | **125282** | **2.15** |
| **Onion** | IDM | Purple blotch managet | 10 | 4.0 | 450 | 390 | 420 | 360 | 16.67 | 50000 | 57500 | 162500 | 441000 | 278500 | 2.71 | 160000 | 378000 | 218000 | 2.36 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Coriender** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Lettuce** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Cabbage** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Cauliflower** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Elephant fruit** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Flower crops** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Marigold** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Bela** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Tuberose** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Gladiolus** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Fruit crops** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pomegranate | Integrated nutrient management | Leaf test based nutrient management | 10 | 04.00 | 37.50 | 11.25 | 26.50 | 23.88 | 10.97 | No.of fruits/plant-111.73  Av.fruit wt(gm)-290.39 | No.of fruits/plant-109.40  Av.fruit wt(gm)-263.80 | 341825 | 1056000 | 714175 | 3.09 | 331900 | 950125 | 618225 | 2.86 |
| **Pomegranate** | **IDM** | Colletotricum and Cercospora management | 10 | 4.0 | 210 | 202.5 | 206.25 | 187.5 | 10.0 | 62500 | 70000 | 300000 | 1031250 | 731250 | 3.43 | 312500 | 937500 | 625000 | 3.0 |
| **Guava** | Biological control | Integrated nematode management | 10 | 4.0 | 210 | 190 | 200 | 175 | 14.29 | 25000 | 30000 | 75000 | 300000 | 255000 | 4.0 | 87500 | 262500 | 175000 | 3.0 |
| **Strawberry** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Guava** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Banana** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Papaya** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Ginger** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Garlic** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Turmeric** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Commercial Crops** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Sugarcane** | Weed management. | Spray herbicides halosulfuron methyl @60gm a.i. at 2-4 stage of Cyprus rotundus | 10 | 2 | Crop is yet to harvest for yield data , expected harvest in the month of February/March 2020 | | | | | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| Sugarcane  Suru | Problematic soil management | Subsoiler use | 06 | 02.40 | Crop is yet to harvest for yield data , expected harvest in the month of February/March 2020 | | | | | No.tillers at earthing up–08.83 | No.tillers at earthing up-07.72 | Crop is yet to harvest | | | | | | | |

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FLD on Livestock

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | **Thematic area** | **Name of the technology demonstrated** | **No. of Farmer** | **No.of Units (Animal/ Poultry/ Birds, etc)** | **Major parameters** | | **%**  **change**  **in major**  **parameter** | **Other parameter** | | **Economics of demonstration (Rs.)** | | | | **Economics of check**  **(Rs.)** | | | |
| **Demo** | **Check** | **Demo** | **Check** | **Gross**  **Cost** | **Gross**  **Return** | **Net**  **Return** | **BCR**  **(R/C)** | **Gross**  **Cost** | **Gross**  **Return** | **Net**  **Return** | **BCR**  **(R/C)** |
| **Cattle** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Buffalo** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Buffalo Calf** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Dairy** | Disease management | Use o metrizium anisopalie for tick control in crossbred cows | 10 | Two Cow | 12.33lit/day | 11.6 lit/day | 6.29 | 2/sq inch | 5.5 /sq inch | 66438 | 90262.5 | 23424 | 1.35 | 66438 | 86107.5 | 19959.5 | 1.29 |
|  | Fodder management | Cultivation of phule godhan | 10 | Two cow | **34.5 t/ha** | 32.43 t/ha | 6.38 | 0.500 kg fodder wastage | 1.25 kg fodder wastage | 13916.67 | 51750 | 37833 | 3.71 | 13432.4 | 48838 | 35205.6 | 3.62 |
| **Poultry** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Sheep & Goat** | Health management | Deworming in goat | 10 | Two goat /demonstration | 30.88 kg /goat | 28.72 kg/goat | 7.52 | 28 | 32 | 15769 | 30880 | 15111 | 1.95 | 15476 | 28720 | 13244 | 1.85 |
| **Vaccination** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

FLD on Fisheries

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | **Thematic area** | **Name of the technology demonstrated** | **No. of**  **Farmer** | **No.of units** | **Major parameters** | | **% change in major parameter** | **Other parameter** | | **Economics of demonstration (Rs.)** | | | | **Economics of check**  **(Rs.)** | | | |
| **Demons**  **ration** | **Check** | **Demons**  **ration** | **Check** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** |
| **Common Carps** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Composite fish culture** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Feed Management** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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FLD on Other Enterprises

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category** | **Name of the technology demonstrated** | **No. of Farmer** | **No.of units** | **Major parameters** | | **% change in major parameter** | **Other parameter** | | **Economics of demonstration (Rs.) or Rs./unit** | | | | **Economics of check**  **(Rs.) or Rs./unit** | | | |
| **Demo** | **Check** | **Demo** | **Check** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** |
| **Oyster Mushroom** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Button Mushroom** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Apiculture** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Maize Sheller** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Value Addition** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Vermi Compost** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Sericulture** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

FLD on Women Empowerment - NIL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Category | Name of technology | No. of demonstrations | Name of observations | Demonstration | Check |
|  |  |  |  |  |  |

**FLD on Farm Implements and Machinery**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of the implement** | **Crop** | **Technology demonstrated** | **No. of Farmer** | **Area (ha)** | **Major**  **parameters** | **Field observation (output/man hour)** | | **% change**  **in major**  **parameter** | **Labor reduction (man days)** | | | | **Cost reduction**  **(Rs./ha or Rs./Unit etc.)** | | | |
| **Demo** | **Check** | **Harvesting of fruits** | **Sowing** | **Weeding** | **Total** | **Harvesting of fruits** | **Labor** | **Irrigation** | **Total** |
| Okra cutter | Okra | Harvesting | 05 | 1.0 | Harvesting period kg/hr | 7.5kg/hr | 4.0kg/hr | 45% | 16 | - | - | - | 4800 | - | - | - |

**FLD on Other Enterprise: Kitchen Gardening**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category and Crop** | **Thematic area** | **Name of the technology demonstrated** | **No. of Farmer** | **No. of Units** | **Yield (Kg)** | | **% change in yield** | **Other parameters** | | **Economics of demonstration**  **(Rs./0.1 ha)** | | | | **Economics of check**  **(Rs./ha)** | | | |
| **Demons**  **ration** | **Check** | **Demo** | **Check** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** |
| Leafy vegetables | Nutrition management | MAU Parbhani | 15 | 15 | 202 | 135 | 66 | - | - | 1265 | 2430 | 1165 | 1.92 | 875 | 1520 | 645 | 0.5 |

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**FLD on Demonstration details on crop hybrids**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **technology demonstrated** | **Hybrid Variety** | **No. of Farmers** | **Area**  **(ha)** | **Yield (q/ha)** | | | | **% Increase in yield** | **Economics of demonstration (Rs./ha)** | | | |
| **Demo** | | | **Check** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** |
| **High** | **Low** | **Average** |
| Oilseed crop |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pulse crop |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cereal crop |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Vegetable crop |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fruit crop |  |  |  |  |  |  |  |  |  |  |  |  |  |

**D. Performance of Cluster Frontline Demonstrations (CFLD)**

**CFLD on Oilseed crops**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Thematic Area** | **technology demonstrated** | **Variety** | **No. of Farmers** | **Area**  **(ha)** | **Yield (q/ha)** | | | | **% Increase in yield** | **Economics of demonstration (Rs./ha)** | | | | **Economics of check**  **(Rs./ha)** | | | |
| **Demo** | | | **Check** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** |
| **High** | **Low** | **Average** |
| Groundnut |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sesamum |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mustard |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Niger |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Linseed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sunflower |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Soybean |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Castor |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

CFLD on Pulse crops

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Thematic Area** | **Technology demonstrated** | **Variety** | **No. of Farmers** | **Area**  **(ha)** | **Yield (q/ha)** | | | | **% Increase in yield** | **Economics of demonstration (Rs./ha)** | | | | **Economics of check**  **(Rs./ha)** | | | |
| **Demo** | | | **Check** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** | **Gross**  **Cost** | **Gross**  **Return** | **Net Return** | **BCR**  **(R/C)** |
| **High** | **Low** | **Average** |
| Pigeonpea |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blackgram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Greengram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Chickpea |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fieldpea |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lentil |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Horsegram |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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3.4. Training Programmes

**Farmers’ Training including sponsored training programmes (on campus)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Thematic area** | **No. of courses** | **Participants** | | | | | | | | |
| **Others** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **I Crop Production** |  |  |  |  |  |  |  |  |  |  |
| Weed Management |  |  |  |  |  |  |  |  |  |  |
| Resource Conservation Technologies | 1 | 16 | 9 | 25 | 1 | 1 | 2 | 17 | 10 | 27 |
| Cropping Systems |  |  |  |  |  |  |  |  |  |  |
| Crop Diversification |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming |  |  |  |  |  |  |  |  |  |  |
| Micro Irrigation/irrigation |  |  |  |  |  |  |  |  |  |  |
| Seed production |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Crop Management | 2 | 41 | 34 | 75 | 5 | 3 | 8 | 46 | 37 | 83 |
| Soil & water conservatioin |  |  |  |  |  |  |  |  |  |  |
| Integrated nutrient management |  |  |  |  |  |  |  |  |  |  |
| Production of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **3** | **57** | **43** | **100** | **6** | **4** | **10** | **63** | **47** | **110** |
| **II Horticulture** |  |  |  |  |  |  |  |  |  |  |
| **a) Vegetable Crops** |  |  |  |  |  |  |  |  |  |  |
| Production of low value and high valume crops |  |  |  |  |  |  |  |  |  |  |
| Off-season vegetables |  |  |  |  |  |  |  |  |  |  |
| Nursery raising |  |  |  |  |  |  |  |  |  |  |
| Exotic vegetables |  |  |  |  |  |  |  |  |  |  |
| Export potential vegetables |  |  |  |  |  |  |  |  |  |  |
| Grading and standardization |  |  |  |  |  |  |  |  |  |  |
| Protective cultivation |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (a)** |  |  |  |  |  |  |  |  |  |  |
| **b) Fruits** |  |  |  |  |  |  |  |  |  |  |
| Training and Pruning | 1 | 23 | 0 | 23 | 1 | 0 | 1 | 24 | 0 | 24 |
| Layout and Management of Orchards |  |  |  |  |  |  |  |  |  |  |
| Cultivation of Fruit | 04 | 101 | 0 | 101 | 8 | 0 | 8 | 109 | 0 | 109 |
| Management of young plants/orchards |  |  |  |  |  |  |  |  |  |  |
| Rejuvenation of old orchards |  |  |  |  |  |  |  |  |  |  |
| Export potential fruits |  |  |  |  |  |  |  |  |  |  |
| Micro irrigation systems of orchards |  |  |  |  |  |  |  |  |  |  |
| **Total (b)** | **05** | **124** | **0** | **124** | **09** | **-** | **09** | **133** | **0** | **133** |

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **c) Ornamental Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery Management |  |  |  |  |  |  |  |  |  |  |
| Management of potted plants |  |  |  |  |  |  |  |  |  |  |
| Export potential of ornamental plants |  |  |  |  |  |  |  |  |  |  |
| Propagation techniques of Ornamental Plants |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total ( c)** |  |  |  |  |  |  |  |  |  |  |
| **d) Plantation crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (d)** |  |  |  |  |  |  |  |  |  |  |
| **e) Tuber crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (e)** |  |  |  |  |  |  |  |  |  |  |
| **f) Spices** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (f)** |  |  |  |  |  |  |  |  |  |  |
| **g) Medicinal and Aromatic Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Production and management technology |  |  |  |  |  |  |  |  |  |  |
| Post harvest technology and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (g)** |  |  |  |  |  |  |  |  |  |  |
| **GT (a-g)** |  |  |  |  |  |  |  |  |  |  |
| **III Soil Health and Fertility Management** |  |  |  |  |  |  |  |  |  |  |
| Soil fertility management | 01 | 31 | 07 | 38 | 03 | 01 | 04 | 34 | 08 | 42 |
| Integrated water management |  |  |  |  |  |  |  |  |  |  |
| Integrated Nutrient Management | 01 | 25 | 00 | 25 | 02 | 00 | 02 | 27 | 00 | 27 |
| Production and use of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Management of Problematic soils |  |  |  |  |  |  |  |  |  |  |
| Micro nutrient deficiency in crops |  |  |  |  |  |  |  |  |  |  |
| Nutrient Use Efficiency | 01 | 29 | 00 | 29 | 03 | 00 | 03 | 32 | 00 | 32 |
| Balance use of fertilizers |  |  |  |  |  |  |  |  |  |  |
| Soil and Water Testing | 02 | 60 | 00 | 60 | 03 | 00 | 03 | 63 | 00 | 63 |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **05** | **145** | **07** | **152** | **11** | **01** | **12** | **156** | **08** | **164** |

