# ICAR-ATARI, ZONE–XI, HEBBAL, BENGALURU

# ACTION PLAN 2020-21

# ICAR-TARALABALU KRISHI VIGYAN KENDRA, DAVANAGERE

## 1. General information about the Krishi Vigyan Kendra

| | | | |
|---|---|---|---|
| 1.1 | Name and address of KVK with phone, fax and e-mail ID | : | **ICAR-Taralabalu Krishi Vigyan Kendra**<br>Kadalivana, LIC Colony Layout, BIET College Road,<br>DAVANAGERE-577004, Karnataka<br>Phone : 08192-263462, 297142<br>E-Mail : dvgtkvk@yahoo.com, kvk.Davanagere@icar.gov.in |
| 1.2 | Name and address of host organization | : | Taralabalu Rural Development Foundation<br>SIRIGRE-577541, Chitradurga District |
| 1.3 | Year of sanction | : | 2004-05 |
| 1.4 | Website address of KVK and date of last update | | www.taralabalukvk.com |

## 2. Details of staff as on date

| Sl. No. | Sanctioned post | Name of the incumbent | Discipline | If permanent, please indicate | | Date of joining | If temporary, pl. indicate the consolidated amount paid (Rs./month) |
|---|---|---|---|---|---|---|---|
| | | | | Current pay band | Current grade pay | | |
| 2.1 | Senior Scientist & Head | Dr. Devaraja T.N. | Fishery | 37400-67000 PB-4 | 10000 | 17-05-2005 | Permanent |
| 2.2 | Subject Matter Specialist | Mr. Basavanagowda M.G. | Horticulture | 15600-39100 PB-3 | 6600 | 21-11-2006 | Permanent |
| 2.3 | Subject Matter Specialist | Mr. Mallikarjuna B.O. | Agronomy | 15600-39100 PB-3 | 6600 | 09-01-2008 | Permanent |
| 2.4 | Subject Matter Specialist | Dr. Jayadevappa G.K. | Animal Science | 15600-39100 PB-3 | 6600 | 29-01-2008 | Permanent |
| 2.5 | Subject Matter Specialist | Mr. Raghuraja J. | Agri. Extension | 15600-39100 PB-3 | 6600 | 23-06-2008 | Permanent |
| 2.6 | Subject Matter Specialist | **Vacant** | Plant Protection | 15600-39100 PB-3 | 5400 | -- | **Vacant** |
| 2.7 | Subject Matter Specialist | Mr. H.M. Sannagoudra | Soil Science | 15600-39100 PB-3 | 5400 | 01-07-2013 | Permanent |
| 2.8 | Programme Assistant (Home Science) | **Vacant** | Lab. Technician | 9300-34800 PB-2 | 4200 | -- | **Vacant** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 2.9 | Programme Assistant (Computer Programmer) | Mr. Santhosh B. | Computer | 9300-34800 PB-2 | 4600 | 05-09-2008 | Permanent |
| 2.10 | Programme Assistant (Farm Manager) | Mr. Vijayakumar S.B. | Farm Manager | 9300-34800 PB-2 | 4200 | 23-06-2008 | Permanent |
| 2.11 | Assistant | Mr. Mallikarjuna S. Gudihindala | Administration | 9300-34800 PB-2 | 4600 | 01-06-2005 | Permanent |
| 2.12 | Stenographer | Smt. Mamatha H. Melmalagi | Administration | 5200-20200 PB-1 | 2800 | 27-06-2005 | Permanent |
| 2.13 | Driver 1 | **Vacant** | Jeep | 5200-20200 PB-1 | 2400 | -- | **Vacant** |
| 2.14 | Driver 2 | Mr. Shivakumar S. | Tractor | 5200-20200 PB-1 | 2400 | 01-06-2005 | Permanent |
| 2.15 | Supporting staff 1 | Mr. Shivakumar B. | Office Attendant | 5200-20200 PB-1 | 1900 | 01-06-2005 | Permanent |
| 2.16 | Supporting staff 2 | Mr. Shivakumar S.E. | Farm Attendant | 5200-20200 PB-1 | 1900 | 01-06-2005 | Permanent |

## 3. Details of SAC meeting conducted during 2019-20

**Recommendations of 17th SAC meeting held on 21-12-2019**

**Group-I : To be addressed at KVK level**

- Bench mark information of each farmer selected from DFI villages should be considered for DFI works.
- Suggested to create awareness on soil analysis and to conduct soil health awareness programmes.
- Provide good quality green manure seeds like velvet beans and seedlings of Coconut, Drumstick to farmers from KVK.
- Try to practice and demonstrate dryland agriculture & horticulture farming technologies in the KVK Instructional Farm.
- Create awareness to reduce indiscriminate use of fertilizers.
- To create awareness among farmers for using residual moisture to cultivate Bengalgram.
- To give information on economics of crop cultivation/ enterprise in each training programme.
- Suggested to promote cultivation of multiple crops and avoid monocropping system.
- Give information to farmers about Bank Linkages and schemes available for farmers on various enterprises/crop cultivation and suggested to use Bank finance judicially.
- Suggested the KVK to organize a separate meeting (Brain Storming Session) for developing action plan in DFI villages.
- Encourage climate smart agriculture among farmers.

**Group-II : To be addressed through action plan of KVK in the year 2020-21**

- Encourage Mango, Cashew and other less water requiring crops in drylands.
- Recommend only crops that are suitable to that area and encourage alternate crops wherever necessary.
- Encourage soil fertility management through green manure crops cultivation.
- Encourage organic farming among farmers.
- Introduce New Variety of onion developed by IIHR (Lalima / Keertima).
- Suggested to popularize the Nutrigarden (Vertigarden) in rural areas.
- Livestock are suffering from nutritional imbalances and to create more awareness programmes on these issues.

**Group-III : To be addressed through convergence with Development Departments**

- Suggested to organize Siridhanya Melas.
- Suggested to popularize cashew crop instead of Arecanut crop. Conduct Awareness Progrmmes on this regard.
- Encourage NRM works with farmers.
- To provide assistance to farmers for creating onion storage structures from Department of Horticulture.
- To use forest plants for farm boundaries from Department of Social forestry.
- Cultivate Mahogany Plant in boundaries as it works as mosquito repellent.
- Encourage Hydroponic fodder production among farmers during summer.
- Suggested to encourage farmers to construct farm ponds and to take help from Development Departments.
- Under cashew mission from Department of Horticulture use cashew seedlings (alternate to arecanut crop) and processing units can be established.
- Fisheries activity in farm ponds should be encouraged for additional income.
- Suggested to popularize medicinal plants cultivation among farmers. Give more awareness programmes in this regard.
- Suggested to organize workshop for sellers and buyers (interacting session) on Agriculture/Horticulture commodities.
- Millet processing units should be encouraged with the help of Department of Agriculture.

## 4. Details of operational areas proposed during 2020-21

### AGASANAKATTE, DAVANAGERE TALUK

**I General Information:**

| Sl. No | Particulars | Hectors / No. |
|---|---|---|
| 1 | Total Geographical area | 360.87 |
| 2 | Total Cultivated rainfed area | 259.56 |
| 3 | Male | 500 |
| 4 | Female | 476 |
| 5 | Total Population | 858 |
| 5 | Small Holdings | 102 |
| 6 | Marginal Holdings | 55 |
| 7 | Other Holdings | 35 |
| 8 | Total Holdings | 195 |
| 9 | No. of Dealers | 0 |
| 10 | Total Households | 192 |

**II Crops:**

| Crops | Area (ha) | Productivity (kg/ha) |
|---|---|---|
| Maize | 195 | 4533 |
| Finger millet | 10 | |
| Sorghum | 10 | |
| Tomato | 22 | |
| Chilli | 2.5 | |
| Arecanut | 40.5 | 800 |
| Coconut | 7.5 | |

**50 families have been selected and baseline survey information is collected.**

**III Details of Animals**

| Sl. No. | Animals | No. |
|---|---|---|
| 1 | Cows | 108 |
| 2 | Buffalo | 30 |
| 3 | Sheep & Goat | 65 |

**RAMESHWARA, NYAMATHI TALUK**

**I General Information:**

| Sl. No | Particulars | Hectors / No. |
|---|---|---|
| 1 | Total House Holds | 341 |
| 2 | Total Population | 1591 |
| | Male | 806 |
| | Female | 785 |
| 3 | Literacy Population | 1166 |
| | Male | 646 |
| | Female | 500 |
| 4 | Total Cropped area (ha) | 800 |
| 5 | Primary School | Up to 7th |
| 6 | Govt. Ayurvedic Hospital | Nil |
| 7 | Grama Panchayat | Yargnal |
| 8 | Library | Not active |
| 9 | PACS-1 | Nil |
| 10 | Drinking Water | 1 |
| 11 | Borewell | 03 |
| 13 | Total number of Borewell ( 100 feet- 1000feet) | 650 No. |
| 14 | Tractor | 26 |

**II Soil types:**

| Types of soils |
|---|
| Red soil |
| Black soil |
| Black Loamy Soils |
| Silt soils |

**III Crops:**

| Kharif crops | Hector (ha) | Productivity (kg/ha) | | Rabi Crops | Hector (ha) | Productivity (kg/ha) |
|---|---|---|---|---|---|---|
| Onion | 100 | 20.4 t/ha | | Cabbage (Cauliflower) | 20 | |
| Maize | 400 | | | Sorghum | 200 | |
| Redgram | 10 | | | Wheat | 15 | |
| Tomato | 20 | | | Bengalgram | 70 | |
| Chilli | 20 | | | Arecanut | 50 | 800 |
| Beetroot | 10 | | | | | |
| Groundnut | 150 | 1850 | | | | |

**IV Details of Animals**

| Sl. No. | Animals | No. |
|---|---|---|
| 1 | Cow HF | 150-200 No. |
| 2 | Other Cow | 100 |
| 3 | Buffalo | 150 |
| 4 | Poultry | Backyard |

**V Pending works**

| Sl. No. | Particulars |
|---|---|
| 1 | Community Hall |
| 2 | Concrete Roads |
| 3 | Need to widen and clean the tank existing in the village |
| 4 | Community Hall |

**50 families have been selected and baseline survey information is collected.**

**VI Details of farmer groups**

| Sl. No. | Self Help Groups | Participants |
|---|---|---|
| 1 | SKDRDP Groups | 30 No.s |
| 2 | Horticulture CIGs | 06 No.s |
| 3 | Agriculture CIGs | 04 No.s |

**VII Other Details**

| | |
|---|---|
| Nyamathi FPO | 126 Members |
| Last year 250 borewell digged | 50 % Failure , Rs. 2 crore investment |

**RAMATHEERTHA, HARIHARA TALUK**

**I General Information:**

| Sl. No | Particulars | Hectors / No. |
|---|---|---|
| 1 | Total Geographical area | 342.40 |
| 2 | Total Cultivated area | 319.17 |
| 3 | Small farmers | 75 |
| 4 | Marginal farmers | 136 |
| 5 | Big farmers | 45 |
| 6 | Borewell | 34 |
| 7 | Govt. fair shop | 01 |
| 8 | Veterinary Hospital | Nil |
| 9 | Government School | $1^{st} - 7^{th}$ Std. |
| 10 | No. Houses | 180 |
| 11 | Total voters | 721 |
| 12 | Anganawadi | 01 |
| 13 | Farm Implements | 70 |
| 14 | Tractor | 09 |

**II Crops:**

| Crops | Area (ha) | Productivity (kg/ha) |
|---|---|---|
| Paddy | 25 | |
| Maize | 90 | |
| Finger Millet | 02 | |
| Sorghum | 08 | |
| Arecanut | 20 | |
| Coconut | 05 | |
| Banana | 08 | |
| Betelvine | 40 | 20.4 l/leaves/ha |
| **Total** | **198** | |

**III Details of Animals:**

| Sl. No. | Animals | No.s |
|---|---|---|
| 1 | Buffalo | 120 |
| 2 | Cows | 250 |
| 3 | Bullocks | 8 sets |
| 4 | Sheep | 150 |

## KADARANAHALLI, CHANNAGIRI TALUK

### I General Information:

| Sl. No | Particulars | Ha / No. |
|---|---|---|
| 1 | Total Geographical area | 228.4 |
| 2 | Total Cultivated area | 163 |
| 3 | Irrigated area | 117 |
| 4 | Rainfed area | 19 |
| 5 | Horticulture Plantations | 27 |
| 5 | Male | 375 |
| 6 | Female | 310 |
| 7 | Total Population | 685 |
| 8 | Small Holdings | 85 |
| 9 | Marginal Holdings | 50 |
| 10 | Other Holdings | 38 |
| 11 | Total Holdings | 173 |
| 12 | No. of Dealers | 02 |
| 13 | Total Households | 137 |

### II Crops:

| Crops | Area (ha) | Productivity (kg/ha) |
|---|---|---|
| Paddy | 85 | 5625 |
| Maize | 10 | |
| Sugarcane | 08 | |
| Arecanut | 60 | |
| Coconut | Intercrop | |
| Pepper | 5 | 1718 |
| **Total** | **168** | |