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **IV Livestock Production and Management** |  |  |  |  |  |  |  |  |  |  |
| Dairy Management | 02 | 66 | 0 | 66 | 10 | 0 | 10 | 76 | 0 | 76 |
| Poultry Management |  |  |  |  |  |  |  |  |  |  |
| Goat Management | 02 | 50 | 0 | 50 | 5 | 0 | 5 | 55 | 0 | 55 |
| Rabbit Management |  |  |  |  |  |  |  |  |  |  |
| Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| Disease Management |  |  |  |  |  |  |  |  |  |  |
| Feed & fodder technology |  |  |  |  |  |  |  |  |  |  |
| Production of quality animal products |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **04** | **106** | **0** | **106** | **15** | **0** | **15** | **131** | **0** | **131** |
| **V Home Science/Women empowerment** |  |  |  |  |  |  |  |  |  |  |
| Household food security by kitchen gardening and nutrition gardening | 01 | - | 64 | 64 | - | 11 | 11 |  | 75 | 75 |
| Design and development of low/minimum cost diet |  |  |  |  |  |  |  |  |  |  |
| Designing and development for high nutrient efficiency diet |  |  |  |  |  |  |  |  |  |  |
| Minimization of nutrient loss in processing |  |  |  |  |  |  |  |  |  |  |
| Processing and cooking |  |  |  |  |  |  |  |  |  |  |
| Gender mainstreaming through SHGs |  |  |  |  |  |  |  |  |  |  |
| Storage loss minimization techniques |  |  |  |  |  |  |  |  |  |  |
| Value addition |  |  |  |  |  |  |  |  |  |  |
| Women empowerment |  |  |  |  |  |  |  |  |  |  |
| Location specific drudgery reduction technologies |  |  |  |  |  |  |  |  |  |  |
| Rural Crafts |  |  |  |  |  |  |  |  |  |  |
| Women and child care |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **01** | **-** | **64** | **64** | **-** | **11** | **11** |  | **75** | **75** |
| **VI Agril. Engineering** |  |  |  |  |  |  |  |  |  |  |
| Farm Machinary 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) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **VII Plant Protection** |  |  |  |  |  |  |  |  |  |  |
| Integrated Pest Management | 02 | 39 | 04 | 43 | 06 | - | 06 | 45 | 04 | 49 |
| Integrated Disease Management | 02 | 36 | 05 | 41 | 03 | - | 03 | 39 | 05 | 44 |
| Bio-control of pests and diseases | 01 | 21 | - | 21 | 04 | - | 04 | 25 | - | 25 |
| Production of bio control agents and bio pesticides |  |  |  |  |  |  |  |  |  |  |
| **Total** | **05** | **96** | **09** | **105** | **13** | **-** | **13** | **109** | **09** | **118** |
| **VIII 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) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **IX Production of Inputs at site** |  |  |  |  |  |  |  |  |  |  |
| Seed Production |  |  |  |  |  |  |  |  |  |  |
| Planting material production |  |  |  |  |  |  |  |  |  |  |
| Bio-agents production |  |  |  |  |  |  |  |  |  |  |
| Bio-pesticides production |  |  |  |  |  |  |  |  |  |  |
| Bio-fertilizer production |  |  |  |  |  |  |  |  |  |  |
| Vermi-compost production |  |  |  |  |  |  |  |  |  |  |
| Organic manures production |  |  |  |  |  |  |  |  |  |  |
| Production of fry and fingerlings |  |  |  |  |  |  |  |  |  |  |
| Production of Bee-colonies and wax sheets |  |  |  |  |  |  |  |  |  |  |
| Small tools and implements |  |  |  |  |  |  |  |  |  |  |
| Production of livestock feed and fodder |  |  |  |  |  |  |  |  |  |  |
| Production of Fish feed |  |  |  |  |  |  |  |  |  |  |
| Mushroom Production |  |  |  |  |  |  |  |  |  |  |
| Apiculture |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X CapacityBuilding and Group Dynamics** |  |  |  |  |  |  |  |  |  |  |
| Leadership development |  |  |  |  |  |  |  |  |  |  |
| Group dynamics | 01 | 39 | 0 | 39 | 06 | 0 | 06 | 45 | 0 | 45 |
| Formation and Management of SHGs |  |  |  |  |  |  |  |  |  |  |
| Mobilization of social capital |  |  |  |  |  |  |  |  |  |  |
| Entrepreneurial development of farmers/youths | 01 | 36 | 0 | 36 | 04 | 0 | 04 | 40 | 0 | 40 |
| WTO and IPR issues |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **02** | **75** | **0** | **75** | **10** | **0** | **10** | **85** | **0** | **85** |
| **XI Agro-forestry** |  |  |  |  |  |  |  |  |  |  |
| Production technologies |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming Systems |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **GRAND TOTAL** | **25** | **603** | **123** | **726** | **64** | **16** | **80** | **677** | **139** | **816** |

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**Farmers’ Training including sponsored training programmes (off campus)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Thematic area** | **No. of courses** | **Participants** | | | | | | | | |
| **Others** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **I Crop Production** |  |  |  |  |  |  |  |  |  |  |
| Weed Management |  |  |  |  |  |  |  |  |  |  |
| Resource Conservation Technologies |  |  |  |  |  |  |  |  |  |  |
| Cropping Systems |  |  |  |  |  |  |  |  |  |  |
| Crop Diversification |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming |  |  |  |  |  |  |  |  |  |  |
| Micro Irrigation/irrigation |  |  |  |  |  |  |  |  |  |  |
| Seed production |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Crop Management | 1 | 38 | 1 | 39 | 4 | 0 | 4 | 42 | 1 | 43 |
| Soil & water conservatioin |  |  |  |  |  |  |  |  |  |  |
| Integrated nutrient management | 1 | 24 | 0 | 24 | 4 | 0 | 4 | 28 | 0 | 28 |
| Production of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Integrated Pest Management | 3 | 65 | 0 | 65 | 16 | 0 | 16 | 81 | 0 | 81 |
| **Total** | **05** | **127** | **01** | **128** | **24** | **0** | **24** | **151** | **01** | **152** |
| **II Horticulture** |  |  |  |  |  |  |  |  |  |  |
| **a) Vegetable Crops** |  |  |  |  |  |  |  |  |  |  |
| Production of low value and high valume crops |  |  |  |  |  |  |  |  |  |  |
| Off-season vegetables | 01 | 33 | 0 | 33 | 2 | 0 | 2 | 35 | 0 | 35 |
| Nursery raising |  |  |  |  |  |  |  |  |  |  |
| Export potential vegetables |  |  |  |  |  |  |  |  |  |  |
| Grading and standardization |  |  |  |  |  |  |  |  |  |  |
| Protective cultivation |  |  |  |  |  |  |  |  |  |  |
| Others Resource conservation in vegetables | 1 | 23 | 0 | 23 | 2 | 0 | 2 | 25 | 0 | 25 |
| INM in vegetables | 1 | 30 | 0 | 30 | 2 | 0 | 2 | 32 | 0 | 32 |
| **Total (a)** | **03** | **86** | **0** | **86** | **6** | **0** | **6** | **92** | **0** | **92** |
| **b) Fruits** |  |  |  |  |  |  |  |  |  |  |
| Training and Pruning |  |  |  |  |  |  |  |  |  |  |
| Layout and Management of Orchards |  |  |  |  |  |  |  |  |  |  |
| Cultivation of Fruit | 02 | 48 | 0 | 48 | 03 | 0 | 03 | 51 | 0 | 51 |
| Management of young plants/orchards |  |  |  |  |  |  |  |  |  |  |
| Rejuvenation of old orchards |  |  |  |  |  |  |  |  |  |  |
| Export potential fruits |  |  |  |  |  |  |  |  |  |  |
| Micro irrigation systems of orchards |  |  |  |  |  |  |  |  |  |  |
| Plant propagation techniques |  |  |  |  |  |  |  |  |  |  |
| **Total (b)** | **02** | **48** | **0** | **48** | **03** | **0** | **03** | **51** | **0** | **51** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **c) Ornamental Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery Management |  |  |  |  |  |  |  |  |  |  |
| Management of potted plants |  |  |  |  |  |  |  |  |  |  |
| Export potential of ornamental plants |  |  |  |  |  |  |  |  |  |  |
| Propagation techniques of Ornamental Plants |  |  |  |  |  |  |  |  |  |  |
| Cultivation of Chrysanthemum and Aster | 1 | 28 | 0 | 28 | 2 | 0 | 2 | 30 | 0 | 30 |
| **Total ( c)** | **1** | **28** | **0** | **28** | **2** | **0** | **2** | **30** | **0** | **30** |
| **d) Plantation crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (d)** |  |  |  |  |  |  |  |  |  |  |
| **e) Tuber crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (e)** |  |  |  |  |  |  |  |  |  |  |
| **f) Spices** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (f)** |  |  |  |  |  |  |  |  |  |  |
| **g) Medicinal and Aromatic Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Production and management technology |  |  |  |  |  |  |  |  |  |  |
| Post harvest technology and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (g)** |  |  |  |  |  |  |  |  |  |  |
| **GT (a-g)** |  |  |  |  |  |  |  |  |  |  |
| **III Soil Health and Fertility Management** |  |  |  |  |  |  |  |  |  |  |
| Soil fertility management |  |  |  |  |  |  |  |  |  |  |
| Integrated water management |  |  |  |  |  |  |  |  |  |  |
| Integrated Nutrient Management | 04 | 101 | 04 | 105 | 09 | 00 | 09 | 110 | 04 | 114 |
| Production and use of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Management of Problematic soils | 01 | 29 | 00 | 29 | 02 | 00 | 02 | 31 | 00 | 31 |
| Micro nutrient deficiency in crops |  |  |  |  |  |  |  |  |  |  |
| Nutrient Use Efficiency |  |  |  |  |  |  |  |  |  |  |
| Balance use of fertilizers |  |  |  |  |  |  |  |  |  |  |
| Soil and Water Testing |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **05** | **130** | **04** | **134** | **11** | **0** | **11** | **141** | **04** | **145** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **IV Livestock Production and Management** |  |  |  |  |  |  |  |  |  |  |
| Dairy Management | 1 | 18 | 0 | 18 | 0 | 0 | 0 | 18 | 0 | **18** |
| Poultry Management | 1 | 0 | 18 | 18 | 0 | 5 | 5 | 0 | 23 | **23** |
| Goat Management | 3 | 12 | 32 | 44 | 3 | 12 | 15 | 15 | 44 | 59 |
| Rabbit Management |  |  |  |  |  |  |  |  |  |  |
| Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| Disease Management | 1 | 8 | 8 | 16 | 2 | 2 | 4 | 10 | 10 | **20** |
| Feed & fodder technology |  |  |  |  |  |  |  |  |  |  |
| Production of quality animal products |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **06** | **38** | **58** | **96** | **05** | **19** | **24** | **43** | **77** | **120** |
| **V Home Science/Women empowerment** |  |  |  |  |  |  |  |  |  |  |
| Household food security by kitchen gardening and nutrition gardening | 02 |  | 35 | 35 |  | 12 | 12 |  | 47 | 47 |
| Design and development of low/minimum cost diet |  |  |  |  |  |  |  |  |  |  |
| Designing and development for high nutrient efficiency diet |  |  |  |  |  |  |  |  |  |  |
| Minimization of nutrient loss in processing |  |  |  |  |  |  |  |  |  |  |
| Processing and cooking |  |  |  |  |  |  |  |  |  |  |
| Gender mainstreaming through SHGs |  |  |  |  |  |  |  |  |  |  |
| Storage loss minimization techniques |  |  |  |  |  |  |  |  |  |  |
| Value addition |  |  |  |  |  |  |  |  |  |  |
| Women empowerment |  |  |  |  |  |  |  |  |  |  |
| Location specific drudgery reduction technologies | 02 | - | 25 | 25 | - | 06 | 06 |  | 31 | 31 |
| Rural Crafts | 03 |  | 31 | 31 |  | 05 | 05 |  | 36 | 36 |
| Women and child care |  |  |  |  |  |  |  |  |  |  |
| **Total** | **07** | **-** | **91** | **91** | **-** | **23** | **23** |  | **114** | **114** |
| **VI Agril. Engineering** |  |  |  |  |  |  |  |  |  |  |
| Farm Machinary 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) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **VII Plant Protection** |  |  |  |  |  |  |  |  |  |  |
| Integrated Pest Management | 01 | 23 | - | 23 | 04 | - | 04 | 27 | - | 27 |
| Integrated Disease Management | 01 | 21 | - | 21 | 05 | - | 05 | 26 | - | 26 |
| Bio-control of pests and diseases | 01 | 20 | - | 20 | 04 | - | 04 | 24 | - | 24 |
| Production of bio control agents and bio pesticides |  |  |  |  |  |  |  |  |  |  |
| **Total** | **03** | **64** | **-** | **64** | **14** | **-** | **14** | **77** | **-** | **77** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **VIII 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 |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **IX Production of Inputs at site** |  |  |  |  |  |  |  |  |  |  |
| Seed Production |  |  |  |  |  |  |  |  |  |  |
| Planting material production |  |  |  |  |  |  |  |  |  |  |
| Bio-agents production |  |  |  |  |  |  |  |  |  |  |
| Bio-pesticides production |  |  |  |  |  |  |  |  |  |  |
| Bio-fertilizer production |  |  |  |  |  |  |  |  |  |  |
| Vermi-compost production |  |  |  |  |  |  |  |  |  |  |
| Organic manures production |  |  |  |  |  |  |  |  |  |  |
| Production of fry and fingerlings |  |  |  |  |  |  |  |  |  |  |
| Production of Bee-colonies and wax sheets |  |  |  |  |  |  |  |  |  |  |
| Small tools and implements |  |  |  |  |  |  |  |  |  |  |
| Production of livestock feed and fodder |  |  |  |  |  |  |  |  |  |  |
| Production of Fish feed |  |  |  |  |  |  |  |  |  |  |
| Mushroom Production |  |  |  |  |  |  |  |  |  |  |
| Apiculture |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **X Capacity Building and Group Dynamics** |  |  |  |  |  |  |  |  |  |  |
| Leadership development |  |  |  |  |  |  |  |  |  |  |
| Group dynamics |  |  |  |  |  |  |  |  |  |  |
| Formation and Management of SHGs |  |  |  |  |  |  |  |  |  |  |
| Mobilization of social capital |  |  |  |  |  |  |  |  |  |  |
| Entrepreneurial development of farmers/youths |  |  |  |  |  |  |  |  |  |  |
| WTO and IPR issues |  |  |  |  |  |  |  |  |  |  |
| Technology Orientation | 05 | 163 | 0 | 163 | 14 | 0 | 14 | 177 | 0 | 177 |
| **Total** | **05** | **163** | **0** | **163** | **14** | **0** | **14** | **177** | **0** | **177** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **XI Agro-forestry** |  |  |  |  |  |  |  |  |  |  |
| Production technologies |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming Systems |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **GRAND TOTAL** | **37** | **684** | **154** | **838** | **79** | **42** | **121** | **762** | **196** | **958** |

**Farmers’ Training including sponsored training programmes – CONSOLIDATED (On + Off campus)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Thematic area** | **No. of courses** | **Participants** | | | | | | | | |
| **Others** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| **I Crop Production** |  |  |  |  |  |  |  |  |  |  |
| Weed Management |  |  |  |  |  |  |  |  |  |  |
| Resource Conservation Technologies | 1 | 16 | 9 | 25 | 1 | 1 | 2 | 17 | 10 | 27 |
| Cropping Systems |  |  |  |  |  |  |  |  |  |  |
| Crop Diversification |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming |  |  |  |  |  |  |  |  |  |  |
| Micro Irrigation/irrigation |  |  |  |  |  |  |  |  |  |  |
| Seed production |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Crop Management | 3 | 65 | 34 | 99 | 9 | 3 | 12 | 74 | 37 | 111 |
| Soil & water conservatioin |  |  |  |  |  |  |  |  |  |  |
| Integrated nutrient management | 1 | 38 | 1 | 39 | 4 | 0 | 4 | 42 | 1 | 43 |
| Production of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Integrated Pest Management | 3 | 65 | 0 | 65 | 16 | 0 | 16 | 81 | 0 | 81 |
| **Total** | **08** | **184** | **44** | **228** | **30** | **04** | **34** | **214** | **38** | **252** |
| **II Horticulture** |  |  |  |  |  |  |  |  |  |  |
| **a) Vegetable Crops** |  |  |  |  |  |  |  |  |  |  |
| Production of low value and high valume crops |  |  |  |  |  |  |  |  |  |  |
| Off-season vegetables | 01 | 33 | 0 | 33 | 2 | 0 | 2 | 35 | 0 | 35 |
| Nursery raising |  |  |  |  |  |  |  |  |  |  |
| Exotic vegetables |  |  |  |  |  |  |  |  |  |  |
| Export potential vegetables |  |  |  |  |  |  |  |  |  |  |
| Grading and standardization |  |  |  |  |  |  |  |  |  |  |
| Protective cultivation |  |  |  |  |  |  |  |  |  |  |
| Others Resource conservation in vegetables | 1 | 23 | 0 | 23 | 2 | 0 | 2 | 25 | 0 | 25 |
| INM in vegetables | 1 | 30 | 0 | 30 | 2 | 0 | 2 | 32 | 0 | 32 |
| **Total (a)** | **03** | **86** | **0** | **86** | **06** | **0** | **06** | **92** | **0** | **92** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **b) Fruits** |  |  |  |  |  |  |  |  |  |  |
| Training and Pruning | 1 | 23 | 0 | 23 | 1 | 0 | 1 | 24 | 0 | 24 |
| Layout and Management of Orchards |  |  |  |  |  |  |  |  |  |  |
| Cultivation of Fruit | 06 | 149 | 0 | 149 | 11 | 0 | 11 | 160 | 0 | 160 |
| Management of young plants/orchards |  |  |  |  |  |  |  |  |  |  |
| Rejuvenation of old orchards |  |  |  |  |  |  |  |  |  |  |
| Export potential fruits |  |  |  |  |  |  |  |  |  |  |
| Micro irrigation systems of orchards |  |  |  |  |  |  |  |  |  |  |
| Plant propagation techniques |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (b)** | **07** | **172** | **0** | **172** | **12** | **0** | **12** | **184** | **0** | **184** |
| **c) Ornamental Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery Management |  |  |  |  |  |  |  |  |  |  |
| Management of potted plants |  |  |  |  |  |  |  |  |  |  |
| Export potential of ornamental plants |  |  |  |  |  |  |  |  |  |  |
| Propagation techniques of Ornamental Plants |  |  |  |  |  |  |  |  |  |  |
| Cultivation of Chrysanthemum and Aster | 1 | 28 | 0 | 28 | 2 | 0 | 2 | 30 | 0 | 30 |
| **Total ( c)** | **1** | **28** | **0** | **28** | **2** | **0** | **2** | **30** | **0** | **30** |
| **d) Plantation crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (d)** |  |  |  |  |  |  |  |  |  |  |
| **e) Tuber crops** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (e)** |  |  |  |  |  |  |  |  |  |  |
| **f) Spices** |  |  |  |  |  |  |  |  |  |  |
| Production and Management technology |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (f)** |  |  |  |  |  |  |  |  |  |  |
| **g) Medicinal and Aromatic Plants** |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Production and management technology |  |  |  |  |  |  |  |  |  |  |
| Post harvest technology and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total (g)** |  |  |  |  |  |  |  |  |  |  |
| **GT (a-g)** |  |  |  |  |  |  |  |  |  |  |

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **III Soil Health and Fertility Management** |  |  |  |  |  |  |  |  |  |  |
| Soil fertility management | 01 | 31 | 07 | 38 | 03 | 01 | 04 | 34 | 08 | 42 |
| Integrated water management |  |  |  |  |  |  |  |  |  |  |
| Integrated Nutrient Management | 05 | 126 | 04 | 130 | 11 | 00 | 11 | 137 | 04 | 141 |
| Production and use of organic inputs |  |  |  |  |  |  |  |  |  |  |
| Management of Problematic soils | 01 | 29 | 00 | 29 | 02 | 00 | 02 | 31 | 00 | 31 |
| Micro nutrient deficiency in crops |  |  |  |  |  |  |  |  |  |  |
| Nutrient Use Efficiency | 01 | 29 | 00 | 29 | 03 | 00 | 03 | 32 | 00 | 32 |
| Balance use of fertilizers |  |  |  |  |  |  |  |  |  |  |
| Soil and Water Testing | 02 | 60 | 00 | 60 | 03 | 00 | 03 | 63 | 00 | 63 |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **10** | **275** | **11** | **286** | **22** | **1** | **23** | **297** | **12** | **309** |
| **IV Livestock Production and Management** |  |  |  |  |  |  |  |  |  |  |
| Dairy Management | 3 | 84 | 0 | 84 | 10 | 0 | 10 | 94 | 0 | 94 |
| Poultry Management | 1 | 0 | 18 | 18 | 0 | 5 | 5 | 0 | 23 | **23** |
| Piggery Management | 5 | 62 | 32 | 94 | 8 | 12 | 20 | 70 | 44 | 114 |
| Rabbit Management |  |  |  |  |  |  |  |  |  |  |
| Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| Disease Management | 1 | 8 | 8 | 16 | 2 | 2 | 4 | 10 | 10 | **20** |
| Feed & fodder technology |  |  |  |  |  |  |  |  |  |  |
| Production of quality animal products |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **10** | **154** | **58** | **212** | **20** | **19** | **39** | **174** | **77** | **251** |
| **V Home Science/Women empowerment** |  |  |  |  |  |  |  |  |  |  |
| Household food security by kitchen gardening and nutrition gardening | 03 | - | 99 | 99 | - | 23 | 23 |  | 122 | 122 |
| Design and development of low/minimum cost diet |  |  |  |  |  |  |  |  |  |  |
| Designing and development for high nutrient efficiency diet |  |  |  |  |  |  |  |  |  |  |
| Minimization of nutrient loss in processing |  |  |  |  |  |  |  |  |  |  |
| Processing and cooking |  |  |  |  |  |  |  |  |  |  |
| Gender mainstreaming through SHGs |  |  |  |  |  |  |  |  |  |  |
| Storage loss minimization techniques |  |  |  |  |  |  |  |  |  |  |
| Value addition |  |  |  |  |  |  |  |  |  |  |
| Women empowerment |  |  |  |  |  |  |  |  |  |  |
| Location specific drudgery reduction technologies | 02 | - | 25 | 25 | - | 06 | 06 |  | 31 | 31 |
| Rural Crafts | 03 |  | 31 | 31 |  | 05 | 05 |  | 36 | 36 |
| Women and child care |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **08** |  | **155** | **155** |  | **34** | **34** |  | **189** | **189** |

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **VI Agril. Engineering** |  |  |  |  |  |  |  |  |  |  |
| Farm Machinary 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) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **VII Plant Protection** |  |  |  |  |  |  |  |  |  |  |
| Integrated Pest Management | 03 | 62 | 04 | 67 | 10 | - | 10 | 72 | 04 | 76 |
| Integrated Disease Management | 03 | 57 | 05 | 61 | 08 | - | 08 | 65 | 05 | 70 |
| Bio-control of pests and diseases | 02 | 41 | 0 | 41 | 08 | 0 | 08 | 49 | 0 | 49 |
| Production of bio control agents and bio pesticides |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** | **8** | **160** | **9** | **169** | **26** | **0** | **26** | **186** | **9** | **195** |
| **VIII 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) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **IX 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 |  |  |  |  |  |  |  |  |  |  |

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|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Production of fry and fingerlings |  |  |  |  |  |  |  |  |  |  |
| Production of Bee-colonies and wax sheets |  |  |  |  |  |  |  |  |  |  |
| Small tools and implements |  |  |  |  |  |  |  |  |  |  |
| Production of livestock feed and fodder |  |  |  |  |  |  |  |  |  |  |
| Production of Fish feed |  |  |  |  |  |  |  |  |  |  |
| Mushroom Production |  |  |  |  |  |  |  |  |  |  |
| Apiculture |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **X CapacityBuilding and Group Dynamics** |  |  |  |  |  |  |  |  |  |  |
| Leadership development |  |  |  |  |  |  |  |  |  |  |
| Group dynamics | 01 | 39 | 0 | 39 | 06 | 0 | 06 | 45 | 0 | 45 |
| Formation and Management of SHGs |  |  |  |  |  |  |  |  |  |  |
| Mobilization of social capital |  |  |  |  |  |  |  |  |  |  |
| Entrepreneurial development of farmers/youths | 01 | 36 | 0 | 36 | 04 | 0 | 04 | 40 | 0 | 40 |
| WTO and IPR issues |  |  |  |  |  |  |  |  |  |  |
| Technology Orientation | 05 | 163 | 0 | 163 | 14 | 0 | 14 | 177 | 0 | 177 |
| **Total** | **7** | **238** | **0** | **238** | **24** | **0** | **24** | **262** | **0** | **262** |
| **XI Agro-forestry** |  |  |  |  |  |  |  |  |  |  |
| Production technologies |  |  |  |  |  |  |  |  |  |  |
| Nursery management |  |  |  |  |  |  |  |  |  |  |
| Integrated Farming Systems |  |  |  |  |  |  |  |  |  |  |
| Others (pl specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **GRAND TOTAL** | **62** | **1297** | **277** | **1574** | **142** | **58** | **200** | **1439** | **325** | **1764** |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | | | | | | | | | |
| **General** | | | | | | **SC/ST** | | | | | | **Grand Total** | | | | |
| **Male** | **Female** | | **Total** | | | **Male** | | **Female** | | **Total** | | **Male** | | **Female** | | **Total** |
| Nursery Management of Horticulture crops | 1 | 15 | | 2 | | 17 | | 3 | | 0 | | 3 | | 18 | | 2 | | 20 |
| Training and pruning of orchards | 1 | 23 | | 0 | | 23 | | 1 | | 0 | | 1 | | 24 | | 0 | | 24 |
| Protected cultivation of vegetable crops |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Commercial fruit production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Integrated farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Seed production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Production of organic inputs | 01 | 18 | | 03 | | 21 | | 06 | | - | | 06 | | 24 | | 03 | | 27 |
| Planting material production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Vermi-culture | 01 | 18 | | 00 | | 18 | | 02 | | 00 | | 02 | | 20 | | 00 | | 20 |
| Bee-keeping |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Repair and maintenance of farm machinery and implements |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Value addition |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Small scale processing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Post Harvest Technology |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Tailoring and Stitching | 01 | - | | 11 | | 11 | - | | 03 | | 03 | |  | | 14 | | 14 | |
| Rural Crafts |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Production of quality animal products |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Dairying | 01 | 9 | | 0 | | 9 | | 3 | | 0 | | 3 | | 12 | | 0 | | 12 |
| Sheep and goat rearing | 02 | 31 | | 5 | | 36 | | 6 | | 0 | | 6 | | 37 | | 5 | | 42 |
| Quail farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Piggery |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Rabbit farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Poultry production | 01 | 9 | | 0 | | 9 | | 3 | | 0 | | 3 | | 12 | | 0 | | 12 |
| Ornamental fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Composite fish culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Freshwater prawn culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Shrimp farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Pearl culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Cold water fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fish harvest and processing tech |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fry and fingerling rearing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Agri entrepreneurship | 03 | 92 | | 0 | | 92 | | 14 | | 0 | | 14 | | 106 | | 0 | | 106 |
| Formation and Management of SHGs | 05 |  | | 65 | | 65 | |  | | 13 | | 13 | |  | | 78 | | 78 |
| Spirulina cultivation & processing | 02 | 59 | | 7 | | 68 | | 5 | | 0 | | 5 | | 64 | | 7 | | 71 |
| **TOTAL** | **19** | **274** | | **93** | | **369** | **43** | | **16** | | **59** | | **317** | | **109** | | **426** | |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | | | | | | | | | |
| **General** | | | | | | **SC/ST** | | | | | | **Grand Total** | | | | |
| **Male** | **Female** | | **Total** | | | **Male** | | **Female** | | **Total** | | **Male** | | **Female** | | **Total** |
| Nursery Management of Hort. crops |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Training and pruning of orchards |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Protected cultivation of veg. crops |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Commercial fruit production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Integrated farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Seed production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Production of organic inputs |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Planting material production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Vermi-culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Mushroom Production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Bee-keeping |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Sericulture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Repair and maintenance of farm machinery and implements |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Value addition |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Small scale processing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Post Harvest Technology |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Tailoring and Stitching | 04 | - | | 75 | | 75 | - | | 08 | | 08 | | - | | 83 | | 83 | |
| Rural Crafts | 02 | - | | 24 | | 24 | - | | 02 | | 02 | | - | | 26 | | 26 | |
| Production of quality animal products |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Dairying | 01 | 20 | | 0 | | 20 | | 0 | | 0 | | 0 | | 20 | | 0 | | 20 |
| Sheep and goat rearing | 04 | 0 | | 46 | | 46 | | 0 | | 05 | | 05 | | 0 | | 51 | | 51 |
| Quail farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Piggery |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Rabbit farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Poultry production | 01 | 17 | | 1 | | 18 | | 2 | | 0 | | 2 | | 19 | | 1 | | 20 |
| Ornamental fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Composite fish culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Freshwater prawn culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Shrimp farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Pearl culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Cold water fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fish harvest and processing tech |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fry and fingerling rearing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Formation and Management of SHGs | 7 | 0 | | 294 | | 294 | | 0 | | 12 | | 12 | | 0 | | 306 | | 306 |
| **TOTAL** | **19** | **37** | | **440** | | **477** | **2** | | **27** | | **29** | | **39** | | **467** | | **506** | |