### III Details of Animals:

| Sl. No. | Animals | No.s |
|---|---|---|
| 1 | Cows | 150 (130 HF, 25 Local) |
| 2 | Milk | 400 L/ Cow |
| 3 | Fodder Crops | Nil |
| 4 | Sheep | Household |
| 5 | Bullocks | 4 Pairs |
| 6 | Poultry | Nil |

## MARIKUNTE, JAGALUR TALUK

### I General Information:

| Sl. No | Particulars | Ha / No. |
|---|---|---|
| 1 | Total Geographical area | 624 |
| 2 | Total Cultivated area | 501.7 |
| 3 | Small farmers | 158 |
| 4 | Marginal farmers | 358 |
| 5 | Big farmers | 160 |
| 6 | Borewell | 40 |
| 7 | PDS | 02 |
| 8 | Government School | 01 |
| 9 | Total House | 470 |
| 12 | Total Voters | 1411 |
| 13 | Anganwadi | 02 |
| 14 | Dealers | 01 |
| 15 | Farm Implements | 115 |
| 16 | Tractor | 23 |
| 17 | Library | 01 |

### II Crops:

| Crops | Area (ha) | Productivity (kg/ha) |
|---|---|---|
| Maize | 355.3 | |
| Finger Millet | 16.9 | |
| Sorghum | 3.26 | |
| Arecanut | 30.05 | |
| Coconut | 5.26 | |
| Banana | 3.22 | |
| Pomegranate | 1.66 | |
| Cotton | 26.47 | 2000 |
| Tomato | 15 | 35 t/ha |
| Onion | 20 | 20.4 t/ha |
| Others | 51.06 | |
| Total | 525.68 | |

### III Details of Animals:

| Sl. No. | Animals | No.s |
|---|---|---|
| 1 | Cows | 76 |
| 2 | Buffalo | 48 |
| 3 | Bullocks | 20 |
| 4 | Sheep | 950 |
| | Total | 1094 |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| **Agasanakatte Davanagere taluk** | Maize | • Low yield<br>• No intercrop<br>• Cob worm incidence<br>• Army worm and fall army worm<br>• Use of old varieties like Hy 3c, TTB-7 and long duration | 175 ha | **OFT-**Effect of Nano fertilizer (N and Zn) on growth and yield of Maize<br>**FLD –**Integrated Crop Management in Maize<br>• **Training**<br>- Importance of seed treatment<br>- Integrated Nutrient and pest management<br>• **Method demonstrations**<br>- Seed treatment with bio fertilizers<br>- Installation of pheromone traps for FAW<br>• **Extension activities** |
| | Fingermillet | • Imbalanced nutrient management<br>• Stem borer | 17 ha | **NFSM-CFLD – Nutricereals -** Integrated Crop Management in Fingermillet<br>• **Training**<br>- Integrated Crop Management in Fingermillet<br>• **Method demonstrations**<br>- Spraying of WSF<br>• **Extension activities** |
| | Vegetable crops | • Low yield<br>• Poor water management<br>• No IPDM practices<br>• Improved hybrids are not cultivated | 25 ha | • **Training**<br>- Production technology<br>- IPDM practices<br>• **Method demonstrations**<br>- Seed treatment with Biofertilizer<br>- Installation of pheromone traps<br>• **Extension activities**<br>• **Marketing & value addition** |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Tomato | • Imbalanced nutrient management<br>• No IPDM practices | 15 ha | **FLD –**Micronutrient management in Tomato<br>• **Training**<br>- Integrated Crop Management in Tomato<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>- Installation of pheromone traps<br>• **Extension activities** |
| | Arecanut | • **Red mites**<br>• Low yield<br>• Hidimundige<br>• Inflorescence caterpillar<br>• Spindle Bug<br>• Inflorescence die back<br>• Anabe Roga<br>• Nut Splitting and Dropping | 40.5 ha | **FLD –**Integrated Pest and Disease Management in Arecanut<br>• **Training**<br>- Production technology of Arecanut<br>- Integrated Pest and Disease Management in Arecanut<br>• **Method demonstrations**<br>- Method of placing fertilizers<br>- Foliar spray of micronutrients<br>• **Extension activities** |
| | Blackpepper | • Incidence of wilt<br>• Spike shedding<br>• Root rot<br>• Improper filling | 15 ha | **FLD –** Management of yellowing and spike shedding in Black pepper<br>• **Training**<br>- Production technology of Pepper<br>- Integrated Pest and Disease Management in Pepper<br>• **Method demonstrations**<br>- Foliar spray of micronutrients<br>**Extension activities** |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Dairying | • Low milk yield<br>• Scarcity of good quality fodder<br>• Delayed puberty | 138 No. | **FLD –** Integrated Management of Crossbred dairy animals for better performance<br>• **Training**<br>- Use of Non-protein nitrogenous (NPN) substances in reducing the feeding cost in dairy animals<br>- Importance of colostrum and milk feeding to crossbred female calves<br>• **Method demonstrations**<br>- Dry fodder enrichment & feeding along with grain mixture<br>- Silage making methods<br>- Azolla production<br>• **Extension activities** |
| | Sheep and goat | • Lower body weight gain<br>• Under nutrition<br>• Worm infestation | 45 No. | **FLD –** Controlling parasitic infestations and feeding small ruminants based on Indian Standards for better performance<br>• **Training**<br>- Effect of total deworming and balanced nutrition in small ruminants<br>• **Method demonstrations**<br>- Preparation of compounded feeds for sheep<br>• **Extension activities** |
| | Fisheries | • Low yield | -- | • **FLD – Polyculture of fresh water fishes in farm ponds with an emphasis on aeration** |
| **Rameshwara, Nyamathi taluk** | Maize | • Low yield<br>• Sole crop<br>• **Army worm and fall army worm**<br>• Improper nutrient management (No potash application) | 320 ha | **FLD –** Integrated Crop Management in Maize.<br>• **Training**<br>- Importance of seed treatment for higher yield in intercropping system<br>- Integrated pest management in Maize + Redgram<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>- Installation of pheromone traps<br>• **Extension activities** |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Groundnut | • Imbalanced nutrient management<br>• Collar rot<br>• Use of TMV-2 variety | 50 ha | **OFT- Assessment of performance of Groundnut for higher yield**<br>• **Training**<br>- Improved production technology for higher yield<br>- Integrated Nutrient Management<br>- Integrated Disease Management<br>• **Method demonstrations**<br>- Seed treatment with bio fertilizers<br>- Use of stripper<br>• **Extension activities** |
| | Redgram | • Low yielding varieties<br>• No IPM measures<br>• Poor nutrient management<br>• Weed management<br>• Sole cropping of Maize | 10 ha | **NFSM –CFLD**<br>**Integrated Crop Management in Redgram**<br>• **Training**<br>- ICM practices in Redgram<br>- IPDM practices in Redgram<br>• **Method demonstrations**<br>- Seed treatment with bio fertilizers<br>- Installation of pheromone traps<br>- Preparation and Spraying of Nutrient sprays and chemicals<br>**Extension activities** |
| | Bengalgram | • Low yield<br>• Low yielding varieties<br>• No IPM measures<br>• Poor nutrient management<br>• Weed management<br>• Broadcasting method of sowing | 90 ha | **NFSM –CFLD**<br>**Integrated Crop Mangment in Bengal Gram**<br>• **Training**<br>- Integrated Crop Management in Bengalgram<br>- IPDM practices in Bengalgram<br>• **Method demonstrations**<br>- Seed treatment with bio fertilizers<br>- Installation of pheromone traps<br>- Spraying of Chick pea magic<br>• **Extension activities** |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Onion | • Lower yield<br>• Incidence of sucking pests like Thrips<br>• Purple Blotch<br>• High cost on weeding<br>• Splitting of bulbs at bulbing stage | 90 ha | **FLD –** Integrated Crop Management in Onion<br>• **Training**<br>- Integrated Crop Management in Onion<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>• **Extension activities** |
| | Tomato | • Blossom end rot<br>• Improper nutrient management<br>• Pod borer<br>• Blight incidence | 40 ha | **FFS–**IPM in Tomato<br>FLD – Integrated Crop management in Tomato<br>• **Training**<br>- Production technology<br>- IPDM practices<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>- Installation of pheromone traps<br>• **Extension activities** |
| | Pulses | • Incidence of storage pests | 75 ha | **FLD**<br>Super grain bags to prevent storage pests. |
| | Enterprise<br>Onion storage structure | • Lack of storage structure | -- | • 30 x 12 feet, centre roofing height 9 feet **(2 No.)**<br>• Convergence mode with Dept. of Horticulture<br>• Total Cost Rs. 1,75,000/- (Subsidy Rs. 87,500/-)<br>• Implemented through FPO |
| | Vermicompost unit | • Deteriorated soil fertility<br>• Burning of agriculture residues | -- | • Construction **10 No.** of units<br>• Training and method demonstration<br>• Convergence mode with Dept. of Horticulture<br>• Total cost Rs. 60,000/- (Subsidy Rs. 30,000/-) |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Dairying | • Low milk yield<br>• Scarcity of good quality fodder<br>• Delayed puberty | 200 No. | **FLD–** Integrated Management of Dairy Animals for better performance<br>• **Training**<br>- Use of Non-protein nitrogenous (NPN) substances in reducing the feeding cost in dairy animals<br>- Importance of colostrum and milk feeding to crossbred female calves<br>• **Method demonstrations**<br>- Dry fodder enrichment & feeding along with grain mixture<br>- Silage making methods<br>- Azolla production<br>• **Extension activities** |
| | Sheep | • Lower body weight gain<br>• Worm infestation | 150 NO. | • **Training**<br>- Effect of total deworming and balanced nutrition in small ruminants<br>• **Method demonstrations**<br>- Preparation of compounded feeds for sheep |
| | Capacity building | • Unorganised approach in production and marketing | -- | • FPO strengthening |
| **Ramathirtha Harihara taluk** | Rice | • Low yield<br>• BPH, Sheath blight and blast<br>• Tail enders | 30 ha | • **Training**<br>- IPM for the stem borer and BPH<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>- Installation of pheromone traps<br>• **Extension activities** |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Maize | • Low yield<br>• No intercrop with redgram<br>• Stem borer and doweny mildew<br>• Incidence of fall army worm | 130 ha | • **Training**<br>- Importance of seed treatment for higher yield in intercropping system<br>- Integrated pest management in Maize + Redgram<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>- Installation of pheromone traps |
| | Arecanut | • Low yield<br>• Hidimundige<br>• Inflorescence caterpillar<br>• Spindle Bug<br>• Red mites<br>• Inflorescence die back<br>• Anabe Roga | 15 ha | • **Training**<br>- Production technology of Arecanut<br>• **Method demonstrations**<br>- Method of placing fertilizers<br>- Foliar spray of micronutrients<br>• **Extension activities** |
| | Betelvine | • Foot rot<br>• Downey mildew<br>• Scales, root grub and leaf curl<br>• Powdery mildew | 30 ha | **FLD –**Integrated Crop Management in Betelvine<br>• **Training**<br>- Recent trends in production technology of betelvine<br>• **Method demonstrations**<br>- Drenching of AMC<br>- Lowering of vines<br>• **Extension activities** |
| | Dairy | • Low milk yield<br>• Scarcity of good quality fodder<br>• Delayed puberty | 250 nos | • **Training**<br>- Use of Non-protein nitrogenous (NPN) substances in reducing the feeding cost in dairy animals<br>- Importance of colostrum and milk feeding to crossbred female calves<br>• **Method demonstrations**<br>- Dry fodder enrichment & feeding along with grain mixture<br>- Silage making methods & Azolla production<br>• **Extension activities** |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Sheep & goat | • Lower body weight gain<br>• Worm infestation | 150 | Training & Method demonstration |
| **Kadaranahalli Channagiri taluk** | Rice | • Improper Nutrient Management<br>• BPH, Sheath blight and blast<br>• Increased cost of production<br>• Poor post harvest management practices | 85 ha | **FLD -** Integrated Crop management in Rice<br>• **Training**<br>- IPM for the stem borer and BPH<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>- Installation of pheromone traps<br>• **Extension activities** |
| | Arecanut | • Low yield<br>• Hidimundige<br>• Inflorescence caterpillar<br>• Spindle Bug<br>• Red mites<br>• Inflorescence die back<br>• Anabe Roga | 60 ha | • **Training**<br>- Production technology of Arecanut<br>• **Method demonstrations**<br>- Method of placing fertilizers<br>- Foliar spray of micronutrients<br>• **Extension activities** |
| | Dairy | • Scarcity of good quality of fodder<br>• Under /malnutrition<br>• Mastitis | 150 No. | • **FLD:** Establishment Fodder cafeteria for reducing the feeding cost in dairy animals<br>• **Training**<br>- Use of leguminous & non-leguminous fodder cropsfor reducing the feeding cost in dairy animals<br>- Importance of colostrum and milk feeding to crossbred female calves<br>• **Method demonstrations**<br>- Dry fodder enrichment & feeding along with grain mixture<br>- Silage making methods<br>- Azolla production<br>• **Extension activities** |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Fisheries | • Low yield | -- | • **OFT-** Assessment of growth performance of improved carps, pangasius and farmed tilapia in ponds |
| **Marikunte Jagalur taluk** | Maize | • No intercrop<br>• Fall army worm<br>• Imbalanced nutrient management<br>• Moisture stress at critical stage of crop growth | 310 ha | **FLD –**Integrated Crop Management in Maize<br>• **Training**<br>- Importance of seed treatment for higher yield in intercropping system<br>- Integrated pest management in Maize + Redgram<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>- Installation of pheromone traps<br>• **Extension activities**<br>- Farm pond construction with convergence mode |
| | Cotton | • Improper nutrient management<br>• Sucking pest and pink boll worm<br>• Square dropping and leaf reddening | 27 ha | **FLD –**Integrated Crop Management in Cotton<br>• **Training**<br>- Advanced production technologies in Cotton<br>• **Method demonstrations**<br>- Installation of yellow sticky traps<br>- Preparation of spraying solutions<br>• **Extension activities** |
| | Onion | • Imbalanced nutrient management<br>• Small bulb<br>• Less pungency | 20 ha | **OFT-** Role of sulphur in improving the productivity of onion |
| | Groundnut | • Imbalanced nutrient management<br>• Collar rot<br>• Use of TMV-2 variety | 20 ha | • **Training**<br>- Improved production technology for higher yield<br>- Integrated Nutrient & Disease Management<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>- Use of stripper<br>• **Extension activities** |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Arecanut | • Low yield<br>• Hidimundige<br>• Inflorescence caterpillar<br>• Spindle Bug<br>• Red mites<br>• Inflorescence die back<br>• Anabe Roga | 30 ha | • **Training**<br>- Production technology of Arecanut<br>• **Method demonstrations**<br>- Method of placing fertilizers<br>- Foliar spray of micronutrients<br>• **Extension activities** |
| | Tomato | • Imbalanced nutrient management<br>• No IPDM practices | 25 ha | **FLD –**Micronutrient management in Tomato<br>• **Training**<br>- Integrated Crop Management in Tomato<br>• **Method demonstrations**<br>- Seed treatment with biofertilizers<br>- Installation of pheromone traps<br>• **Extension activities** |
| | Fingermillet | • Imbalanced nutrient management<br>• Stem borer | 17 ha | **NFSM-CFLD – Nutricereals -** Integrated Crop Management in Fingermillet<br>• **Training**<br>- Integrated Crop Management in Fingermillet<br>• **Method demonstrations**<br>- Spraying of WSF<br>• **Extension activities** |
| | Drumstick | • Monocropping of Maize | -- | **FLD –**Integrated Crop Management in Drumstick<br>• **Training**<br>- Advanced production technologies in Drumstick<br>• **Method demonstrations**<br>- Pinching to 3 feet height<br>• **Extension activities**<br>• **Market link for dried leaves** |

| Clusters | Major crops & enterprises being practiced in cluster villages | Prioritized problems in these crops/ enterprise that limit yield and income | Extent of area (ha/No.) affected by the problem in the village | Proposed intervention (OFT, FLD, Training, extension activity etc.) |
|---|---|---|---|---|
| | Dairying | • Low milk yield<br>• Poor feeding due to shortage of fodder<br>• Delayed puberty | 124 No. | • **Training**<br>- Use of Non-protein nitrogenous (NPN) substances in reducing the feeding cost in dairy animals<br>- Importance of colostrums and milk feeding to crossbred female calves<br>• **Method demonstrations**<br>- Dry fodder enrichment & feeding along with grain mixture<br>- Silage making methods<br>- Azolla production |
| | Sheep | • Lowe body weight gain<br>• Under nutrition<br>• Worm infestation | 950 No. | **FLD –** Balanced feeding and Total deworming in small ruminants for better performance<br>• **Training**<br>- Effect of total deworming and balanced nutrition in small ruminants<br>• **Method demonstrations**<br>- Preparation of compounded feeds for sheep<br>• **Extension activities** |

## 5. Technology assessment during 2020-21

| Sl.No. | Crop/ enterprise | Prioritized problem | Title of intervention | Technology options | Source of Technology |
|---|---|---|---|---|---|
| 5.1 | Groundnut | • Use of local variety TMV-2<br>• Low yield<br>• Lack of awareness on improved varieties. | **Assessment of performance of groundnut varieties for better higher yield.** | **$T_1$ :Farmers Practice:** TMV-2 | - |
| | | | | **T2 : Recommended practice:** GPBD-4 | UAS(D) |
| | | | | **T3: :Recommended Practice:** G2-52 | UAS(B) |

| Name of critical input | Quantity per trial | Cost per trial | No. of trials | Total cost for the intervention (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| **$T_1$-** Nil | - | - | 03 | - | - | - |
| **$T_2$-** Pods GPBD-4<br>Gypsum<br>Trichoderma<br>19 all | 60 kg<br>100 kg<br>4 kg<br>2 kg | 4200-00<br>600-00<br>400-00<br>300-00 | 03 | 16,500-00 | • Germination %<br>• Plant height<br>• No of pods/plant<br>• Shelling %<br>• Test weight<br>• Pod yield<br>• Haulm yield | Mallikarjuna B.O.<br>Sannagouda H.M<br>Raghuraja J |
| **$T_3$-** Pods - G252<br>Gypsum<br>Trichoderma<br>19 all | 60 kg<br>100 kg<br>4 kg<br>2 kg | 4200-00<br>600-00<br>400-00<br>300-00 | 03 | 16,500-00 | | |
| TOTAL | | | | **33,000-00** | | |

| Sl. No. | Crop/ enterprise | Prioritized problem | Title of intervention | Technology options | Source of technology | Name of critical input | Qty per trial (q) | Cost per trial (Rs.) | No. of trials | Total cost (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.2 | Maize | • Low yield | Effect of Nano fertilizer (N and Zn) on Growth and Yield in Hybrid Maize | **$T_1$ :FP:** Application of NP(100kg) fertilizers as a basal dose and top dressing with Nitrogenous(50 kg urea) and Potash fertilizers (30 kg MOP | Farmers practice | Soil analysis | - | 200 | 05 | 1000 | • Yield (q/ha)<br>• Plant height (cm)<br>• No of rows /cob (No.)<br>• Cob weight (g)<br>• Benefit cost ratio | **SMS (Agronomy**, Soil Science, AE) |
| | | | | **$T_2$ :RP:** Soil Test Based Fertilizers application Nutrient Management (RDF; 100:50 :25 N , P2O5 and K2O kg/ha. 50 % N . 100 % P2O5 and 50 % K20 as a basal and 25 % N at 30 DAS and 25% N and 50 % K20 at Tasselling stage | UAHS, Shivamoga | Soil analysis | - | 200 | 05 | 1000 | | |
| | | | | **$T_3$ :AP:** Application of 25 % N ( N: 25 kg/ha), 50% K20 and 100 % P2O5 as a basal dose . 25 % N at 25 – 30 DAS, 50 % K2O at tassselling stage . N and Zn Nano fertilizer spray at 30 DAS (4 ml/l of water ) and second spray 50 DAS | IFFCO NBRC , Gujarath | Soil analysis<br>N and Zn based Nano Fertilizers | 1 litre<br>1litre | 200<br>450<br>450 | 05 | 5500 | | |
| | | | | | | | | **1500** | | **7500** | | |

| S. No. | Crop/ enterprise | Prioritized problem | Title of intervention | Technology options | Source of Technology |
|---|---|---|---|---|---|
| 7.3 | Onion | Non availability of suitable varieties for Rabi season<br>**Causes:**<br>• Use of local varieties<br>• Bulb to seed season | Assessment of Onion Varieties for Rabi Season | 1. Nyamathi Local | FP |
| | | | | 2. Arka Nikethan | IIHR, Bengaluru |
| | | | | 3. Bhima Shakthi | DOGR, Pune |
| | | | | 4. NHRDF Red (Line-28) | NHRDF, Nasik |

| Name of critical input | Qty per trial | Cost per trial | No. of trials | Total cost for the intervention (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| | | | | | Plant height (cm)<br>Bulb diameter (cm)<br>Bulb Yield (t/ha)<br>No. of protective irrigations<br>B: C ratio | SMS(Horticulture)<br>SMS(Soil Science)<br>SSH |
| Arka Nikethan | 0.5 kg | 1,500-00 | 5 | 7500-00 | | |
| Bhima Shakthi | 0.5 kg | 1,500-00 | 5 | 7500-00 | | |
| NHRDF Red (Line-28) | 0.5 kg | 1,500-00 | 5 | 7500-00 | | |
| **Total** | | **4,500-00** | | **22,500-00** | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.4 | Onion | • Low yield<br>**Causes:**<br>• Imbalanced nutrient management<br>• Small bulb<br>• Less pungency | Role of sulphur in improving the productivity of onion | $T_1$ –Application of 100:75:20 kg $N:P_2O_5:K_2O$/ha along with FYM + remaining ICM practices. | Farmers practices | $T_1$: | -- | -- | 5 | -- | • Plant Height (cm)<br>• Bulb diameter (cm)<br>• Weight of bulb (g)<br>• Yield (q/ha) | **SMS (Soil Science**, Horticulture) |
| | | | | $T_2$ – RDF (125:50:125 Kg $N:P_2O_5:K_2O$/ha) along with FYM + remaining ICM practices. | UAHS, Shivamogga | $T_2$ : *Azospirillum*<br>PSB<br>Yellows ticky trap | 0.5 kg<br>0.5 kg<br>8 no. | 50<br>50<br>320 | 5 | 2,100 | | |
| | | | | T3- RDF (125:50:125 Kg $N:P_2O_5:K_2O$/ha) along with FYM and 45kg sulphur through elemental sulphur through Gypsum remaining ICM practices. | DOGR, Pune | $T_3$ : *Azospirillum*<br>PSB<br>Gypsum<br>Yellow sticky trap | 0.5 kg<br>0.5 kg<br>200 kg<br>8 no. | 50<br>50<br>550<br>320 | 5 | 4,850 | | |
| | | | | | | **Total** | | | | **6,950** | | |

| Sl. No. | Crop/ enterprise | Prioritized problem | Title of intervention | Technology options | Source of technology | Name of critical input | Qty per trial (q) | Cost per trial (Rs.) | No. of trials | Total cost (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5.5 | Dairy | Generally dairy animals are fed with poor quality dry roughages along with a few feed ingredients. These fodders when fed to high yielding dairy animals would not support production and health due to deficiency of Protein, energy & minerals. Poor quality dry roughages when enriched with urea and fed along with Grain mixture (starch) improved the digestibility of dry roughages and supplied the crude protein & Energy (TDN) required by the animal. | Feeding Urea-treated paddy straw along with grain mixture (starch source) for better performance in dairy animals | **T1**- Feeding dairy animals with low quality dry roughages and non-leguminous green fodders along with cake and bran items. | -- | -- | -- | -- | 05 | 13,700/- | • Milk yield (Liters)<br>• Specific gravity of milk (CLR)<br>• Cost of milk production (Rs./l) | **SMS (Animal Science)** & SMS (Agri. Extension) SSH |
| | | | | **T2**- Feeding dairy animals with urea-treated dry roughages, green fodders and compounded animal feeds as per the NRC Specifications | KVA & FSU, Bidar | Chelated Mineral mixture<br>Deworming bolus (80 mg)<br>Vitamins-Minerals tonic | 5 kg<br>2 No.<br>5 l | 600/-<br>120/-<br>650/- | | | | |
| | | | | **T3**- Feeding dairy animals with urea-treated dry roughages, green fodders and compounded animal feeds as per the NRC specifications. PLUS using 1-2 kg grain mixture at the time of feeding urea-treated dry roughages | NIANP, Bengaluru | Chelated Mineral mixture<br>Deworming bolus (80 mg)<br>Vitamins-Minerals tonic | 5 kg<br>2 No.<br>5 l | 600/-<br>120/-<br>650/- | | | | |

| Sl. No. | Crop/ enterprise | Prioritized problem | Title of intervention | Technology options | Source of Technology |
|---|---|---|---|---|---|
| 5.6 | Fisheries | Low productivity with carps in tanks and ponds | **Assessment of growth performance of improved carps, pangasius and farmed tilapia in farm ponds** | **T1 FP: Indian major Common carps (**Catla, Rohu, Common carp)<br>• Stocking density – 1200<br>• Culture duration – 12 months<br>• Feeding – Rice bran & Groundnut oil cake 1:1 and floating feeds @ 4% of body weight | -- |
| | | | | **T2**: **Pangasius**<br>• Stocking density – 1200<br>• Culture duration – 10 months<br>• Feeding – Rice bran & Groundnut oil cake 1:1 and floating feeds @ 4% of body weight | KVAFSU, Bidar |
| | | | | **T3: All male Tilapia**<br>• Stocking density – 1200<br>• Culture duration – 8 months<br>• Feeding – Rice bran & Groundnut oil cake 1:1 and floating feeds @ 4% of body weight | UAS (B) |
| | | | | **T4: Amur Common Carp**<br>• Stocking density – 1200<br>• Culture duration – 10 months<br>• Feeding – Rice bran & Groundnut oil cake 1:1 and floating feeds @ 4% of body weight | FRIC, Hebbal, KVAFSU, Bidar |
| | | | | **T5: Jayanthi Rohu**<br>• Stocking density – 1200<br>• Culture duration – 12 months<br>• Feeding – Rice bran & Groundnut oil cake 1:1 and floating feeds @ 4% of body weight | CIFA, Bengaluru |

| Name of critical input | Qty per trial | Cost per trial | No. of trials | Total cost for the intervention (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| **T1 : Carps** | 1200 No | Farmers share | 03 | 43,200 | • Yield (t/ha)<br>• Body weight of fish (g)<br>• Percent of survival (%)<br>• FCR | **Senior Scientist and Head** & SMS (Extension) |
| **T2: Pangasius** | 1200 No | 3600/- | | | | |
| **T3 : All male Tilapi** | 1200 No | 3600/- | | | | |
| **T4 : Amur Common Carp** | 1200 No | 3600/- | | | | |
| **T5 : Jayanthi Rohu** | 1200 No | 3600/- | | | | |
| | | **14,400** | | **43,200** | | |