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**Training for Rural Youths including sponsored training programmes – CONSOLIDATED (On + 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 Hort.crops | 1 | 15 | | 2 | | 17 | | 3 | | 0 | | 3 | | 18 | | 2 | | 20 |
| Training and pruning of orchards | 1 | 23 | | 0 | | 23 | | 1 | | 0 | | 1 | | 24 | | 0 | | 24 |
| Protected cultivation of vegetable crops |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Commercial fruit production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Integrated farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Seed production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Production of organic inputs | 01 | 18 | | 03 | | 21 | | 06 | | - | | 06 | | 24 | | 03 | | 27 |
| Planting material production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Vermi-culture | 01 | 18 | | 00 | | 18 | | 02 | | 00 | | 02 | | 20 | | 00 | | 20 |
| Mushroom Production |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Bee-keeping |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Sericulture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Repair and maintenance of farm machinery and implements |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Value addition |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Small scale processing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Post Harvest Technology |  |  | |  | |  |  | |  | |  | |  | |  | |  | |
| Tailoring and Stitching | 05 | - | | 86 | | 86 | -- | | 11 | | 11 | | - | | 97 | | 97 | |
| Rural Crafts | 02 | - | | 24 | | 24 | - | | 02 | | 02 | | - | | 26 | | 26 | |
| Production of quality animal products |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Dairying | 01 | 9 | | 0 | | 9 | | 3 | | 0 | | 3 | | 12 | | 0 | | 12 |
| Sheep and goat rearing | 06 | 31 | | 51 | | 82 | | 6 | | 5 | | 11 | | 37 | | 62 | | 99 |
| Quail farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Piggery |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Rabbit farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Poultry production | 02 | 26 | | 1 | | 27 | | 5 | | 0 | | 5 | | 31 | | 1 | | 32 |
| Ornamental fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Composite fish culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Freshwater prawn culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Shrimp farming |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Pearl culture |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Cold water fisheries |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fish harvest and processing technology |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Fry and fingerling rearing |  |  | |  | |  | |  | |  | |  | |  | |  | |  |
| Agri entrepreneurship | 03 | 92 | | 0 | | 92 | | 14 | | 0 | | 14 | | 106 | | 0 | | 106 |
| Formation and Management of SHGs | 12 | 0 | | 359 | | 359 | | 0 | | 25 | | 25 | | 0 | | 384 | | 384 |
| Spirulina cultivation & processing | 02 | 59 | | 7 | | 68 | | 5 | | 0 | | 5 | | 64 | | 7 | | 71 |
| **TOTAL** | **38** | **311** | | **533** | | **846** | **45** | | **43** | | **88** | | **356** | | **582** | | **938** | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| Productivity enhancement in field crops | 1 | 24 | 0 | 24 | 2 | 0 | 2 | 26 | 0 | 26 |
| Integrated Pest Management | 01 | 21 | - | 21 | 03 | - | 03 | 24 | - | 24 |
| Integrated Nutrient management |  |  |  |  |  |  |  |  |  |  |
| Rejuvenation of old orchards | 1 | 21 | 0 | 21 | 2 | 0 | 2 | 23 | 0 | 23 |
| 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 | **01** | 13 | 5 | 18 | 6 | 1 | 7 | 19 | 6 | 25 |
| Household food security | 01 | 0 | 23 | 23 | 0 | 04 | 04 | 0 | 27 | 27 |
| Extension management | 02 | 50 | 0 | 50 | 06 | 0 | 06 | 56 | 0 | 56 |
| Integrated Crop Management | 01 | 53 | 3 | 56 | 4 | 0 | 4 | 57 | 3 | 60 |
| **TOTAL** | **08** | **182** | **31** | **213** | **23** | **5** | **28** | **205** | **36** | **241** |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| Productivity enhancement in field crops |  |  |  |  |  |  |  |  |  |  |
| Integrated Pest Management |  |  |  |  |  |  |  |  |  |  |
| Integrated Nutrient management |  |  |  |  |  |  |  |  |  |  |
| 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 | 02 | 0 | 55 | 55 | 0 | 10 | 10 | 0 | 65 | 65 |
| Low cost and nutrient efficient diet designing | 01 | 0 | 22 | 22 | 0 | 04 | 04 | 0 | 26 | 26 |
| 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 | 01 | 0 | 11 | 11 | 0 | 03 | 03 | 0 | 14 | 14 |
| Any other (pl.specify) |  |  |  |  |  |  |  |  |  |  |
| **TOTAL** | **04** | **0** | **88** | **88** | **0** | **17** | **17** | **0** | **105** | **105** |

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**Training programmes for Extension Personnel including sponsored training – CONSOLIDATED (On + Off campus)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | |
| **General** | | | **SC/ST** | | | **Grand Total** | | |
| **Male** | **Female** | **Total** | **Male** | **Female** | **Total** | **Male** | **Female** | **Total** |
| Productivity enhancement in field crops | 01 | 24 | 0 | 24 | 2 | 0 | 2 | 26 | 0 | 26 |
| Integrated Pest Management | 01 | 21 | - | 21 | 03 | - | 03 | 24 | - | 24 |
| Integrated Nutrient management |  |  |  |  |  |  |  |  |  |  |
| Rejuvenation of old orchards | 01 | 21 | 0 | 21 | 2 | 0 | 2 | 23 | 0 | 23 |
| 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 | 02 |  | 55 | 55 |  | 10 | 10 |  | 65 | 65 |
| Low cost and nutrient efficient diet designing | 01 |  | 22 | 22 |  | 04 | 04 |  | 26 | 26 |
| Group Dynamics and farmers organization |  |  |  |  |  |  |  |  |  |  |
| Information networking among farmers |  |  |  |  |  |  |  |  |  |  |
| Capacity building for ICT application |  |  |  |  |  |  |  |  |  |  |
| Management in farm animals |  |  |  |  |  |  |  |  |  |  |
| Livestock feed and fodder production | **01** | 13 | 5 | 18 | 6 | 1 | 7 | 19 | 6 | 25 |
| Household food security | 02 | 0 | 11 | 11 |  | 03 | 03 |  | 14 | 14 |
| Extension management | 02 | 50 | 0 | 50 | 06 | 0 | 06 | 56 | 0 | 56 |
| Household food security by kitchen gardening and nutrition gardening |  |  |  |  |  |  |  |  |  |  |
| Nutrient use efficiency |  |  |  |  |  |  |  |  |  |  |
| Integrated Crop Management | 01 | 53 | 3 | 56 | 4 | 0 | 4 | 57 | 3 | 60 |
| **TOTAL** | **12** | **182** | **96** | **278** | **23** | **18** | **41** | **205** | **114** | **319** |

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Sponsored training programmes

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 and management** |  |  |  |  |  |  |  |  |  |  |
| Increasing production and productivity of crops |  |  |  |  |  |  |  |  |  |  |
| Commercial production of vegetables |  |  |  |  |  |  |  |  |  |  |
| **Production and value addition** |  |  |  |  |  |  |  |  |  |  |
| Fruit Plants |  |  |  |  |  |  |  |  |  |  |
| Ornamental plants |  |  |  |  |  |  |  |  |  |  |
| Spices crops |  |  |  |  |  |  |  |  |  |  |
| Soil health and fertility management |  |  |  |  |  |  |  |  |  |  |
| Production of Inputs at site |  |  |  |  |  |  |  |  |  |  |
| Methods of protective cultivation |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Post harvest technology and value addition** |  |  |  |  |  |  |  |  |  |  |
| Processing and value addition |  |  |  |  |  |  |  |  |  |  |
| Others (pl. specify) |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Farm machinery** |  |  |  |  |  |  |  |  |  |  |
| Farm machinery, tools and implements |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Livestock and fisheries** |  |  |  |  |  |  |  |  |  |  |
| Livestock production and management |  |  |  |  |  |  |  |  |  |  |
| Animal Nutrition Management |  |  |  |  |  |  |  |  |  |  |
| Animal Disease Management |  |  |  |  |  |  |  |  |  |  |
| Fisheries Nutrition |  |  |  |  |  |  |  |  |  |  |
| Fisheries Management |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Home Science** |  |  |  |  |  |  |  |  |  |  |
| Household nutritional security |  |  |  |  |  |  |  |  |  |  |
| Economic empowerment of women |  |  |  |  |  |  |  |  |  |  |
| Drudgery reduction of women |  |  |  |  |  |  |  |  |  |  |
| Workshop on woman rights ,health and nutrition |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Agricultural Extension** |  |  |  |  |  |  |  |  |  |  |
| CapacityBuilding and Group Dynamics |  |  |  |  |  |  |  |  |  |  |
| ACABC Para extension workers | 03 | 61 | 7 | 68 | 7 | 1 | 8 | 68 | 8 | 76 |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **GRAND TOTAL** | 03 | 61 | 7 | 68 | 7 | 1 | 8 | 68 | 8 | 76 |

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**Details of vocational training programmes carried out by KVKs for rural youth**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 and management** |  |  |  |  |  |  |  |  |  |  |
| Commercial floriculture |  |  |  |  |  |  |  |  |  |  |
| Commercial fruit production |  |  |  |  |  |  |  |  |  |  |
| Commercial vegetable production |  |  |  |  |  |  |  |  |  |  |
| Integrated crop management |  |  |  |  |  |  |  |  |  |  |
| Organic farming |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Post harvest technology and value addition** |  |  |  |  |  |  |  |  |  |  |
| Value addition |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Livestock and fisheries** |  |  |  |  |  |  |  |  |  |  |
| Dairy farming |  |  |  |  |  |  |  |  |  |  |
| Composite fish culture |  |  |  |  |  |  |  |  |  |  |
| Sheep and goat rearing |  |  |  |  |  |  |  |  |  |  |
| Piggery |  |  |  |  |  |  |  |  |  |  |
| Poultry farming |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Income generation activities** |  |  |  |  |  |  |  |  |  |  |
| Vermicomposting |  |  |  |  |  |  |  |  |  |  |
| Production of bio-agents, bio-pesticides, |  |  |  |  |  |  |  |  |  |  |
| bio-fertilizers etc. |  |  |  |  |  |  |  |  |  |  |
| Repair and maintenance of farm machinery |  |  |  |  |  |  |  |  |  |  |
| and implements |  |  |  |  |  |  |  |  |  |  |
| Rural Crafts |  |  |  |  |  |  |  |  |  |  |
| Seed production |  |  |  |  |  |  |  |  |  |  |
| Sericulture |  |  |  |  |  |  |  |  |  |  |
| Mushroom cultivation |  |  |  |  |  |  |  |  |  |  |
| Nursery, grafting etc. |  |  |  |  |  |  |  |  |  |  |
| Tailoring, stitching, embroidery, dying |  |  |  |  |  |  |  |  |  |  |
| Agril. para-workers, para-vet training |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Agricultural Extension** |  |  |  |  |  |  |  |  |  |  |
| Capacity building and group dynamics |  |  |  |  |  |  |  |  |  |  |
| **Total** |  |  |  |  |  |  |  |  |  |  |
| **Grand Total** |  |  |  |  |  |  |  |  |  |  |