## 6. Frontline demonstrations during 2020-21

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.1 | Cereals | Rice | • No seedling treatment with bio fertilizer<br>• Improper nutrient management<br>• Incidence of stem borer(white ear), Blast and BPH | **Integrated crop management in Rice**<br>• Deep ploughing in summer and burning of stubles<br>• Use of Green manuring crop Diancha 20 kg/acre<br>• Seed treatment with carbendazim @4g/kg<br>• Installation of Pheromone traps in the Nursery for stem borer management<br>• Seed treatment with Azospirillum (1kg/acre)<br>• Application of $ZnSO_4$ (8 kg)<br>• Removing of weeds from bunds and fields<br>• Maintain proper spacing and avoid excess plant population<br>• Avoid excess N application | RNR-1 (Private variety) | -- | UAS (R) |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Trichoderma | 500 g | 50.00 | 20 | 37,200.00 | • Yield (q/ha)<br>• Plant height (cm)<br>• Productive tillers (no.)<br>• Percent incidence of stem borer<br>• Test weight 1000 seeds (g) | **SMS (Agronomy)**<br>SMS (Soil Science)<br>SSH |
| Bio-fertilizers *Azosprillium*, PSB ( 1kg each ) | 2 kg | 200.00 | | | | |
| Pheromone trap 6 and lures 12 No/acre | 12 No. | 700.00 | | | | |
| Sodium Acta Borate (Boron) @ 1 kg/acre | 1 kg | 350.00 | | | | |
| Zinc sulphate (8kg/acre) | 80 g | 560.00 | | | | |
| | | **1860.00** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.2 | Cereals | Hybrid Maize | • Fall army worm incidence (60-100%)<br>• Improper nutrient Management | **Integrated crop Management in Maize**<br>✓ Spacing of 60X30 cm for maize through seed cum fertilizer drill .<br>✓ Recommended dose of Fertilizers (100 : 50 : 25 NPK kg /ha ) with FYM @ 7.5 t/ha<br>✓ Use of bio fertilizers *Asosprillium*, and PSB 1kg each/ha<br>✓ Management of stem borer - Chlorntraniliprole @ 150 ml/ha<br>✓ **FAW management : Deep ploughing in summer and bunds should be wed free**<br>✓ Installation of pheromone traps @ 12 no/ha (24 lures)- Fall Army worm (*Spodoptera frugiperde)*- 8 days after Sowing<br>✓ Spraying of Azadirachtin 1500 PPM 5ml/l<br>✓ Spraying of Chlorntraniliprole @ 150 ml / ha ( 0.3 ml/l of water ) /Lamda cyhalothrin 9.5% 0.5 ml/l of water | - | Private hybrid | UAHS (S) |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Azosprillium and PSB 1kg each | 1kg | 190/- | 10 | 22,400 | • Yield (q/ha) [Maize + Redgram]<br>• No. of rows/cob (No.) [Maize]<br>• No. of pods/plant (No.) [Redgram]<br>• Incidence of pod borer & wilt (%) | **SMS (Agronomy)**<br>SMS (Soil Science)<br>SSH |
| Pheromone traps 5 Nos @ lures 10 nos.( FAW) | 5 Nos | 500/- | | | | |
| Chlorntraniliprole @ 0.3 ml /l (60 ml) | 0.3 ml | 950/- | | | | |
| Zinc Sulphate 4 kg/acre | 4 kg | 300/- | | | | |
| 13:00:45/19:19:19 @ 5g/l 2kg/acre | 2kg | 300/- | | | | |
| | | **2,240/-** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.3 | Commercial crops | Cotton | • Improper spacing ($2^1$ row spacing)<br>• Improper nutrient management (140:100:75 kg $N:P_2O_5:K_2$/ha)<br>• Incidence of sucking pest (10-30% yield bales)<br>• Leaf reddening (Mg deficiency)<br>• Square drying (25% yield loss) | **Integrated Crop Management in Cotton**<br>✓ Maintaining proper spacing (4 x 4 feet)<br>✓ Soil test based fertilizer application<br>✓ Trap crop Bhendi/Marigold (25:1)<br>✓ Yellow sticky traps<br>✓ Spraying Acetamaprid 20 SP @ 0.2 g/l against sucking pest<br>✓ Spraying of Planofix @ 1ml/4.5 l<br>✓ Spraying of $MgSO_4$ 1% @ 75 & 90 DAS<br>✓ Spraying of $KNO_3$ @ 1% at 90 & 110 DAS | -- | BG-II | UAHS (Shivamogga) |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Yellow sticky trap | 8 No. | 400/- | 20 | 38,000/- | • Yield (q/ha)<br>• Percent square dropping (%)<br>• Leaf reddening (%)<br>• No. of bolls/plant (No.) | SMS (Soil Science)<br>SMS (Agronomy)<br>SSH |
| Pheromone traps | 5 No. | 250/- | | | | |
| $MgSO_4$ | 2 kg | 400/- | | | | |
| $KNO_3$ | 2 kg | 400/- | | | | |
| Planofix | 100 ml | 200/- | | | | |
| Safety kit | 1 | 250/- | | | | |
| | **Total** | **1,900/-** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.4 | Horticultural crops | Tomato | • Improper nutrient management (70:100:40 kg $N:P_2O_5:K_2$/ha)<br>• Boron and Zinc deficiency (20% yield loss)<br>• Incidence of sucking pest (20-60% yield loss) | **Integrated Crop Management in Tomato**<br>✓ Weather based agronomic practices<br>✓ Soil test based nutrient application<br>✓ Application of Arka Microbial Consortium (20 g for seed treatment, 20g/l – drenching 10 DAT, 5kg- Main field along with vermicompost)<br>✓ Spray of vegetable special @ 5g/l<br>✓ Spray of calcium nitrate @5g/l<br>✓ Use of yellow and blue sticky traps @ 25/ha<br>✓ Use of pheromone traps @ 10/ha<br>✓ Need based plant protection measures | -- | Private | IIHR, Bengaluru |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Arka Microbial Consortium | 7 kg | 1750 | 10 | 43,000/- | • Yield (q/ha)<br>• No. of fruits/plant (No.)<br>• Plant height (cm)<br>• Incidence of leaf curl (%) | SMS (Soil Science)<br>SMS (Horticulture)<br>SSH |
| Vegetable special | 4 kg | 800 | | | | |
| Calcium nitrate | 2 kg | 400 | | | | |
| Yellow sticky and blue sticky traps | 20 No.s | 800 | | | | |
| Pheromone traps 4 and lures 8 | 4 No.s | 300 | | | | |
| Safety kit | 1 No.s | 250 | | | | |
| | **Total** | 4,300.00 | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.5 | Horticultural crops | Drumstick | • Improper nutrient management<br>• Flower dropping<br>• No treatment after pruning | **Integrated Crop Management in Drumstick**<br>• Integrated Nutrient Management<br>• Intercropping with pulses/groundnut<br>• Pruning at the height of 2.5 '<br>• Treatment with COC after pruning<br>• Spraying of Potassium nitrate @ 5g/l<br>• Spraying with NAA@ 0.4ml/l to prevent flower dropping<br>• Spraying of micronutrient mixture @ 5ml/l<br>• Need based plant protection measures<br>• Marketing through FPO | KDM-1 (Bhagya) | -- | UAHS, Shivamogga |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Micronutrient Mixture | 2 l | 1000.00 | 05 | 11,000/- | • Yield (q/ha)<br>• Number of pods/plant | SMS (Soil Science)<br>SMS (Horticulture)<br>SSH |
| NAA | 200 ml | 400.00 | | | | |
| Potassium Nitrate | 4 kg | 800.00 | | | | |
| | **Total** | **2200.00** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.6 | Horticultural crops | Arecanut | • No drainage (28%)<br>• Anabe roga(15%)<br>• Incidence of Hidimundige (45%)<br>• Lower fertility (28%)<br>• Indiscriminate use of fertilizers (150:100:100/Plant)<br>• Inflorescence dieback(33%)<br>• Spindle bug(16 %)<br>• Nut Splitting and dropping(45%) | **Integrated Pest and Disease Management in Arecanut**<br>✓ For every two rows one row of 2.5-3 feet drainage<br>✓ Loosening of soil around plant<br>✓ Avoiding flood irrigation<br>✓ Application of RDF(100:40:140g NPK/plant) based on soil test<br>✓ *Trichoderma* enriched organic manure<br>✓ Intercrop with velvet beans<br>✓ Spray Chlorpyriphos @ 2 ml/l<br>✓ Spray of Mancozeb @ 2g/l<br>✓ Drenching with Propiconozole @ 2 ml/l | Channagiri local | -- | AICRP Arecanut (Shivamogga) |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| *Trichoderma harzianum* | 2 l | 600/- | 20 | 30,000/- | • Yield (q/ha)<br>• Percent incidence of Hidimundige<br>• Percent of nut splitting and dropping | **SMS (Horticulture)**<br>SMS (Soil Science)<br>SSH |
| Mucuna | 5 kg | 900/- | | | | |
| | **Total** | **1,500/-** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.7 | Horticultural crops | Blackpepper | • Yellowing<br>• Spike shedding<br>• Wilt<br>• Nematodes | **Management of yellowing and spike shedding in Blackpepper**<br>✓ Spraying of blackpepper special @ 5 g/l during May and September<br>✓ Drenching of Arka Microbial consortium 20 g/l<br>✓ Spraying Potassium Nitrate @ 5 g/l<br>✓ Soil application of *Pachonia chlamydosporia* | Paniyur-1 | -- | IIHR, Bengaluru & IISR, Calicut |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Black Pepper Special | 5 kg | 450/- | 05 | 16,250/- | • Yield (q/ha)<br>• Spikes shedding (No.)<br>• Yellowing (%) | **SMS (Horticulture)**<br>SMS (Soil Science)<br>SSH |
| Arka Microbial Consortium | 10 kg | 1500/- | | | | |
| Pachonia chlamydosporia | 10 kg | 1000/- | | | | |
| Potassium Nitrate | 2 kg | 300/- | | | | |
| | **Total** | **3250/-** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.8 | Horticultural crops | Betelvine | • Incidence of downey mildew (8%)<br>• Sucking insect damage (15%)<br>• Mealy bug for standard (32%)<br>• Wilt( 23%)<br>• Imbalance nutrition (17:17:17 @ 100 g/vine) | **Integrated Pest and Disease Management in Betelvine**<br>✓ Recommended RDF ( 50:50:50 g NPK/Vine)<br>✓ Controlled irrigation<br>✓ Drenching Copper oxy chloride @ 3 g/l @ lowering of vine<br>✓ Drenching AMC @ 5 ml/l- Thrice<br>✓ Spraying *Verticillium lecanae*@ 5 ml /l | Nagaveni | -- | IIHR, Bengaluru |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Arka Microbial Consortium | 2 l | 500/- | 10 | 9,500/- | • Yield (q/ha)<br>• Percent of Wilt incidence (%)<br>• Incidence of sucking pest (%) | **SMS (Horticulture)**<br>SMS (Soil Science)<br>SSH |
| Verticilliumlecanae | 1 l | 450/- | | | | |
| | **Total** | **950/-** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.9 | Horticultural crops | Onion | • Use of Nyamathi local variety<br>• Incidence of purple blotch (20%)<br>• Incidence of thrips (15%)<br>• High cost on weeding | **Integrated Crop Management in Onion**<br>✓ Use of Bhima Super variety (10 kg/ha)<br>✓ Application of gypsum (as source of sulphur) ( 2.5 q/ha) based on soil test report<br>✓ Seed treatment with *Trichoderma harzianum* @ 4 g/kg<br>✓ Use of post emergent herbicide (Oxyfluorfen 23.5% EC @ 300 g/acre)<br>✓ Foliar nutrition with Arka Vegetable Special & water soluble fertilizers (30 and 60 DAT) @ 5 g/l<br>✓ 2 rows of maize as barrier crop to manage adult thrips<br>✓ Spray with Fipronil @ 1 ml/l to control sucking pest<br>✓ Spray with Hexaconazole @ 1 ml/l to purple blotch | Bhima super | -- | AICRP on Onion and Garlic, RC, Hiriyur |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| *Trichoderma harzianum* | 1 l | 300/- | 20 | 37,000/- | • Yield (q/ha)<br>• Germination of seed (%)<br>• Weight of bulb (g) | **SMS (Horticulture)**<br>SMS (Soil Science)<br>SSH |
| Arka vegetable special | 2 kg | 800/- | | | | |
| Arka Microbial Consortium | 5 kg | 750/- | | | | |
| | **Total** | **1850/-** | | | | |

## Result: 2019-20

| | Yield q/ ha | % increase in yield | Gross Cost (Rs.) | Gross Returns (Rs) | Net Return (Rs./ha) | B:C ratio |
|---|---|---|---|---|---|---|
| **Check** | **137.05** | **28.85** | **136904** | **175560** | **38656** | **1.28** |
| **Demo** | **176.6** | | **104678** | **388520** | **283842** | **3.71** |

## Horizontal Spread of Technology

- Reduction in the disease / pest incidence to the tune of 28 %
- Area under new variety increased to 370 acres by 180 farmers in 2 years.
- Participatory seed production with farmers: 605 kg
- Additional production of 60 q/ha and additional income of Rs.1,03,000 /ha.
- Within a few years of introduction, the variety occupied 20 per cent of onion area of 400 ha

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.10 | Livestock | Dairy animals | • Weakness<br>• Infertility problem (50-60% of the breedable population)<br>• Low milk yield (4-5 /milk/day/animal) | **Integrated Management of Crossbred Dairy Animals for better performance**<br><br>✓ Timely Deworming and vaccination<br>✓ Use of compounded feed, minerals and vitamins required for body maintenance & production as per Feeding standards<br>✓ Dry fodder enrichment<br>✓ Silage making,<br>✓ Azolla cultivation &Use | - | HFx | KVAFSU, Bidar |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Deworming bolus (3 g) | 1No. | 60/- | 10 | 28,900/- | • Milk yield (l/lactation)<br>• Milk quality (Specific gravity)<br>• Cost of feeding (Rs/l)<br>• No. of AI/AIs for conceiving | **SMS (Animal Science)**<br>SSH<br>SMS (Agri. Extension) |
| Chelated Mineral Mixture | 5 kg | 600/- | | | | |
| Enzymex powder @ 5 g/kg dry fodder | 1 kg | 180/- | | | | |
| Brolaytone tonic @ 2 ml/kg fodder | 500 ml | 450/- | | | | |
| Plastic Drums (250 l) | 1 No. | 800/- | | | | |
| | **Total** | **2,090/-** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.11 | Livestock | Small ruminants | • Lower body weight gain (18-20 kg at maturity)<br>• Sudden mortality<br>• Delayed puberty (Maturity @ 15-18 months) | **Balanced Feeding and Total Deworming in Small Ruminants for better performance**<br><br>✓ Balanced feeding based on standards<br>✓ Timely Deworming & Vaccination<br>✓ Use of special mineral mixtures & liver tonic | - | Bellaryx | KVAFSU, Bidar |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Fenbendazole (150 mg) | 20 No. | 100 | 10 | 14,000 | • Body weight gain (kg)<br>• Mortality rate (%)<br>• Cost of meat production (Rs./kg) | **SMS (Animal Science)**<br>SSH<br>SMS (Agri. Extension) |
| Mineral mixture for sheep & goat (5 g/day/animal) | 5 kg | 650 | | | | |
| Liver tonic (K-Live – 5 ml/day/animal) | 5 l | 650 | | | | |
| | **Total** | **1400** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.12 | **Fodder** | Non-leguminous & leguminous fodders | Low and poor-quality milk yield due to non-availability of good quality fodder crops for feeding dairy animals | **Establishment of fodder cafeteria for profitable dairy farming**<br><br>Production of HYV of Non-leguminous and leguminous fodder crops | CoFS-31, Lucerne and Sesbenia spp. | -- | KVAFSU, Bidar |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Multi-cut Fodder Sorghum (CoFS-31) | 1 kg. | 500 | 10 | 12,500 | • Milk yield (l)<br>• Milk fat &SNF<br>• Cost of Feeding | **SMS (Animal Science)**<br>SSH<br>SMS (Agri. Extension) |
| Leguminous fodder seeds (Lucerne) | 1 kg | 700 | | | | |
| Tree type leguminous fodder (Sesbenia spp) | 100 g | 50 | | | | |
| **Total** | | **1,250** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.13 | Fisheries | Fish | • Low yield (8-10 q/ha) | **Composite culture of fresh water fishes in farm ponds with an emphasis on water quality parameters**<br><br>✓ Pond preparation and management<br>✓ Seed selection and stocking<br>✓ Feed and feeding management<br>✓ Health and water quality monitoring and harvesting<br>✓ Aeration for better growth | *Catla, Rohu, Common carp, Silver carp, Pangassius* | -- | KVAFSU, Bidar |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| pH meter and DO meter (1 No.) | 50 kg | 3000/- | 2 | 16,000 | • Yield (t/ha)<br>• Average body weight (g)<br>• FCR | **SSH**<br>SMS (Agri. Extension) |
| Aerator | 1 unit | 5000/- | | | | |
| | **Total** | **8,000/-** | | | | |

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.14 | Post harvest technology | Pulses (Red gram & Bengal gram) | • Incidence of stored grain pests | ✓ **Super grain bags to prevent stored grain pests** | - | - | PCI, Bengaluru |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Super grain bags | 05 | 500 | 40 | 20000 | • Pest infestation %<br>• Shelf life of stored grains | **SMS (AE**, SS&AC and Agron) |
| | | **500** | 40 | 20000 | | |

**NFSM- CLUSTER FRONTLINE DEMONSTRATION**

| S. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Specify Hybrid or Variety | Name of the Hybrid or Variety | Source of Technology |
|---|---|---|---|---|---|---|---|
| 6.15 | Millets | Finger millet | • Improper nutrient management<br>• Stem borer<br>• Long duration variety | **Integrated Crop Management in Finger millet**<br>• Short duration ML-365 variety.<br>• Soil test based fertilizer application<br>• Seed treatment with bio fertilizers *Azosprillium,* PSB, VAM @ 3 kg<br>• Use of water soluble fertilizers 19:19:19 and 13:0:45<br>• Micronutrient Mixture @ 5ml/l<br>• Spray chlorpyrifos, 20 EC @2ml/l for stem borer<br>• Spray Carbendazim @ 1g/l for blast | Variety | ML-365 | UAHS, Shivamogga |

| Name of critical input | Qty per Demo | Cost per Demo | No. of Demo | Total cost for the Demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| ML-365seeds | 5 kg | 300.00 | 10 | 24000.00 | • Plant height (cm)<br>• Test weight (g)<br>• Yield (q/ha)<br>• Fodder yield (t/ha) | SMS (SS, Agr)<br>SS &H |
| Bio fertilisers | 3 kg | 300.00 | | | | |
| 19:19:19 water soluble fertilize | 2 kg | 300.00 | | | | |
| 13:0:45 water soluble fertilizer | 2kg | 300.00 | | | | |
| Micronutrient Mixture | 1l | 500.00 | | | | |
| chlorpyrifos , 20 EC, | 500ml | 400.00 | | | | |
| Carbendazim | 500g | 300.00 | | | | |
| **Total** | | **2400-00** | | | | |

**NFSM- CLUSTER FRONTLINE DEMONSTRATION**

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.16 | **Pulses** | **Bengal gram** | ➢ Low yield<br>➢ Improper nutrient management<br>➢ No IPM measures | **Variety**: JAKI 9218<br>**Technology with cost breakup per ha**<br>➢ Use of JAKI 9218 seeds 62.5 kg /ha<br>**Seed treatment**<br>➢ Bio fertilisers- Rhizobium. 500g/ha<br>➢ Use of biofungicide trichoderma-2kg/ha<br>➢ Spray with Chick pea magic @ 5kg/ha (10g / l)<br>**PP measures**<br>➢ Installation of 43utrient43 traps @ 10 No/ha ( 20 lures)<br>➢ Spray with profenophos @ 2ml /l – 1.25 l/ha<br>➢ Spray with Chlorntraniliprole @ 0.3 ml /l | JAKI 9218 | - | UAS(B) |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Seeds | 20 kg | 1200.00 | 50 | 1,80,000 | Plant height (cm)<br>No of pods/plant (No.)<br>No of Branches /plant (No.)<br>Test weight (g)<br>Yield (q) | **SMS (Agronomy)**<br>SMS (Soil Science)<br>SSH |
| PSB and Rhizobium | 1kg | 200.00 | | | | |
| Pheromone traps | 5 No. | 500.00 | | | | |
| *TrichodermaViridae* | 50 g | 50.00 | | | | |
| Chick pea Magic | 2kg | 500.00 | | | | |
| Profenopous | 500ml | 600.00 | | | | |
| Chlorntraniliprole | 30 ml | 450.00 | | | | |
| Micro 43utrient spray | 500ml | 300.00 | | | | |
| | | **3600.00** | | | | |

**NFSM- CLUSTER FRONTLINE DEMONSTRATION**

| Sl. No. | Category | Crop/ enterprise | Prioritized problem | Technology to be demonstrated | Name of variety | Name of hybrid | Source of technology |
|---|---|---|---|---|---|---|---|
| 6.17 | **Pulses** | **Redgram** | ➢ Low yield<br>➢ Improper nutrient management<br>➢ No IPM measures | **Variety:** BRG-5<br>**Technology with cost breakup per ha**<br>➢ Use of wilt tolerant medium duration variety BRG- 5 seeds:15.0 kg /ha<br>**Seed treatment**<br>➢ Bio fertilisers- Rhizobium &, PSB @ 1kg each &Trichoderma @ 5.0 kg/ha<br>➢ Spray with pulse magic-5kg/ha<br>**PP measures**<br>➢ Installation of pheromone traps @ 8no. / ha(16 lures)<br>➢ Spray with profenophos @ 2ml/l- Ovicidal- 1 l/ha<br>➢ Spray with neem based insecticide @3ml/l – 1l /ha<br>➢ Spray with indaxicarb@0.5ml/l -200 ml / ha | BRG-5 | - | UAS(B) |

| Name of critical input | Qty per demo | Cost per demo (Rs.) | No. of demos | Total cost for the demo (Rs.) | Parameters to be studied | Team members |
|---|---|---|---|---|---|---|
| Seeds | 5kg | 600.00 | 50 | 1,80,000 | Plant height (cm)<br>No of pods/plant (No.)<br>No of Branches /plant (No.)<br>Test weight (g)<br>Yield (q) | **SMS (Agronomy)**<br>SMS (Soil Science)<br>SSH |
| PSB and Rhizobium | 1kg | 200.00 | | | | |
| Pheromone traps | 4No. | 400.00 | | | | |
| *TrichodermaViridae* | 50 g | 50.00 | | | | |
| Pulse Magic | 2kg | 500.00 | | | | |
| Profenopous | 500ml | 600.00 | | | | |
| Chlorntraniliprole | 60 ml | 900.00 | | | | |
| Micro 44utrient spray | 250ml | 200.00 | | | | |
| Safety Kit | 1 set | 150.00 | | | | |
| | | **3600.00** | | | | |