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**Details of trainings organized under ASCI**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Area of training** | **No. of**  **Courses** | **No. of Participants** | | | | | | | | | | | | | | |
| **General** | | | | **SC/ST** | | | | | | **Grand Total** | | | | |
| **Male** | **Female** | **Total** | | **Male** | | **Female** | | **Total** | | **Male** | | **Female** | | **Total** |
| Gardener (Nursery management) | 01 | 15 | 2 | 17 | | 3 | | 0 | | 3 | | 18 | | 2 | | 20 |
| Dairy Farmer Entrepreneur | 01 | 20 | 0 | 20 | | 0 | | 0 | | 0 | | 20 | | 0 | | 20 |
| Poultry Farming | 01 | 17 | 1 | 18 | | 2 | | 0 | | 2 | | 19 | | 1 | | 20 |
| **TOTAL** | **03** | **52** | **03** | **55** | **05** | | **0** | | **05** | | **57** | | **03** | | **60** | |

3.5. Extension Programmes

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Activities | No. of programmes | No. of farmers | No. of Extension Personnel | TOTAL |
| Advisory Services | 83 | 1743 | 41 | 1784 |
| Diagnostic visits by KVK Scientists | - | 472 | 00 | 472 |
| Field Day | 09 | 304 | 08 | 312 |
| Group discussions | 12 | 154 | 06 | 160 |
| Kisan Ghosthi | - | 0 | 0 | 0 |
| Self -help groups | - | 0 | 0 | 0 |
| Kisan Mela | 02 | 515 | 75 | 590 |
| Agriculture Technology Mahotsav-Exhibition | 01 | 12000 | 0 | 12000 |
| Participation in exhibitions organized by other agencies | 02 | 20000 | 0 | 20000 |
| Scientists' visit to farmers field | - | 895 | 0 | 895 |
| Plant/animal health camps | - | 0 | 0 | 0 |
| Farm Science Club | - | 0 | 0 | 0 |
| Ex-trainees Sammelan | - | 0 | 0 | 0 |
| Farmers' seminar/workshop | 11 | 1450 | 36 | 1486 |
| Method Demonstrations | 05 | 285 | 03 | 288 |
| Celebration of important days – Soil Health Day | 01 | 325 | 28 | 353 |
| Special day celebration-World Women’s Day | 01 | 128 | 03 | 131 |
| Exposure visits arranged by KVK | 03 | 93 | 0 | 93 |
| Exposure visits organized by other agencies | 45 | 2250 | 0 | 2250 |
| Kharif interface | 01 | 340 | 10 | 350 |
| Rabi interface | 01 | 450 | 50 | 500 |
| **Total** | **177** | **41404** | **260** | **41664** |

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Details of other extension programmes

|  |  |
| --- | --- |
| **Particulars** | **Number** |
| Electronic Media (CD./DVD)- DVD on Spirulina / crop production/  Entrepreneurship etc. | 310 |
| Extension Literature | 6 (4500) |
| Newspaper coverage |  |
| Popular articles | 05 |
| Radio Talks | 42 |
| TV Talks |  |
| Animal health amps (Number of animals treated) |  |
| Others (pl. specify) |  |
| **Total** |  |

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**3.6. PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS**

**Production of Seeds by the KVKs**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Crop | Name of the crop | Name of the variety | Name of the hybrid | Quantity of seed (q) | Value  (Rs) | Number of farmers |
| Cereals | - | - | - | - | - | - |
| Oilseeds | Soybean | MACS-1188 | - | 39.37 | 94787 | Supply to Mahabeej |
| Pulses | - | - | - | - | - | - |
| Commercial crops | Sugarcane | MS 10001  MS 8005  COM – 265 | - | 252 t | 530337 | - |
| Vegetables | Drumstick | PKM-1 | - | 0.29 | 72500 | 65 |
| Flower crops | - | - | - | - | - | - |
| Spices | - | - | - | - | - | - |
| Fodder crop seeds | - | - | - | - | - | - |
| Fiber crops | - | - | - | - | - | - |
| Forest Species | - | - | - | - | - | - |
| Others-Fruit | Mango | Keshar | - | 5 t | 131000 | - |
|  | Guava | L-49 | - | 20 t | 255000 | - |
|  | Sapota | Kalipatti | - | 1 t | 16000 |  |
| **Total** |  |  |  |  |  |  |

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# Production of Planting Materials by the KVK

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Crop | Name of the crop | Name of the variety | Name of the hybrid | Number | Value (Rs.) | Number of farmers |
| Commercial |  |  |  |  |  |  |
| Vegetable seedlings | Drumstick | PKM-1 |  | 3141 | 31410 | 88 |
| Fruits | Mango | Keshar |  | 618 | 37080 | 31 |
|  | Guava | L-49 |  | 52702 | 1844570 | 246 |
|  | Pomegranate | Bhagwa |  | 52889 | 1057780 | 224 |
|  | Lime | Phule Sarbati |  | 5028 | 50280 | 78 |
|  | Coconut | Maly Green Dwarf |  | 606 | 30300 | 40 |
| Ornamental plants |  |  |  | 114984 | 3051420 | 707 |
| Medicinal and Aromatic |  |  |  | - | - | - |
| Plantation |  |  |  | - | - | - |
| Spices |  |  |  | - | - | - |
| Tuber |  |  |  | - | - | - |
| Fodder crop saplings |  |  |  | - | - | - |
| Forest Species |  |  |  | - | - | - |
| Others |  |  |  | - | - | - |
| **Total** |  |  |  | **114984** | **3051420** | **707** |

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**Production of Bio-Products**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bio Products | Name of the bio-product | Quantity | Value (Rs.) | No. of Farmers |
| Kg/lit |
| Bio Fertilizers | Azatobactor  Phosphate Solubilizing Bacteria(PSB)  Acetobactor  Rhizobium  Potash Mobilizing Bacteria  Composting Culture | 7798 lit | 915935 | 1708 |
| **Total** | **7798 lit** | **915935** | **1708** |
|  |  |  |  |  |
| Bio-pesticide | Bio-pesticides | 5884 | 882600 | 1387 |
| Bio-fungicide | Bio-fungicides | 8532 | 1279800 | 2198 |
|  | **Total** | **14416** | **2162400** | **3585** |
| Bio –Foods | **Spirulina** |  |  |  |
|  | Powder | 16.25 kg | 48750 | 80 |
|  | Vaseline | 285 no. | 17100 | 74 |
|  | culture | 50.65 lit. | 24325 | 35 |
|  | **Total** |  | **91535** | **199** |

# Production of livestock materials

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Particulars of Live stock | **Name of the breed** | **Number** | **Value (Rs.)** | **No. of Farmers** |
| **Dairy animals** | **-** | **-** | **-** | **-** |
| Cows | - | - | - | - |
| Buffaloes | - | - | - | - |
| Calves | - | - | - | - |
| Goat | Sojat, Sirohi and Osmanabadi | 14 kids | 56000 | - |
| **Poultry** |  |  |  |  |
| Broilers | Vancob | 15000 nos | 57000 | - |
| Layers | - | - | - | - |
| Duals (broiler and layer) | - | - | - | - |
| Japanese Quail | - | - | - | -- |
| Turkey | - | - | - | - |
| Emu | - | - | - |  |
| Ducks | - | - | - | - |
| Hatchery Unit | Srinidhi | 2771 nos | 55420 | 44 |
| **Piggery** |  |  |  |  |
| Piglet | - | - | - | - |
| **Fisheries** | - | - | - | -- |
| Indian carp | - | - | - | - |
| Exotic carp | - | - | - |  |
| **Total** |  |  | **168420** | **44** |

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

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

B. Literature developed/published

|  |  |  |  |
| --- | --- | --- | --- |
| **Item** | **Title** | **Authors name** | **Number** |
| Research papers | - | - | - |
| Technical reports | - | - | - |
| News letters | * IFM model under rainfed condition * Water management under drought condition | S.S.Deshmukh | 02 |
| Technical bulletins | - | - | - |
| Popular articles | Trash management in ratoon sugarcane  Soil health management | S.S.Sonawane | 02 |
| Extension literature | Nutrient management hybrid maize  Sugarcane fertilizer management | S.S.Sonawane | 02 |
| * Chick pea cultivation practices * Cultivation practices * Crop & livestock management under drought condition * Crop management under changing climatic condition * Spirulina cultivation | S.S Deshmukh | 10000 |
| White grub and brown spot management in sugarcane | Bharat Dawange | 500 |
| Pink boll worm management in Bt cotton | Bharat Dawange | 1000 |
| Oliy spot management in pomegranate | Bharat Dawange | 500 |
| Spodoptera management in Lucern | Bharat Dawange | 2000 |
| Use of bio-pesticides and pheromone traps | Bharat Dawange | 1000 |
| **TOTAL** |  |  | **15006** |

**C. Details of Electronic Media Produced**

|  |  |  |  |
| --- | --- | --- | --- |
| S. No. | Type of media (CD / VCD / DVD/ Audio-Cassette) and | Title of the programme | Number |
| 01 | DVD | NICRA Project | 01 |
| Spirulina project | 100 |
| Krishi Gyan | 100 |
| Krish Udyojakta | 100 |
| 02 | Video Clippings developed | Silage | 01 |
| 03 | Video Clippings developed | Pomegranate | 01 |
| 04 | Video Clippings developed | Technology week | 01 |

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**D. Success Stories / Case studies**

**Guava Meadow Cultivation assures high income to the growers**

Guava is an important fruit crop of Rahata Taluka in Ahmednagar District that is grown in mriga bahar and hasta bahar season in Ahmednagar District. The area under guava is 3250 hectares in Ahmednagar District as per 2015-2016 data out of which more than 85 per cent area is in Rahata block. The guava cultivation is predominantly grown under light to medium soils that faces various problems like poor flowering, poor fruit size and quality**.** The average yield of L-49 or Sardar variety amongst guava growers is 175 quintals per ha.The farmers are using various technologies like use of micro irrigation and use of water soluble fertilizers. The net income of conventional guava in Rahata block is Rs 110000 per ha. Farmers are forced to undertake guava cultivation with poor quality of fruits and low yeilds.

The KVK scientists provided technological intervention by demonstrating the ultra high density method of guava cultivation which is called meadow orchard cultivation as an easy option for tackling the problem of poor yield and quality. The KVK initially spread awareness through promoting the participation and involving guava growers in National Convention on Guava at Shirdi during 2013 and 2015. Thereafter the KVK itself initiated the guava meadow orchard at its Demonstration Farm. The KVK initially had conventional plantation at 5 X 5 m planting distance which was modified to 3 X 3m and 2.25 X 2.25m and 3 X 2.25m and 3 X 1.25m planting distance. The technology of pruning guava plants thrice in a year has been modified to twice in a year once at May-June prior to june rainfall and second after harvest in October-November. During the other remaining period the pruning is restricted to thinning of unwanted vegetative shoots. After the success of guava meadow plantation at KVK Demonstration Farm the planting distance of 3 X 2.25 providing an average yield of 262 q/ha was recommended by KVK for new guava growers in ultra high density meadow plantation.

The KVK has conducted 18 oncampus and off campus training programmes for farmers and rural youths for disseminating the guava meadow cultivation and pruning techniques.The results have been found to be very encouraging as the farmers who were looking for an option for pomegranate are now shifting towards guava meadow cultivation. Apart from increasing the yield of fruits the qulaity of fruits obtained is also very high. The average weight of more than 75 per cent fruits under guava meadow orchard is 250 grams and the shelf life of such fruits after harvest is more than 3 to 5 days which is far superior than other varieties like Shweta, Lalit and G-Vilas Pasand grown by many guava growers.

The area under guava meadow cultivation was hardly 100 ha which has grown to more than 600 ha in Ahmednagar, Nashik and Aurangabad districts where the pomegranate cultivation was predominant. Now the fruit growers are slowly shifting to guava meadow orchard plantation due to increase in net income from 110000 per ha 240000 per ha.