## 1. Training for farmers/ farm women during 2020-21

| Sl.No. | Thematic area and the crop/ enterprise | Crop / Enterprise | Related field intervention (OFT/FLD) | Training title | No. of courses | Expected No. of participants | Names of the team members involved |
|---|---|---|---|---|---|---|---|
| 7.1 | Crop production | Groundnut | OFT/FLD | Improved production technology for higher yield | 02 | 60 | SMS (Ag & SS) |
| | | Groundnut | OFT/FLD | Integrated Nutrient management | 02 | 100 | SMS (Ag & SS) |
| | | Rice | FLD | Land preparation and selection of varieties and Seed treatment | 01 | 25 | SMS (Ag & SS) |
| | | Finger millet | FLD | Integrated crop management in Finger millet | 1 | 20 | SMS (SS, Ag & AE) |
| | | Maize + Redgram | FLD | Importance of seed treatment for higher yield in intercropping system | 01 | 25 | SMS (Ag & SS) |
| | | Redgram | FLD | 1.Importance of seed treatment in pulses<br>2. Integrated nutrient management<br>3. Integrated pest management | 03 | 100 | SMS (Ag & SS) |
| | | Bengal gram | FLD | 1. Importance of seed treatment in pulses<br>2. Integrated nutrient management<br>3. Integrated pest management | 03 | 100 | SMS (Ag & SS) |
| | | Cotton | FLD | Advanced production technologies of cotton | 1 | 25 | SMS (SS, Ag & AE) |
| 7.2 | Horticulture production | Tomato | FLD | Integrated crop management in Tomato | 1 | 25 | SMS (SS, Hort. & AE) |
| | | Drumstick | FLD | Advanced production technologies in drumstick for higher productivity | 1 | 10 | SMS (SS, Hort. & AE) |
| | | Arecanut | FLD | Production technology of Arecanut | 02 | 40 | SMS (Hort. & SS) |
| | | Banana | FLD | Integrated Pest & Disease Management Banana | 02 | 40 | SMS (PP & Hort.) |
| | | Betel vine | FLD | Recent trends in Production technology of Betelvine | 01 | 25 | SMS (Hort. & SS) |
| | | Onion | FLD | Integrated crop Management in Onion | 01 | 25 | SMS (Hort. & SS) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Black Pepper | OFT | Production technology of Pepper | 01 | 25 | SMS (Hort. & SS) |
| | | Coconut | Others | Management of Rugose white fly in Coconut | 1 | 30 | SMS (AE & Horti.) |
| | | Arecanut | Others | Management of Ambrosia beetal in Arecanut | 1 | 30 | SMS (AE & Horti.) |
| 7.3 | Livestock production | Dairy | FLD | Use of Non-protein nitrogenous (NPN) substances in reducing the feeding cost in dairy animals | 2 | 60 | SMS (ASc., AE & SSH) |
| | | Dairy | FLD | Importance of colostrums and milk feeding to crossbred female calves | 2 | 60 | SMS (ASc., AE & SSH) |
| | | Sheep & Goat | FLD | Effect of total deworming and balanced nutrition in small ruminants | 2 | 50 | SMS (ASc., AE & SSH) |
| | | Dairy | FLD | Balancing the nutrition in cattle based on feeding standards | 2 | 60 | SMS (ASc., AE & SSH) |
| 7.4 | Home Science | | | | | | |
| 7.5 | Plant protection | Maize + Redgram | FLD | Integrated pest management in Maize +Redgram | 01 | 25 | SMS (Ag & SS) |
| | | Rice | FLD | IPM for the Stem borer and BPH | 01 | 25 | SMS (Ag & SS) |
| 7.6 | Production of inputs at site | | | | | | |
| 7.7 | Soil health and fertility | -- | -- | Soil health management based on soil analysis report | 05 | 125 | SMS (SS & AE) |
| 7.8 | PHT and value addition | Groundnut | OFT | Grading and oil extraction | 01 | 35 | SMS (Ag & SS) |
| 7.9 | Capacity building/ group dynamics | | | | | | |
| 7.10 | Farm mechanization | Groundnut | 0FT | Mechanized harvesting using stripper | 01 | 30 | SMS (Ag & SS) |
| | | Maize + Redgram | FLD | Nipping of Redgram | 01 | 25 | SMS (Ag & SS) |
| 7.11 | Fisheries production technologies | Fish | FLD | Production technology | 01 | 20 | SSH |
| 7.12 | Mushroom production | Mushroom | -- | Production and marketing of Mushroom | 01 | 50 | SMS (AE) |
| 7.13 | Agro forestry | Sandalwood & Other | -- | Production technology of sandalwood | 01 | 50 | SMS (AE) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | forestry technologies | | | | | |
| 7.14 | Bee keeping | Honey bee | -- | Production technology of Honey | 01 | 25 | SMS (AE) |
| 7.15 | Sericulture | -- | -- | -- | -- | -- | -- |
| | | | | **Total** | **44** | **605** | **--** |

## 8. Training for rural youth during 2020-21

| Sl.No. | Thematic area and the crop/ enterprise | Crop / Enterprise | Related field intervention (EDP/Skill development etc) | Training title | No. of courses | Expected No. of participants | Names of the team members involved |
|---|---|---|---|---|---|---|---|
| 8.1 | Crop production | Vermi compost | Skill | Improved Production technology of vermin compost | 01 | 25 | SMS (Ag and AE.) |
| 8.2 | Horticulture production | Coconut | Skill Development | Friends of Coconut Tree | 01 | 20 | SMS (Hort. & SS) |
| 8.3 | Livestock production | Sheep & Goat | EDP | Profitable sheep farming (Stall feeding) | 01 | 20 | SMS (ASc., AE & SSH) |
| | | Dairy | Skilled | Dairy entrepreneur | 01 | 20 | SMS (ASc., AE & SSH) |
| 8.4 | Home Science | | | | | | |
| 8.5 | Plant protection | | | | | | |
| 8.6 | Production of inputs at site | | | | | | |
| 8.7 | Soil health and fertility | -- | -- | Methods of soil testing and maintenance of soil and water testing laboratory | 01 | 20 | SMS (SS, Ag & AE) |
| 8.8 | PHT and value addition | | | | | | |
| 8.9 | Capacity building/ group dynamics | | | | | | |
| 8.10 | Farm mechanization | | | | | | |
| 8.11 | Fisheries production technologies | | | | | | |
| 8.12 | Mushroom production | | | | | | |
| 8.13 | Agro forestry | | | | | | |
| 8.14 | Bee keeping | | | | | | |
| | | | | | **05** | **105** | |

## 9. Training for extension personnel during 2020-21

| Sl.No. | Thematic area and the crop/ enterprise | Training title | No. of courses | Expected No. of participants | Names of the team members involved |
|---|---|---|---|---|---|
| 9.1 | Crop production | Improved production technology in Direct Seeded Rice | 01 | 20 | SMS (Ag & SS) |
| 9.2 | Home Science | | | | |
| 9.3 | Capacity building and group dynamics | Recent advances in agriculture and horticulture sector (For ATMA functionaries) | 01 | 25 | SMS (AE, Agron, Horti, SS&AC) |
| 9.4 | Horticulture | Nutrigarden | 01 | 50 | SMS (Hort. & SS) |
| 9.5 | Livestock production and management | New feed resources for animal feeding | 01 | 25 | SMS (ASc, AE & SSH) |
| 9.6 | Plant protection | | | | |
| 9.7 | Farm mechanization | Complete mechanization in transplanted paddy for higher yield | 01 | 20 | SMS (Ag & SS) |
| 9.8 | PHT and value addition | | | | |
| 9.9 | Production of inputs at site | | | | |
| 9.10 | Sericulture | Nutrient management in mulberry cultivation | 01 | 25 | SMS (SS & AE) |
| 9.11 | Fisheries | | | | |
| | | | **06** | **165** | |

## 10. Vocational trainings during 2020-21

| Sl.No. | Thematic area and the crop/ enterprise | Training title | No. of programmes | Duration (days) | Expected No. of participants | Sponsoring agency, if any | Names of the team members involved |
|---|---|---|---|---|---|---|---|
| 10.1 | Crop production | | | | | | -- |
| 10.2 | Home Science | | | | | | -- |
| 10.3 | Capacity building and group Dynamics | Vermicompost Producer | 01 | 23 | 20 | ASCI, New Delhi | SMS (AE, Agron, Horti, SS&AC, ASc & SSH) |
| | | Organic Grower | 01 | 23 | 20 | ASCI, New Delhi | SMS (AE, Agron, Horti, SS&AC, ASc & SSH) |
| | | Arecanut climbing using machine | 02 | 03 | 60 | - | SMS (AE, Horti,) |
| 10.4 | Horticulture | Horticulture nursery Management | 01 | 05 | 20 | Department of Horticulture | SMS (Hort. & SS) |
| 10.5 | Livestock production and management | Rearing local poultry birds in backyard | 01 | 05 | 20 | -- | SMS (ASc., AE & SSH) |
| 10.6 | Plant protection | | | | | | |
| 10.7 | Farm mechanization | | | | | | -- |
| 10.8 | PHT and value addition | | | | | | -- |
| 10.9 | Production of inputs at site | | | | | | -- |
| 10.10 | Sericulture | | | | | | -- |
| 10.11 | Fisheries | | | | | | -- |
| | | | **04** | **80** | | | **--** |

## 11. Sponsored trainings during 2020-21

| Sl.No. | Thematic area and the crop/ enterprise | Training title | No. of programmes | Duration (days) | Expected number of participants | Sponsoring agency | Names of the team members involved |
|---|---|---|---|---|---|---|---|
| 11.1 | Crop production | LRI- based soil and water conservation technologies | 50 | 01 | 1500 | ATARI and SUJALA III, Bangalore | SMS (Ag & SS) |
| 11.2 | Home Science | | | | | | |
| 11.3 | Capacity building and group Dynamics | | | | | | |
| 11.4 | Horticulture | Terrace and Kitchen gardening | 02 | 01 | 400 | Department of Horticulture | SMS (Hort.) |
| 11.5 | Livestock production and management | Scientific dairy farming | 02 | 06 | 50 | Zilla Panchayath, Davanagere | SMS (ASc., AE) & SSH) |
| 11.6 | Plant protection | | | | | | |
| 11.7 | Farm mechanization | | | | | | |
| 11.8 | PHT and value addition | | | | | | |
| 11.9 | Production of inputs at site | | | | | | |
| 11.10 | Sericulture | | | | | | |
| 11.11 | Fisheries | | | | | | |
| | | | **55** | **--** | **1950** | | |

## 12. Extension activities during 2020-21

| Sl. No. | Extension activity | No. of activities | Targeted number of participants | Names of the team members involved |
|---|---|---|---|---|
| 12.1 | Advisory services | 1900 | 2100 | All Scientists involved |
| 12.2 | Diagnostic visits | 15 | 140 | |
| 12.3 | Field days | 18 | 2500 | |
| 12.4 | Group discussions | 04 | 200 | |
| 12.5 | Kisan gosthies | 03 | 600 | |
| 12.6 | Film shows | 12 | 600 | |
| 12.7 | Self -Help Groups (SHGs) meetings | -- | -- | |
| 12.8 | Kisan Melas | 03 | | |
| 12.9 | Exhibitions | 05 | | |
| 12.10 | Scientists' visit to farmers fields | 250 | 2000 | |
| 12.11 | Plant/soil health/animal health camps | 03+03 | 300 samples + 400 animals | |
| 12.12 | Farm science club meetings | 01 | -- | |
| 12.13 | Ex-trainees sammelans (Meetings) | 01 | 40 | |
| 12.14 | Farmers' seminars/workshops | 06 | 300 | |
| 12.15 | Method demonstrations | 15 | 250 | |
| 12.16 | Celebration of important days | 04 | 300 | |
| 12.17 | Special day celebrations | 10 | 2000 | |
| 12.18 | Exposure visits | 01 | 50 | |
| 12.19 | Technology week celebration | 01 | 1000 | |
| 12.20 | Farmers Field School (FFS) | 01 | 25 | |
| 12.21 | Farm innovators meet | -- | -- | |
| 12.22 | Awareness programmes | 04 | 250 | |
| 12.23 | Pre-kharif campaign | - | - | |
| 12.24 | Pre-rabi/summer campaign | -- | -- | |
| 12.25 | Bimonthly Meetings | 06 | 450 | |
| 12.26 | Tri-monthly meetings | 04 | 300 | |
| 12.27 | Guest lecture | 100 | 3000 | |
| 12.28 | Popular article | 12 | -- | |
| 12.29 | News paper coverage | 70 | -- | |
| 12.30 | Swachha Bharath Campaigns | 10 | -- | |
| 12.31 | Kisan Mobile Advisory Services | 30 | 11505 | |
| 12.32 | Radio Talk | 10 | -- | |
| 12.33 | TV Talk | 08 | -- | |
| | | **2529** | **28310** | |

## 13. Activities proposed as knowledge and resource centre during 2020-21

### 13.1 Technological knowledge

| Sl. No. | Category | Details of technologies | Area (ha) | Number | Names of the team members involved |
|---|---|---|---|---|---|
| 13.1.1 | Technology park/ crop cafeteria | High density planting in Guava, Jack, Mango and Arecanut | 02 | -- | Farm Manager & SMS (Horticulture) |
| 13.1.2 | Demonstration units | Live bearer | 1 unit | 10,000 | Senior Scientist and Head |
| 13.1.3 | Lab analytical services | Soil test campaigns | 3 villages | 300 | SMS (Soil Science), Programme Assistant (Lab. Technician) |
| 13.1.4 | Technology week | Frontline demonstrations<br>Seminars<br>Exhibition | -- | 1000 | All team members |
| 13.1.5 | PUC students orientation | -- | -- | 300 | SMS (Horticulture) |
| 12.1.6 | Hands on training for Students | Horticulture Nursery | -- | 50 | SMS (Horticulture) |
| 12.1.7 | Science project for school children | -- | -- | 05 | All team members |
| 12.1.8 | Soil & water analysis training to degree students | -- | -- | 08 | SMS (Soil Science) & Programme Assistant (Lab. Technician) |
| 12.1.9 | DAESI diploma course | -- | -- | 20 | All Scientific staff |
| 12.1.10 | Kasa Rasa Training | -- | -- | 100 People | SMS (Animal Science) |
| 12.1.11 | Kitchen garden training | -- | -- | 100 People | SMS (Horticulture) |
| 12.1.12 | Kitchen waste Composting promotional activities | -- | -- | 100 People | SMS (Animal Science) |

**13.2 Technological products**

| Sl. No. | Category | Name of the production partner agency, if any | Name of the product | Quantity planned to be produced during 2020-21 (q) | Number planned to be produced during 2020-21 | Names of the team members involved |
|---|---|---|---|---|---|---|
| 13.2.1 | **Seeds** | | | | | |
| | | -- | Velvetbeans | 10 | -- | Farm Manager |
| | | -- | Vegetable seed kits | 1000 kits | -- | SMS (Horticulture) |
| 13.2.2 | Planting material | | | | | |
| | | -- | Arecanut | -- | 20000 | SMS (Horticulture) |
| | | -- | Coconut | -- | 5000 | SMS (Horticulture) |
| | | -- | Drumstick | -- | 15000 | SMS (Horticulture) |
| 13.2.3 | Bio-products | | | | | |
| | | -- | Banana Special | 30 | -- | SMS (Horticulture) |
| | | -- | Vermicompost | 150 | -- | SMS (Animal Science) |
| | | -- | Earthworms | 0.4 | -- | SMS (Animal Science) |
| 13.2.4 | Livestock strains | | | | | |
| | | -- | Male calves | -- | 2-3 No. | SMS (Animal Science) |
| 13.2.5 | Fish fingerlings | | | | | |
| | | -- | Fish fingerlings | -- | 15000 No. | Senior Scientist and Head |
| 13.2.6 | Any other | -- | | | | |

**13.3 Technological information**

| Sl. No. | Category | Technological capsules/lectures/number | Names of the team members involved |
|---|---|---|---|
| 13.3.1 | Technology backstopping to line departments | | |
| | a. Agriculture | **01** (Training ATMA personnel) | SMS (Agricultural Extension) |
| | | **01** (Training to agriculture officers and ATMA personnel) | SMS (Agronomy) |
| | b. Horticulture | **01** (Training to AHOs & Horticulture Assistants) | SMS (Horticulture) |
| | c. Animal Husbandry | **01** (New feed resources for animal feeding) | SMS (Animal Science) |
| | d. Fisheries | **01** (ATMA Officials) | SSH |
| | e. Agricultural Engineering | -- | -- |
| | f. Sericulture | -- | -- |
| | g. Others, pl. specify | -- | -- |
| 13.3.2 | Literature/publication | 06 | All scientific staff |
| 13.3.3 | Electronic media | 02 | All staff |
| 13.3.4 | Kisan mobile advisory services | 30 | All scientific staff |
| 13.3.5 | Information on centre/state sector schemes and service providers in the district (Data may be collected from different agencies). | 01 | SMS (Agri. Extension) |
| 13.3.6 | **Whatsapp groups**<br>• ICAR-Taralabalu KVK<br>• Horticulture Solution Davanagere<br>• Horti Solutions<br>• Davanagere FPOs | 04 | All scientific staff |

## 14. Additional activities planned during 2020-21

| Sl. No. | Name of the agency / scheme | Name of activity | Technical programme with quantification | Financial outlay (Rs.) | Names of the team members involved |
|---|---|---|---|---|---|
| 1 | National Innovations on Climate Resilient Agriculture (NICRA) | Technology Demonstration Component (TDC) | Climate Resilient Technology Demonstration | 7,00,000-00 | SMS (Agronomy)<br>SMS (Animal Science)<br>SSH |
| 2 | Bio-Energy Information and Demonstration Centre | Training and awareness programmes on biofuel production. Bio Seed procurement and production | Awareness programmes-25 nos<br>Production of biodiesel – 500 l | 6,00,000-00 | SMS (Agril. Extn.) |
| 3 | Paramparagat Krishi Vikas Yojana (PKVY) | Training and awareness programmes, Demonstrations on Organic farming units | Organic Farming | 3,30,000-00 | SMS(Horticulture) |
| 4 | Nutrigarden | Demonstration of vegetable garden | Demonstrations – 50<br>Training – 03 | 25,000-00 | SMS(Horticulture) |

## 15. Revolving fund

### 15.1 Financial status of revolving fund

| Opening balance as on 01.04.2019 (Rs. in Lakh) | Expenditure incurred during 2019-20 (Rs. in Lakh) | Receipts during 2019-20 (Rs. in Lakh) | Closing balance as on 31.03.2020 (Rs. in Lakh) | Expected closing balance by 31.03.2020 (Including value of material in stock/ likely to be produced) |
|---|---|---|---|---|
| 15.74 | 56.66 | 46.00 | 5.00 | 8.00 |

### 15.2. a) Plan of activities under revolving fund

| Sl. No. | Proposed activities | Expected output | Anticipated income (Rs.) | Names of the team members involved |
|---|---|---|---|---|
| 15.1 | Velvetbeans | 10000 kg | 1,20,000/- | Farm Manager & SMS (Horticulture) |
| 15.2 | Arecanut Seedlings | 15000 No. | 4,50,000/- | SMS (Horticulture) |
| 15.3 | Coconut Seedlings | 3000 No. | 2,25,000/- | |
| 15.4 | Drumstick Seedlings | 15000 No. | 1,50,000/- | |
| 15.5 | Arecanut | 10 q | 2,00,000/- | SMS (Horticulture) & Farm Manager |
| 15.6 | Mango fruits | 5 t | 1,00,000/- | |
| 15.7 | Sapota fruits | 1.5 t | 30,000/- | |
| 15.8 | Coconut nuts | 500 No. | 5,000/- | |
| 15.9 | Jamoon | 50 kg | 5,000/- | |
| 15.10 | Tender Coconut | 500 No. | 10,000/- | |
| 15.11 | Drumstick pods | 550 kg | 11,000/- | |
| 15.12 | Tamarind | 375 kg | 15,000/- | |
| 15.13 | Guava fruits | 100 kg | 10,000/- | |
| 15.14 | Vermicompost | 7-8 q | 80,000/- | SMS (Animal Science) |
| 15.15 | Earthworms | 0.2 q | 6,000/- | |
| 15.16 | Milk | 3000 l | 1,00,000/- | |

### 15.2 b). Cost Benefit Ratio of Animal Science / Horticulture Demo Units (2019-2020)

| Sl. No. | Demo Unit | Gross Cost | Gross Income | Net Income | BCR |
|---|---|---|---|---|---|
| 1 | Crossbred Cow Dairy Unit | 2,43,780 | 248,444 | 4664 | 1.02 |
| 2 | Vermiculture and Vermicompost | 66,400 | 75,000 | 8,600 | 1.13 |
| 3 | Azolla Production | 800 | 2,920 | 2,120 | 3.65 |
| 4 | Horticulture Demonstration Units | 4,64,962 | 5,69,028 | 1,04,066 | 1.22 |
| 5 | Horticulture Nursery Activities | 4,49,798 | 6,78,715 | 2,28,917 | 1.50 |
| 6 | Banana Special Activities | 1,37,494 | 2,77,640 | 1,40,146 | 2.01 |

## 16. Activities of soil, water and plant testing laboratory during 2020-21

| Sl. No. | Type of samples | No. of samples to be analyzed | Names of the team members involved |
|---|---|---|---|
| 16.1 | Soil test using analytical lab | 2000 | SMS (Soil Science) |
| 16.2 | Soil test using mobile analysis kit | -- | |
| 16.3 | Water | 1000 | |
| 16.4 | Plant | -- | -- |
| 16.5 | Others, pl. specify | -- | -- |

## Cumulative Soil & water samples analyzed since establishment of SWTL:

| Details | No. of Samples analyzed | No. of Farmers benefited | No. of Villages |
|---|---|---|---|
| Soil Samples | 9306 | 7437 | 5175 |
| Water Samples | 7267 | 5568 | 4776 |
| Total | **16573** | **13005** | **9951** |

## 17. E-linkage during 2020-21

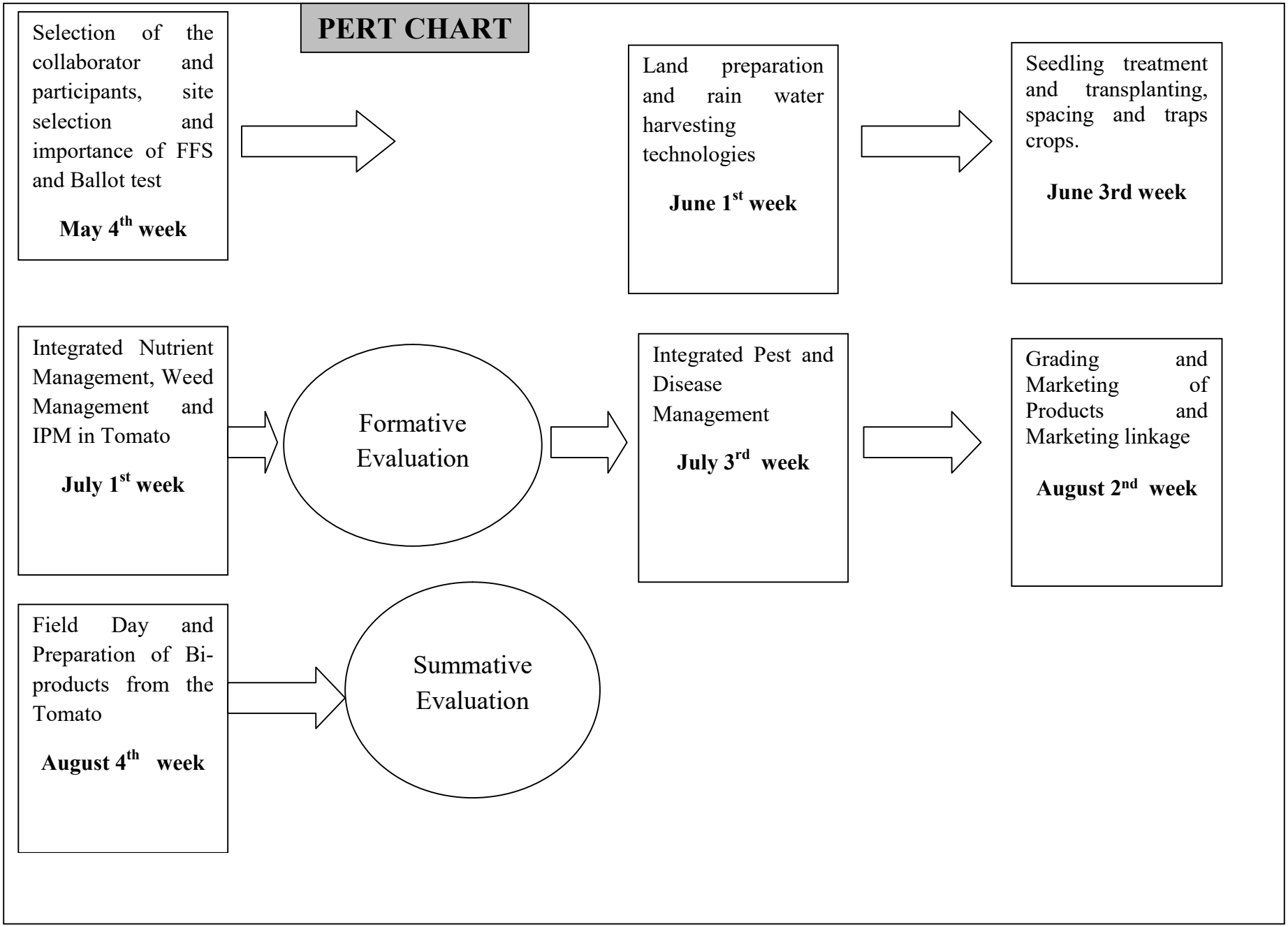
| Sl. No | Nature of activities | Likely period of completion (please set the time frame) | Remarks if any |
|---|---|---|---|
| 17.1 | Title of the technology module to be prepared | -- | -- |
| 17.2 | Creation and maintenance of relevant database system for KVK | Farmer advisory service | -- |
| 17.3 | Other extension activities | Month wise database maintained for all the extension activities | -- |
| 17.4 | Plan of video production | 1. IPM in Tomato<br>2. Nutrigarden for rural folks<br>3. Video production on successful farmers namely:<br>a. Sri Dyamappa H.M., Haluverthy village.<br>b. Sri Arunkumar, Bilchod Village.<br>c. Sri Onkarappa, S. Mallapura Village<br>4. Silage making and its advantages.<br>5. Video on Drumstick Production. | -- |

## 18. Activities planned under rainwater harvesting scheme (only to those KVKs which are already having scheme under rain water harvesting) - Nil