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**E. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year - NIL**

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

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

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

**A. Practicing Farmers**

a) Group discussion

b) Meetings

c) Personal talk

**B. Rural Youth**

a) Group discussion

b) Personal talk

**C. In-service personnel**

a) Discussion with authorities

**5.2.Indicate the methodology for identifying OFTs/FLDs**

**For OFT:**

i) PRA PRA

ii) Problem identified from Matrix Yes

iii) Field level observations Yes

iv) Farmer group discussions Yes

**For FLD:**

1. New variety/technology Yes
2. Poor yield at farmers level Yes
3. Existing cropping system Yes

**5.3. Field activities**

i. Name of villages identified/adopted with block name (from which year) -

**Khandala, Tambhere, Chinchpur, Savalivihir, Durgapur**

ii. No. of farm families selected per village **20**

iii. No. of survey/PRA conducted **10**

iv. No. of technologies taken to the adopted villages **30**

v. Name of the technologies found suitable by the farmers of the adopted villages: vi. Impact (production, income, employment, area/technological– horizontal/vertical)

vii. Constraints if any in the continued application of these improved technologies

**5.4 . No. and Name of villages adopted for Doubling Farmers Income. Indicate whether**

**benchmark survey of the villages are done or not.**

05 - Chinchpur, Durgapur, Tambhere, Khandala, Ranjangaon Kd,

Bench mark survey completed

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**6. LINKAGES**

**A. Functional linkage with different organizations**

|  |  |
| --- | --- |
| **Name of organization** | **Nature of linkage** |
| State Agriculture Department | Organization of FLDs programmes, trainings |
| Mahatama Phule Krishi Vidyapeeth Rahuri | Technology assessment and refinement , Critical inputs , trainings |
| ATMA, Ahmednagar | Training |
| National Bureau of Agricuitural Insect Resources, Bangalore | Supply of pure cultures of bio-pesticides |
| Indian Institute Oilseed Research, Hyderabad | Production techniques of Beauveria bassiana and liquid formulation technology |
| National Horticulture Mission | Establishment of Bio-control laboratory and plant health clinic |
|  |  |

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Name of the scheme** | **Date/ Month of initiation** | **Funding agency** | **Amount (Rs.)** |
| Soil Health Card Mission | April 2018 | State Department of Agriculture | 891000 |
| One day work shop ON Women’s Health & Nutrition and Rights | 26 Oct. t2018 | Maharashtra Mahila Ayog | 40,000 |
| Work shop on health and nutritional kitchen garden | 4 sep 2018 | ATMA | 25,000 |
|  |  |  |  |

**C. Details of linkage with ATMA**

a) Is ATMA implemented in your district Yes

**Coordination activities between KVK and ATMA**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| S. No. | Programme | Particulars | No. of programmes attended by KVK staff | No. of programmes Organized by KVK | Other remarks (if any) |
| 01 | Meetings | GB Meeting | 04 |  | Attended AMC and GB oF ATMA |
| 02 | Research projects | - | - | - |  |
| 03 | Training programmes | Training on Nursery management | - | 01 | 15 trainees trained |
| 04 | Demonstrations | - | - | - | - |
| 05 | Extension Programmes |  |  |  |  |
|  | KisanMela | - | - | - | - |
|  | Technology Week | Organization of Technology Mahoitsav | 01 | - | Organized seminar through ATMA |

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|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Exposure visit | - | - | - | - |
|  | Exhibition | - | - | - | - |
|  | Soil health camps | - | - | - | - |
|  | Animal Health Campaigns | - | - | - | - |
| 06 | Publications |  |  |  |  |
|  | Video Films | - | - | - | - |
|  | Books | - | - | - | - |
|  | Extension Literature | - | - | 2 LITERATURE | Developed folder on Armyworm in lucerene and white grub in sugarcane |
|  | Pamphlets | - | - | - | - |
| 07 | Other Activities (Pl.specify) | - | - | - | - |
|  | Watershed approach | - | - | - | - |
|  | Integrated Farm Development | - | - | - | - |
|  | Agri-preneurs development | - | - | - | - |

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

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

**E. Nature of linkage with National Fisheries Development Board –NIL**

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

**F. Details of linkage with RKVY - NA**

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

**7. Convergence with other agencies and departments:Activities may be specified under DAESI, YCMOU study centres and others**

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**8. Innovator Farmer’s Meet**

|  |  |  |
| --- | --- | --- |
| **Sl.No.** | **Particulars** | **Details** |
| 1 | Have you conducted Farm Innovators meet in your district? | No |
| 2 | Brief report in this regard | No |

**9. Farmers Field School (FFS) -NIL**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S. No** | **Thematic area** | **Title of the FFS** | **Budget proposed in Rs.** | **Brief report** |
| - | - | - | - | - |

**10.1. Technical Feedback of the farmers about the technologies demonstrated and**

**assessed:**

* Herbicide- propaquizafop + Imazethapyr spray in soybean helped timely weed management and enhance the vegetative growth, flowering and resulted in higher yield
* Herbicide spray (propaquizafop +Imazethapyr) in soybean save cost on weed management by Rs 2132/ha and increases crop yield by 2.26%
* Zinc sulphate spray at flowering and pod filling stgae showed increases flowering and pod size, weight.
* Herbicide halosulfuron methyl control weed Cyprus rotundus by 60-70 percent in single spray in sugarcane, when spray at 2-4 leaf stage of weed
* Soybean variety MACS1188 showed health growth, bold seed size and more pods than nay other varieties
* Soil test based fertilizers management for hybrid maize shows improvement in gain filling and yield and not affected the yield of rabi season crop.
* INM in wheat helps to improve the plant leaf colour and grain filling in the spike
* Leaf test based nutrient management reduced the nutrient deficiency symptoms in plant
* Subsoiler use before sugarcane plantation reduced the soil compaction and good initial crop stand
* Liquid bio-fertilizers easy for seed treatment and increased the root nodulation in soybae
* Spray of multimacronutrient and mulimicronutrinet for ratoon sugarcane helps to increased the leaf colour, number of internodes and length of internodes

**10.2. Technical Feedback from the KVK Scientists (Subject wise) to the research**

**institutions/universities:**

* MACS 1188 variety of soybean showed higher leaf yellowing in calcarious soil than any other variety
* Soil test based nutrient management helps to maintain the fertility status of the soil .While in farmers practice reported reduction in fertility status.
* Leaf test based nutrients management in pomegranate helps to increased the fruit a size, weight and colour
* Azatobacter and PSB seed treatment increased the germination in wheat.
* Subsoiler use in vertisol before sugarcane planting reported improvement in soil drainage and porosity
* Fertigation in pre seasonal sugarcane helps to increased the number of tillers, saving of fertilizers and labour cost on fertilizers application

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**11. Technology Week celebration during 2018-19**

Period of observing Technology Week From 6.10.2018 to 8.10.2018

Total number of farmers visited 12,000

Total number of agencies involved Department of Agriculture, NABARD, ATMA/

Department of Animal Health & Dairy Science

Number of demonstrations visited by the 15 (crop cafeteria/ goat farm/ Poultry farm/ Nursery

farmers within KVK campus: Azola/ Farm pond

**Other Details**

| Types of Activities | No. of  Activities | No of  Farmers | Related crop/livestock technology |
| --- | --- | --- | --- |
| Gosthies | - | - | - |
| Lectures organized | 12 | 1700 | Seminars on different aspects/ subjects |
| Exhibition | 01 | 1200 | 100 stalls of different inputs |
| Film show | - | - |  |
| Fair | 3 days | - | 3 days fair organized |
| Farm Visit | 3 days | 250 | - |
| Diagnostic Practicals | - | - | - |
| Supply of Literature (No.) | 01 | 10,000 | Literature on different subjects distributed |
| Supply of Seed (q) | 5 kg | 10 | Drumstick Var. PKM-1 supplied |
| Supply of Planting materials (No.) | - | 500 | Farmers purchased seedlings |
| Bio Product supply (Kg) | - | 200 | Purchased biopesticides |
| Bio Fertilizers (q) | - | 250 | Purchased biofertilizers |
| Supply of fingerlings | - | - | - |
| Supply of Livestock specimen (No.) | - | - | - |
| Total number of farmers visited the technology week | - | 12000 | - |

**12. Interventions on drought mitigation (if the KVK included in this special programme)-NIL**

A. Introduction of alternate crops/varieties

|  |  |  |  |
| --- | --- | --- | --- |
| **State** | **Crops/cultivars** | **Area (ha)** | **Number of beneficiaries** |
| - | - | - | - |

**B. Major area coverage under alternate crops/varieties - NIL**

|  |  |  |
| --- | --- | --- |
| **Crops** | **Area (ha)** | **Number of beneficiaries** |
| Oilseeds | - | - |
| Pulses | - | - |
| Cereals | - | - |
| Vegetable crops | - | - |
| Tuber crops | - | - |
| **Total** | **-** | **-** |

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**C. Farmers-scientists interaction on livestock management**

|  |  |  |  |
| --- | --- | --- | --- |
| **State** | **Livestock components** | **Number of interactions** | **No.of participants** |
| **Maharashtra** | **Fodder crops** | **01** | **63** |
| **Total** |  | **01** | **63** |

**D. Animal health camps organized - NIL**

|  |  |  |  |
| --- | --- | --- | --- |
| **State** | **Number of camps** | **No.of animals** | **No.of farmers** |
| **-** | **-** | **-** | **-** |

**E. Seed distribution in drought hit states - NIL**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **State** | **Crops** | **Quantity (qtl)** | **Coverage of area (ha)** | **Number of farmers** |
| **-** | **-** | **-** | **-** | **-** |

**F. Large scale adoption of resource conservation technologies - NIL**

|  |  |  |  |
| --- | --- | --- | --- |
| **State** | **Crops/cultivars and gist of resource conservation technologies introduced** | **Area (ha)** | **Number of farmers** |
| **-** | **-** | **-** | **-** |

**G. Awareness campaign**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| State | Meetings | | Gosthies | | Field days | | Farmers fair | | Exhibition | | Film show | |
|  | No. | No.of farmers | No. | No.of farmers | No. | No.of farmers | No. | No.of farmers | No. | No.of farmers | No. | No.of farmers |
| Maharashtra | 01 | 293 | - | - | - | - | - | - | - | - | - | - |
| Total | 01 | 293 | - | - | - | | | | - | | | | - | - | - | - | - | - |

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**13. IMPACT**

1. **Impact of KVK activities (Not to be restricted for reporting period).**

**Agronomy**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of specific technology/skill transferred | No. of participants | % of adoption | Change in income (Rs.) | |
| **Before (Rs./Unit)** | **After (Rs./Unit)** |
| Integrated crop Management in soybean | 232 | 72.8 (169) | 54000 Rs/ha  18 qt/ha x 3000 Rs/qt | 66000 Rs/ha  22qt/ha x 3000 Rs/qt |
| Integrated crop Management in Bt cotton | 123 | 60.5 (111) | 110000 Rs/ha  20.0qt/ha x 5500 Rs/qt | 129250 Rs/ha  23.5qt/ha x 5500 Rs/qt |
| Use of high yielding varieties in wheat and INM | 76 | 80.2 (61) | 80000 Rs/ha  32qt/ha x 2500Rs/qt | 90000 Rs/ha  36 qt/ha x 2500 Rs/qt |
| Sugarcane cultivation technologies | 326 | 91.4 (298) | 205000 Rs/ha  82 T/ha x 2500 Rs/t | 225000Rs/ha  90 t/ha x2500 Rs/t |
| Integrated Crop Management in chick pea | 180 | 74.4 (134) | 48000Rs/ha  12.00 qt/ha x 4000 Rs/qt | 60000 Rs/ha  15qt/ha x 4000 Rs/qt |
| Ratoon sugarcane management | 110 | 69.1(76) | 170000 Rs/ha  68 T/ha x 2500 Rs/t | 187500 Rs/ha  75 t/ha x2500 Rs/t |
| Spirulina production, processing and uses for employment generation | 270 | 17.4 (47) | - | 15000-25000 Rs/month |
| **Horticulture** | | | | |
| Post emergence Weed control in onion | 312 | 12 | 54600 | 66400 |
| Prevention of sunscorching of fruits with coverbags in pomegranate | 210 | 14 | 485200 | 545600 |
| Foliar application of KNO3 for increased fruit set andyield in keshar mango | 42 | 92 | 44000 | 51600 |

**Plant Protection**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IPM. in Bt cotton | 361 | 75.00 | 72000 | 90000 |
| Root rot and nematode management in fruit crops | 375 | 84.10 | 370000 | 437000 |
| Pest and disease management in onion | 355 | 79.21 | 125000 | 175000 |
| IPM and IDM in Tomato | 149 | 55.00 | 175000 | 220000 |
| Integrated pest and disease management in important crops | 289 | 57.25 | 40000 | 65000 |
| Shoot and fruit borer management in brinjal through IPM | 245 | 68.50 | 125000 | 155000 |
| IPM and IDM in onion | 170 | 60.66 | 150000 | 220000 |
| Plant protection of soybean | 145 | 70.25 | 42000 | 55000 |

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**Veterinary Science**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dairy management  (Vaccination,saaf kit) | 438 | 48.17 | Rs.1000 spend on treatment per cow | Saving of Rs 1000 per cow |
| Poultry management | 368 | 48.91 | Unemployed | Rs.5000/month thro’ self employment |
| Semi stall fed goat rearing | 600 | 45 | Unemployed | Rs.4500 /month thro’ self employment |
| Integrated management for control mastitis in crossbred cows | 57 | 47.36 | Rs.1100 per cow towards mastitis control | Saving of Rs.1100 per cow |
| Integrated mgt to control ticks in crossbred Cows | 111 | 45 | Rs.1200 per cow towards ticks and disease exp. | Saving of Rs.1200 per cow on treatment |
| Cultivation of fodder crop | 160 | 42.5 | Cultivation of local fodder crop | Additional fodder yield of 9500 /cultivation |
| Commercial production of backyard poultry | 274 | 47.44 | Unemployed | Rs.5800/month thro’ self employment |

**Soil Science**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Soil and tissue analysis based balance nutrients management | 672 | 45.39 | - | 15 per cent increase in crop yield and saving Rs.5000/ha in the cost of chemical fertilizers |
| Trash management in ratoon sugarcane  (2010-2018) | 205 | 66.37 | 204700 | 234600 |
| Fertigation in sugarcane (2012-2018) | 169 | 57.40 | 264500 | 303600 |
| Bio-organic slurry use for pomegranate(2012-2018) | 285 | 49.12 | 492000 | 574000 |

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**B. Cases of large scale adoption- full cases may be given at the end as Annexure.**

1. **Planting method in Sugarcane**

Sugarcane is the major cash crop of the district having average more than 100000 ha. area. In order to increase productivity and minimizes the cost of cultivation. KVK has been introduced technology of wider planting distance (4.5- 5.0 feet furrow distance) simultaneously introduce two eye bud planting with 6cm setts distance. It saves 0.2-0.3 ha. seed material and save cost of Rs 10000-15000/ha. Cost on seed material. Two eye bud with wider planting row maintain plant population, increases aeration; improve crop growth and crop yield. it is also suitable for water management by drip irrigation system. This planting method is suitable for mechanical intercultivation with power tiller. It save time, cost on intercultivations besides timely did operations.

KVK has been made interventions through trainings, demonstrations, method demonstrations at farmers field. KVK also involved the sugar factory technical staff. For technology adoption and dissemination. Exposure visits and seminars are also organized for increase awareness. . Adoption of the technology is about 75 percent. This technology save Rs 20000-25000/ha on cost of cultivations beside increase crop yield by 8-10 tons/ha. that gives additional income of Rs 20000-25000/ha

1. **Customized fertilizers scheduling based on soil and plant analysis**

Indiscriminate and imbalance use of fertilizers has made adverse effect on soil health, crop production and environment pollution problems in the KVK operational area. As the cost of chemical fertilizers is increased, it’s efficient use as well as fertilizers applications at proper crop stage s is very important. For this purpose the proper schedules of integrated nutrients management should be followed by the farmer as per the soil test. Considering the need of the farmers KVK started the advisory services of providing customized fertilizers schedules for various crops considering the various properties of soil. The fertilizers schedule includes the integrated use of chemical fertilizers, organic fertilizers, bio-fertilizers and foliar nutrients application. The schedules also comprises of management practices for the improvement of organic carbon and saline/alkali soil management. The customized fertilizers schedules are followed by the large number farmers and results shows that 12-15 per cent increased in the yield and 15-20 per cent saving in the cost of chemical fertilizers. The integrated schedules also improved the soil physical and bio-logical properties. The adoption of the integrated fertilizers schedule is being adopted by 80-85 per cent in fruit crops, 65-70 per cent in vegetables, 55-60 per cent in sugarcane and 40-45 per cent in other crops.During the reporting period soil test based integrated fertilizers schedules were provided to 7338 farmers benefiting around 5870 ha area.

**3. Use of Bio-organic slurry**

The bio-organic slurry prepared from cow dung, cow urine, jaggary, pulse flour and various beneficial microorganism are found very effective for improvement of soil organic carbon and water holding capacity of the light soil. The white roots plays an important role for uptake nutrients in fruit crops. Less organic carbon in the soil leads to poor white root development affecting moisture and nutrients uptake. Under such conditions application of bio-organic slurry one liter per plant once in a month found very effective for the horticulture growers. Use of bio-organic slurry reported to 12 per cent increase in soil water holding capacity and 14 per cent increase in organic carbon. The technology is easily adapted by the farmers as the most of inputs required for the preparation of bio-organic slurry are available with the farmers. The technology is adopted by 3500 farmers in 35 villages benefiting more than 1200ha area of various horticulture crops. The various bio-fertilizers like azatobatcer, PSB, trichoderma and pacelomyces required for bio-organic slurry preparations are produced by the KVK and made available to the farmers.

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**4. Fertigation in sugarcane**

Sugarcane is the major cash crop growing in the district having area around 1lakhs ha. Farmers are now convinced about drip irrigation system. about 32 per cent sugarcane growers using the drip irrigation system. The sugarcane growers generally applying conventional fertilizers in the soil but the availability and uptake of the soil applied fertilizer is very less due to the high soil pH and calcareous nature of the soils. Fertilizers application through drip increase the nutrients use efficiency of fertilizers. The farmers know the benefits of fertigation but the soluble fertilizers available in the market are costly and uneconomical for sugarcane crops. Use of total fertilizers dose of soluble fertilizers is costly as the crop has high fertilizers requirement. Considering the problem, KVK work on it and combine schedule of conventional fertilizers and soluble fertilizers. The schedule includes the basal application conventional fertilizers and later fertigation schedule is combine application of conventional fertilizers. Urea and white potash which is soluble in water and soluble fertilizers grade 12.61.00 or phosphoric acid as a source of phosphorus are being used. The fertigation dose applied twice in a week for 6 to9 months according to the sugarcane planting season. As per the famers feedback these fertigation schedules helps to increase the yield by 18-20 per cent with saving fertilizers dose by 20-25 per cent. The practice is now widely adopted by the sugarcane growers in the KVK operational area. The technology is adopted by more than 2600 farmers in 39villages and benefiting 2100 ha area.KVK is giving advisory services to the farmers who are testing the soil samples based on which schedules are prepared.

**5. Weed Management in Onion**

Onion is an important cash crop that is grown in kharif as well as in rabi season in Ahmednagar District. The area under onion is 77.5 thousand hectares in Ahmednagar District as per 2016-2017 data out of which more than 65 per cent area is under rabi onion and the rest is grown as kharif crop. The kharif and rabi onion cultivation is predominantly grown under light to medium soils that faces weed competition from weeds like *Dactyloctenium aegyptium*, *Elusine indica*, *Cynodon dactylon*, *Cyperus rotundus*, and *Parthenium hysterophorus***.** The farmers are using weedicide oxyfluorfen(goal) weedicide at 20 days after transplant after which a single weeding is conducted. The cost of weeding was Rs 7340 per ha during 2015-16 while it was Rs 13340 per ha during 2015-16 season. Farmers are forced to reduce the weed control cost by not following second weeding at 60 to 75 days after transplanting (DAT). This has affected the yield of the onion reducing it between 172.9 q/ha to 242 q/ha.

Here the KVK scientists provided technological intervention by conducting Assessment on use of oxyfluorfen and quizalofop ethyl at 12 DAT for control of grassy as well as broad leaf weeds. The results have been found to be very encouraging and the yield due to control of weeds in kharif onion has increased to 280.5 q/ha registering an increase of 16 per cent over farmers practice. The same assessment was observed to be successful and was later demonstrated among farmers in Wakadi, Rajuri and Mamdapur village. Taking the cue from KVK’s assessment and demonstration the MPKV has also conducted the trial on use of oxyfluorfen and quizalofop ethyl at 25 DAT for increasing the onion bulb yield of farmers. The KVK Babhaleshwar has also taken effort to disseminate the technology through use of mass media like KVK Pravara Community radio and AIR Ahmednagar where the use of weedicide has been greatly disseminated further in Ahmednagar district.

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Later the farmers gave a feedback that the second weeding generally which is required to be conducted at 75 DAT as per recommendation was not being followed due to high labour cost during second weeding stage. Here the KVK scientist intervened and provided an innovative solution of broadcasting of sand mix 0.75 a.i. kg/ha pendimethalin at 35 to 40 DAT after completion of first hand weeding to control the emergence of weeds and reduce the labour cost on second weeding and facilitate bulb size enlargement and yield. The results have been found to be successful with demonstration plots registering an average yield of 201.1 q/ha and increase of 16.3 per cent over farmers practice. With the success of this sand mix application of pendimethalin, the farmers have expressed their readiness to use this innovative for not only kharif onion but also other crops like sugarcane, brinjal, chilli and other exotic vegetables in Khandala village.The KVK has demnstrated successfully the use of oxyfluorfen and quizalofop ethyl for control of grassy weeds and broad leaf weeds during kharif while the problem of second weeding labour cost was taken care of by broadcasting sand mix pendimethalin reducing the weed control cost by Rs 3417 per ha. There is a large scale adoption of use of this treatment following KVK’ intervention. Similarly the use of sand mix application has also been accepted by the farmers and are ready the continue the practice during the next season.

**6. Poultry farming for self employment**

The major enterprises of rural youth is poultry enterprise with broiler. In the district, there are many companies like Saguna ,Venkatesheshwara ,Jafa,Godrej ,CP ,Bramati agro and Simran rearing broiler in contract farming basis

For poultry management initially KVK conducted PRA in different villages where broiler poultry is the major enterprise. through which gaps in technologies adoption has been identified. Based on gaps identified intervention were planed.

Traditional housing in poultry farming causing low weight gain , mortality and infestation of various diseases causing medicine expenditure of Rs.1500 to 2000 per lot. Similarly poultry farming becoming more expensive and intensive due to which rural youth are not ready to start commercial broiler poultry enterprise. While considering all the problems, concept of contract farming has been introduced by the KVK. Housing of poultry in large scale and adoption of technique of feed formulation ,fogging system and water purification and low cost brooding management are new technique. For promoting broiler poultry for rural youth, technology like improved feeding system, vaccination technique, watering system, are the interventions in the conventional system.

Technological and skill imparting training organized at KVK for 32 farmers. In the training period exposure visit were arrange at Kopergaon,Yesgaon,Kolhar and other places to see the contract farming and layer poultry and commercial improved backyard poultry rearing system.

Vijay Ramdas Mhaske in village Babhaleshwer in Rahata year 2018,rearing poultry unit traditionally. After KVK intervention he changed housing system in to broiler, environmental controlled, poultry ,Now there are 5000 broiler poultry ,5000 broiler poultry unit certainly help for income source ,At the same time to improve productivity of broiler poultry is a good idea of housing designed to fogging system and to minimize the cost on brooding low cost coal brooder made of local technique is designed In broiler poultry management ,disease control and proper feeding management causing minimizing in feed consumption ratio, Broiler poultry need minimum labour for management because automatic water system and feeding system technique is adopted which resulted to increasing live weight by 11800 kg per lot from 5000 poultry birds.Total gross income is Rs.64900 and additional income of Rs.6 000 per lot by sale of poultry manure . Now there are more than 75 units having capacity 5000 to 10000 poultry unit in the 15 villages of the KVK functional area.

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of specific technology/skill transferred | No. of participants | % of adoption | Gross Change in income (Rs.) | |
| Before (Rs./ha) | After (Rs./ha) |
| Integrated nutrient management for soybean | 29 | 44.83 | 48750 | 55000 |
| Nutrients management for rabi onion | 27 | 51.85 | 243750 | 271500 |
| Balance nutrients management for wheat | 31 | 48.39 | 63000 | 72000 |
| Pink boll worm management in Bt cotton | 25 | 72.50 |  |  |
| White grub management in sugarcane | 25 | 62.87 | 100000 | 125000 |
| Oily spot management in pomegranate | 40 | 71.25 | 312500 | 375000 |
| Plant protection in onion | 22 | 69.33 | 120000 | 145000 |
| Dairy management | 32 | 43.75 | Rs.1100 spend on treatment per cow | Saving of Rs.1100 per cow on treatment |
| Poultry management | 32 | 46.87 | Unemployed | Rs.5000/month thro’ self employment |
| Semi stall fed goat rearing | 106 | .37.73 | Unemployed | Rs.3500 /month thro’ self employment |
| Commercial production of backyard poultry | 23 | 47..82 | Unemployed | Rs.2500/month thro’ self employment |
| Integrated management for tick control in crossbred cows | 20 | 45 | Cultivation of local fodder crop | Saving of green fodder Rs.3600 in summer |

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**14. 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 2018** | 05 | 4365 | - |
| **May** | 06 |
| **June** | 10 |
| **July** | 09 |
| **August** | 06 |
| **September** | 04 |
| **October** | 04 |
| **November** | 07 |
| **December** | 07 |
| **January 2019** | 06 |
| **February** | 04 |
| **March** | 03 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of KVK** | **Message Type** | **Type of Messages** | | | | | | |
| **Crop** | **Livestock** | **Weather** | **Marke-ting** | **Aware-ness** | **Other enterprise** | **Total** |
| Ahmednagar-I | Text only | 22 | 12 | 10 | 08 | 10 | 09 | 71 |
| Voice only | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Voice & Text both | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Messages** | **20** | **12** | **10** | **08** | **10** | **09** | **71** |
| **Total farmers Benefitted** | **4365** | **4365** | **4365** | **4365** | **4365** | **4365** | **4365** |

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**15. PERFORMANCE OF INFRASTRUCTURE IN KVK**