## 19. Farmers Field School (FFS) planned

| Thematic area | Title of the FFS | Budget proposed in Rs. | Staff |
|---|---|---|---|
| Integrated Pest Management | Integrated Pest Management in hybrid Tomato | 30,000/- | SMS (Agronomy, Horticulture, Soil Science & Agricultural Extension) |

| Thematic area | Budget proposed in Rs. | Budget (Rs.) |
|---|---|---|
| **IPM in Tomato** | **A. Critical inputs** | |
| | ▪ Soil test and water test | 150-00 |
| | ▪ Application of Arka Microbial Consortium (20 g for seed treatment, 20g/l – drenching 10 DAT, 7kg- Main field along with vermicompost) | 1,750-00 |
| | • Spray of vegetable special @ 5g/l (4kg) | 1,000-00 |
| | • Spray of calcium nitrate @5g/l (2kg) | 400-00 |
| | **IPM measures :** | |
| | • Use of yellow and blue sticky traps @ 25/ha | 1,000-00 |
| | • Use of Marigold as a trap crop (16:1) | 500-00 |
| | • Use of pheromone traps @ 10/ha | 400-00 |
| | ▪ Plant protection chemicals need based | 2,500-00 |
| | **B. Meals and Refreshment** | 5,000-00 |
| | **C. FFS training kit** | 8,300-00 |
| | **D. Field Day and report preparation** | 4,000-00 |
| | **E. Folder** | **5,000-00** |
| | | **30,000-00** |


PERT CHART
Selection of the collaborator and participants, site selection and importance of FFS and Ballot test
May 4th week
Land preparation and rain water harvesting technologies
June 1st week
Seedling treatment and transplanting, spacing and traps crops.
June 3rd week
Integrated Nutrient Management, Weed Management and IPM in Tomato
July 1st week
Formative Evaluation
Integrated Pest and Disease Management
July 3rd week
Grading and Marketing of Products and Marketing linkage
August 2nd week
Field Day and Preparation of Bi-products from the Tomato
August 4th week
Summative Evaluation

**20. a) Entrepreneurship Development Programme- Nil**

**b) Innovative programme**

**Alternate marketing strategies for FPOs and Farmers**

**Introduction**

Among the many problems that the farmers are facing, marketing remains the major one. The profit for farmers will be realized when the produce is converted to cash through marketing and mere high productivity and production may not fetch profitability. In the situation of nearly 80% of small and marginal holdings in India, marketing assumes greater importance. The surplus of agricultural produce from these categories of farmers (Even though small quantity) has to be sold at profitable prices to sustain their livelihood. Probably, the only producer who does not determine the prices is farmer and in other cases the producer determine the prices and also sure of their margin. The average farmers share in consumer price for agriculture produce ranges from 25-30 % and efforts needs to be directed towards increasing this share to 75-80 %. Another important problem the farmer facing in marketing is the long chain of middlemen, off course the middlemen in marketing can't be ruled out and effort needs to be done to reduce the chain of middlemen and use these middlemen for the farmers advantage. Importing marketing knowledge and educating farmers with market information would certainly help in addressing these problems up to some extent. The extension personnel concentrating more on production and marketing is left alone to farmers. Although marketing is a sensitive issue and the best that the extension system can do is to educate and guide the farmer for better marketing opportunities. The central Government programme of doubling farmers income by 2022 includes innovative marketing opportunities for farmers to realize higher profits.
One the major problem faced by the farmers in the lockdown period (due covid 19 incident) is marketing of agriculture produce. Many farmers and FPOs

developed innovative marketing strategies on their own and there is need to document and give publicity. In this background 2 **Alternate marketing**

**strategies for FPOs and Farmers** will be organized to address the following objectives.

**Objectives**

1. To document and give publicity to innovative marketing practices of farmers and FPOs.
2. To impart innovative marketing strategies to farmers through experts.

**The details of the farmers meet**

The 2 day **Alternate marketing strategies for FPOs and Farmers** will be organized in ICAR-TaralabaluKrishiVigyan Kendra premises 80 farmers and 20 FPO who are practicing innovative marketing strategies across Karnataka will be invited to participate and present their ideas. Marketing experts will be invited to present key note address. Special emphasis will be given to marketing opportunities of FPO members which are recently established in the state.

**Budget requirement**

| Sl. No. | Particulars | Amount (Rs.) |
|---|---|---|
| 1 | Travelling expenses for farmers | 30,000-00 |
| 2 | Food expenses (@ Rs. 150 x 100 farmers x 2days) | 30,000-00 |
| 3 | Halting charges (@ Rs. 150 x 100 farmers) | 15,000-00 |
| 4 | Honorarium to experts and judges | 15,000-00 |
| 5 | Stage, banner and other logistics | 5,000-00 |
| 6 | Prizes for best innovative marketing practices | 10,000-00 |
| 7 | Book on Innovative Marketing Practices | 50,000-00 |
| | **Total** | **1,55,000-00** |

**Expected outcome of the farmers meet**

The 2 days meet on **Alternate marketing strategies for FPOs and Farmers** is expected to help in sharing of marketing ideas among participant farmers. The documented practices will be published for wider adoption.

### c) Documentation of vegetables marketing practices of FPOs during lockdown period

ICAR-TaralabaluKrishiVigyan Kendra, Davanagare has initiated unique vegetables marketing practices of FPOs during lockdown period. The vegetables grown by the farmers were directly procured by respective FPOs and sold directly to the consumers every day. This initiative will be continued by including rural areas. The data on number of farmers benefitted and profit earned by the FPOs will be recorded.

## d). Plan of Human Resource Development of KVK personnel during 2020-21

| S. No | New Areas of Training | Institution proposed to attend | Justification |
|---|---|---|---|
| 1 | Climate Resilient Management techniques under dry land agriculture | ICRISAT, Hyderabad | KVK comes under central dry zone and NICRA activities are going on and required to upgrade knowledge. |
| 2 | Advanced level training in soil testing | Indian Agricultural Research Institute, New Delhi | To strengthen soil and water testing laboratory |
| 3 | | | |
| 4 | Strategies for Promoting Farmers producer Organization | National Academy of Agriculture Research Management (NAARM), Hyderabad | To get more knowledge on management strategies for newly formed FPO's of the district. |
| 5 | Changing Methodological Paradigm in Extension Research | ICAR under CAFT programmes | To conduct impact studies of KVK activities using appropriate statistical tools to draw meaningful conclusions. |
| 6 | Managerial skills for convergence in agricultural extension | MANAGE, Hyderabad | For better KVK management. |
| 7 | Alleviation of Reproductive Problems in Dairy Animals | NIANP, Bengaluru | This is a major problem with Dairy animals in the District. |
| 8 | Aquaponics | CIBA, Chennai | New trend in aquaculture. ( For Fisheries Scientist) |

## 20 e. Plan of Research article / success story / Impact of KVK activities during 2020-21

| Sl. No. | Activities |
|---|---|
| 1 | Impact of ASCI sponsored Skill Trainings conducted by Krishi Vigyan Kendra. |
| 2 | Impact of micronutrients on drumstick production at Suragondanahalli village. |
| 3 | Impact analysis on 'Dry fodder enrichment and its use in NICRA village. |
| 4 | Impact of Farm pond on income of farmers |
| 5 | Impact of Bheema Super Onion Frontline Demonstration |

## 21. Details of budget utilization (2019-20) up to 31st March 2020

**(Rs.)**

| Sl.No. | Particulars | Sanctioned (RE 2019-20) | Released | Expenditure |
|---|---|---|---|---|
| **21.1** | **(A). REVENUE (Recurring Contingencies)** | | | |
| 21.1.1 | **Pay & Allowances** | **1,35,00000** | **1,32,78,643** | **1,30,72,356** |
| 21.1.2 | **Traveling allowances** | **1,00,000** | **1,00,000** | **1,00,000** |
| 21.1.3 | **Contingencies** | **10,75,000** | **10,47,926** | **10,47,398** |
| 21.1.3.*a* | *Stationery, telephone, postage and other expenditure on office running, publication of Newsletter* | 3,00,000 | 3,00,000 | 2,99,749 |
| 21.1.3.*b* | *POL, repair of vehicles, tractor and equipments* | 2,50,000 | 2,50,000 | 2,43,408 |
| 21.1.3.*c* | *Food/refreshment for farmers/extension personnel @ Rs.150/person/day* | 75,000 | 75,000 | 74,150 |
| 21.1.3.*d* | *Training material (need based materials and equipments for conducting the training)* | 75,000 | 75,000 | 74,937 |
| 21.1.3.*e* | *Frontline demonstrations* | 3,15,000 | 2,77,550 | 2,40,088 |
| 21.1.3.*f* | *On farm testing (OFTs)/Technology Assessment* | 52,000 | 26,000 | 25,900 |
| 21.1.3.*g* | *Integrated Farming System (IFS) (Min. 5 Units)* | | | |
| 21.1.3.*h* | *Training of extension functionaries* | 50,000 | 50,000 | 50,000 |
| 21.1.3.*i* | *Extension activities/services* | 50,000 | 50,000 | 49,988 |
| 21.1.3.*j* | *Farmers' Field School* | 25,000 | 25,000 | 24,700 |
| 21.1.3.*k* | *Nutrigardens* | 25,000 | 25,000 | 24,980 |
| 21.1.3.*l* | *Soil & water testing & issue of soil health cards* | 25,000 | 25,000 | 25,000 |
| 21.1.3.*m* | *Maintenance of building* | 1,75,000 | 1,75,000 | 1,75,000 |
| 21.1.3.*n* | *Farmers Conclave, KVK Conference* | | | |
| 21.1.3.*o* | *Video production* | 25,000 | 25,000 | 25,000 |
| 21.1.3.*p* | *Library (Purchase of Journals, Periodicals, News Papers& Magazines)* | 5,000 | 5,000 | 5,000 |
| | **Total Recurring** | **1,50,47,000** | **1,47,62,193** | **1,45,10,256** |
| **21.2** | **(B). CAPITAL (Non-Recurring Contingencies)** | | | |
| 21.2.1 | **Equipments& Furniture** | | | |
| 21.2.2 | **Works** | | | |
| 21.2.3 | **Vehicle** | | | |
| 21.2.3 a | Four wheeler (replacement) | | | |
| 21.2.4 | **Library** | | | |
| | **TotalNon Recurring** | **0** | **0** | **0** |
| **21.3** | **(C). REVOLVING FUND** | **0** | **0** | **0** |
| | **GRAND TOTAL (A+B+C)** | **1,50,47,000** | **1,47,62,193** | **1,45,10,256** |

## 22. Details of Budget Estimate based on proposed action plan (2020-21)

| Sl.No. | Particulars | BE 2020-21 proposed (Rs.) |
|---|---|---|
| **22.1** | **(A). REVENUE (Recurring Contingencies)** | |
| 21.1.1 | **Pay & Allowances** | **1,61,00,000** |
| 22.1.2 | **Traveling allowances** | 2,00,000 |
| 22.1.3 | **Contingencies** | |
| 22.1.3.*a* | *Stationery, telephone, postage and other expenditure on office running, publication of Newsletter* | 4,00,000 |
| 22.1.3.*b* | *POL, repair of vehicles, tractor and equipments* | 3,00,000 |
| 22.1.3.*c* | *Food/refreshment for farmers / extension personnel @ Rs.150/person/day* | 2,00,000 |
| 22.1.3.*d* | *Training material (need based materials and equipments for conducting the training)* | 1,00,000 |
| 22.1.3.*e* | *Frontline demonstrations* | 4,33,525 |
| 22.1.3.*f* | *On farm testing (OFTs)/Technology Assessment* | 2,09,900 |
| 22.1.3.*g* | *Integrated Farming System (IFS) (Min. 5 Units)* | -- |
| 22.1.3.*h* | *Training of extension functionaries* | 50,000 |
| 22.1.3.*i* | *Extension activities/services* | 1,00,000 |
| 22.1.3.*j* | *Farmers' Field School* | 30,000 |
| 22.1.3.*k* | *Innovative activities* | 1,55,000 |
| 22.1.3.*l* | *Soil & water testing & issue of soil health cards* | 1,00,000 |
| 22.1.3.*m* | *Maintenance of building* | 5,00,000 |
| 22.1.3.*n* | *Library (Purchase of Journals, Periodicals, News Papers& Magazines)* | 10,000 |
| 22.1.3.o | *Others, pl. specify* | |
| | **Total Recurring (A)** | **27,88,425** |
| **22.2** | **(B). CAPITAL (Non-Recurring Contingencies)** | |
| 22.2.1 | **Equipments& Furniture** | 20,00,000 |
| 22.2.2 | **Works** | |
| 22.2.3 | **Vehicle** | |
| 22.2.3.a | Four wheeler (replacement) | |
| 22.2.4 | **Library** | 2,00,000 |
| | **Total Non Recurring (B)** | **22,00,000** |
| | **Grand Total (A + B)** | **2,01,88,425** |

**Abstract of interventions for 2020-21**

| Interventions | Number of activities | Number of farmers | Amount (Rs.) |
|---|---|---|---|
| **OFT** | 9 | 47 | 1,57,100 |
| **Frontline demonstrations** | 16 | 178 | 4,45,000 |
| **NFSM** | 3 | 110 | 3,84,000 |
| **Trainings** | | | |
| Farmers/Farm women | 44 | 605 | |
| Rural Youth | 05 | 105 | |
| Extension personnel | 06 | 165 | |
| Vocational | 06 | 140 | |
| Sponsored | 55 | 1950 | |
| **FFS** | 01 | 25 | 30,000 |
| **Innovative programme** | 01 | 100 | 1,55,000 |
| **Extension activities** | 2529 | 28310 | |