**A. Performance of demonstration units (other than instructional farm including value added products)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | Demo Unit | Year of  establishment | Area  (ha) | Details of production | | | Amount (Rs.) | | Remarks |
| Variety | Produce | Qty. | Cost of inputs | Gross income |
| 01 | Soil Testing lab | 1996 |  | - | - | 13845  (Majo+Micro)  (Including soil health card mission ) | 1080000 | 1358546  (Including soil health card mission ) |  |
| 02 | Biofood |  |  |  |  |  |  |  |  |
|  | Spirulina | 2003 | 25 sq.mtr | Spirulina platensis | Powder | 16.25 kg | 26500 | 48750 |  |
| Vaseline | 285 no. | 10000 | 17100 |  |
| culture | 50.65 lit. | 15600 | 24325 |  |
|  |  |  |  |  |  |  | 52100 | **90175** |  |

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

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name  of the crop | Date of sowing | Date of harvest | Area (ha) | Details of production | | | Amount (Rs.) | | Remarks |
| Variety | Type of Produce | Qty. | Cost of inputs | Gross income |
| **Cereals** | | | | | | | | | |
| Maize | 11.07.18 | 10.10.18 | 0.50 | Parmeshwar | Fodder | 50 t | 20388 | 34112 | - |
| Pulses | - | - | - | - | - | - | - | - | - |
| **Oilseeds** | | | | | | | | | |
| Soya bean | 29.06.18 | 29.10.18 | 4.0 | MACS-1188 | Seed | 39.37qt | 108335 | 94787 | - |
| **Spices & Plantation crops** | | | | | | | | | |
| Sugarcane | 19.12.17 | 10.02.19 | 2.0 | MS 10001, MS 8005, COM-265 | Commercial | 252 t | 504000 | 530337 | - |
| **Fruits** | | | | | | | | | |
| Mango | 20.08.2005 | 10.06.18 | 3.20 | Keshar | Commerial | 5 t | 95662 | 131000 | - |
| Guava | 12.7.1996 | 15.12.18 | 2.00 | L-49 | Commercial | 20 t | 175535 | 255000 | - |
| Sapota | 8.9.1995 | 15.03.19 | 0.40 | Kalipatti | Commercial | 1 t | 11540 | 16000 | - |

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl.  No. | Name of the Product | Qty  (kg/lit) | Amount (Rs.) | | Remarks |
| Cost of inputs | Gross income |
| 01 | **Bio-fertilizers** | 7798 | 755000 | 915935 | - |
| 02 | **Bio-pesticides** |  |  |  |  |
|  | Trichoderma | 4865 | 535150 | 729750 |  |
|  | Paecilomyces | 2396 | 263560 | 359400 |  |
|  | Verticilium | 801 | 88110 | 120150 |  |
|  | Pseudomonas | 2421 | 266310 | 363150 |  |
|  | Bacillus | 1246 | 137060 | 186900 |  |
|  | Beauveria | 534 | 58740 | 80100 |  |
|  | Metarrhizium | 2153 | 236830 | 322950 |  |
|  | **Sub-total** | **14416** | **1585760** | **2162400** |  |
| 03 | **Biofood** | Powder 16.25kg | 26500 | 48750 |  |
|  |  | Vaseline 285 No | 10000 | 17100 |  |
|  |  | Culture 50.65lit. | 15600 | 24325 |  |

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sl.  No | Name  of the Unit | Details of production | | | Amount (Rs.) | | Remarks |
| Breed | Type of Produce | Qty. | Cost of inputs | Gross income |
| 1 | Poultry | Srinidhi | Chicks and birds | 2771 | 46420 | 55420 |  |
| 2. | Goat | Sojat and Osmanabadi | Kids | 14 | 49000 | 56000 |  |
| 3 | Broiler Poultry | Vencob | Chicken | 15000 kg | 42000 | 57000 |  |

**E. Utilization of hostel facilities**

Accommodation available (No. of beds):40

|  |  |  |  |
| --- | --- | --- | --- |
| **Months** | **No. of trainees stayed** | **Trainee days (days stayed)** | **Reason for short fall (if any)** |
| April 2018 | 50 | 150 | - |
| May | 85 | 510 | - |
| June | 15 | 45 | - |
| July | 30 | 180 | - |
| August | 27 | 837 | - |
| September | 27 | 810 | - |
| October | 52 | 520 | - |
| November | 50 | 300 | - |
| December | 35 | 105 | - |
| January 2019 | 51 | 1581 | - |
| February | 50 | 1428 | - |
| March | 51 | 1071 | - |
| **Total** | **523** | **7537** | **Total 68.5% utilized** |

**F. Database management - NIL**

|  |  |  |
| --- | --- | --- |
| **S. No** | **Database target** | **Database created** |
| **-** | **-** | **-** |

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

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

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**16.FINANCIAL PERFORMANCE**

**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 | - | - | - | - | - | - | - |
| With KVK | Bank of Maharashtra | Babhalesh war | 1608 | Krishi Vigyan Kendra (PIRENS) Babhaleshwar | 601302 44929 | 41301 4499 | MAHB000 1608 |

**B. Utilization of KVK funds during the year 2018-19 (Rs. in lakh)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.  No. | Particulars | Sanctioned | Released | Expenditure |
| **A. Recurring Contingencies** | | | | |
| 1 | **Pay & Allowances** | 150 | 150 | 142.61 |
| 2 | **Traveling allowances** | .76 | .76 | .62 |
| 3 | **Contingencies** | | | |
| *A* | Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines) | 03.00 | 03.00 | 03.00 |
| *B* | POL, repair of vehicles, tractor and equipments | 03.00 | 03.00 | 03.00 |
| *C* | Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained) | 2.00 | 2.00 | 2.00 |
| *D* | Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training) | 0.50 | 0.50 | 0.50 |
| *E* | Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year) | 1.50 | 1.50 | 1.57 |
| *F* | On farm testing (on need based, location specific and newly generated information in the major production systems of the area) | 1.50 | 1.50 | 1.47 |
| *G* | Training of extension functionaries | 0.30 | 0.30 | 0.30 |
| *H* | Maintenance of buildings | 2.20 | 2.20 | 2.19 |
| *I* | Establishment of Soil, Plant & Water Testing Laboratory | 1.00 | 1.00 | 1.00 |
| *J* | Library | 0.10 | 0.10 | 0.12 |
| *K* | Kisan Mela | 1.90 | 1.90 | 1.85 |
| **TOTAL (A)** | | **167.76** | **167.76** | **160.23** |
| **B. Non-Recurring Contingencies** | |  |  |  |
| 1 | **Works** | 0 | 0 | 0 |
| 2 | **Equipments including SWTL & Furniture** | 0 | 0 | 0 |
| 3 | **Vehicle** (Four wheeler/Two wheeler, please specify) | 0 | 0 | 0 |
| 4 | **Library** (Purchase of assets like books & journals) | 0 | 0 | 0 |
| **TOTAL (B)** | |  |  |  |
| **C. REVOLVING FUND** | |  |  |  |
| **GRAND TOTAL (A+B+C)** | | **167.76** | **167.76** | **160.23** |

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**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 2016 to March 2017 | 35.16 | 17.92 | 12.86 | 40.22 |
| April 2017 to March 2018 | 40.22 | 26.10 | 25.36 | 40.96 |
| April 2018 to March 2019 | 40.96 | 20.72 | 17.64 | 44.04 |

**17. Details of HRD activities attended by KVK staff during year-NIL**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of the staff | Designation | Title of the training programme | Institute where attended | Dates |
| **-** | **-** | - | - | - |

**18. List the other collaborative research/ extension projects and also write brief key achievements of the projects.**

* **Pro SOIL - NIL**
* **NARI (Please indicate the name of one adopted village and give the activities carried over on nutri sensitive agriculture)**

**Nutri-sensitive Agriculture, Research and Innovation (NARI)**

Name of selected Village – Mamdapur , Tal- Rahata

Total Population – 5782

No.of Families – 1260

Year of Selection – 2018-19

For effective implementation of the project, KVK has carried out different programmes and activities as given below

**Activities/ Programmes**

|  |  |  |  |
| --- | --- | --- | --- |
| Sr no | Type of Activity | No.of programmes | No of participants |
| 1 | Survey | 01 | 100 families |
| 2 | Training | 04 | 125 |
| 3 | Demonstration | 01 | 30 |
| 4 | Observation visit | - | 30 |
| 5 | Group discussion | 08 | 162 |
| 6 | Health camp | 01 | 65 |

* **VATICA - NIL**
* **Seed Hub - NIL**

**19. Please include any other important and relevant information which has not been**

**reflected above (write in detail).-NIL**

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**APR SUMMARY**

(Note: While preparing summary, please don’t add or delete any row or columns)

1. **Training Programmes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Clientele** | **No. of Courses** | **Male** | **Female** | **Total participants** |
| **Farmers & farm women** | 62 | 1439 | 335 | 1774 |
| **Rural youths** | 38 | 356 | 576 | 932 |
| **Extension functionaries** | 12 | 205 | 141 | 346 |
| Sponsored Training | 03 | 68 | 08 | 76 |
| Vocational Training(ASCI) | 03 | 57 | 03 | 60 |
| **Total** | **118`** | **2125** | **1063** | **3188** |

1. **Frontline demonstrations**

|  |  |  |  |
| --- | --- | --- | --- |
| **Enterprise** | **No. of Farmers** | **Area(ha)** | **Units/Animals** |
| Oilseeds – Soybean | 50 | 20.00 |  |
| Pulses - Chick pea | 50 | 20.00 |  |
| Cereals | 10 | 04.00 |  |
| Vegetables | 45 | 09.50 |  |
| **Other crops**  - Sugarcane Ratoon | 26 | 10.40 |  |
| - Sugarcane Suru | 10 | 02.00 |  |
| - Okra | 15 | 00.20 | 01 |
| - Pomegranate | 10 | 04.00 |  |
| - Guava | 10 | 04.00 |  |
| **Total** | **226** | **74.10** |  |
| Livestock | 40 | 1.00 | Five Goat/unit Two cow /unit |
| Other enterprises – Okra cutter | 05 | 2.00 | 05 |
| **Total** | 45 | 3.00 | - |
| **Grand Total** | **271** | **80.10** |  |

1. **Technology Assessment**

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **No. of Technology Assessed** | **No. of Trials** | **No. of Farmers** |
| **Technology Assessed** |  |  |  |
| Integrated Nutrient Management | 05 | 30 | 30 |
| Weed management | 01 | 06 | 06 |
| Varietal Evaluation | 01 | 06 | 06 |
| Integrated Pest Management | 01 | 06 | 06 |
| Integrated Disease Management | 01 | 06 | 06 |
| Integrated Crop Management | 02 | 12 | 12 |
| Drudgery Reduction | 01 | 10 | 10 |
| Evaluation of breed | 01 | 10 | 10 |
| Production & Management | 01 | 10 | 10 |
| Feed & Fodder management | 01 | 10 | 10 |
| **Total** | **15** | **106** | **106** |

1. **Extension Programmes**

|  |  |  |
| --- | --- | --- |
| **Category** | **No. of Programmes** | **Total Participants** |
| Extension activities | 17 | 18528 |
| **Total** | **17** | **18528** |

1. **Mobile Advisory Services**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| KVK | Message Type | Type of Messages | | | | | | |
| Crop | Live stock | Weather | Mktg | Awareness | Other enterprise | Total |
| Ahmednagar-1 | Text only | 22 | 12 | 10 | 08 | 10 | 09 | 71 |
| Voice only | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Voice & Text both | 00 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total Messages** | **22** | **12** | **10** | **08** | **10** | **09** | **71** |
| **Total** | **4365** | **4365** | **4365** | **4365** | **4365** | **4365** |  |

1. **Seed & Planting Material Production**

|  |  |  |
| --- | --- | --- |
| **Particulars** | **Quintal/Number** | **Value Rs.** |
| Seed (q) | 0.29 | 72500 |
| Planting material (No.) | 114984 | 3051420 |
| **Bio-Products (kg/lit)** |  |  |
| Biofertilizers | 7798 | 915935 |
| Biopesticides | 14416 | 2162400 |
| **Bio-Food**  Spirulina Powder  Spirulina Vaseline  spirulina culture | 16.25 kg  285 no  50.65 lit. | 48750  17100  24325 |
| Livestock Production (No.) | 14 Goat | 49000 |
| Fishery production (No.) | - | - |

1. **Soil, water & plant Analysis**

|  |  |  |
| --- | --- | --- |
| **Samples** | **No. of Beneficiaries** | **Value Rs.** |
| Soil(Major+Micro) 13321 | 6956 | 1286096.00 |
| Water 299 | 276 | 29350.00 |
| Plant 225 | 106 | 43100.00 |
| **Total 13845** | **7338** | **1358546** |

1. **HRD and Publications**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Category** | **Number** |
| 1 | Workshops | 2 |
| 2 | Conferences | - |
| 3 | Meetings | 02 |
| 4 | Trainings for KVK officials | 01 MDP |
| 5 | Visits of KVK officials | 05 KVKs |
| 6 | Book published | 08 |
| 7 | Training Manual | 05 |
| 8 | Book chapters | - |
| 9 | Research papers | - |
| 10 | Lead papers | - |
| 11 | Seminar papers | - |
| 12 | Extension folder | 12 (20,000 copies) |
| 13 | Proceedings | - |
| 14 | Award & recognition | - |
| 15 | On going research projects | - |