**ANNUAL ACTION PLAN**

**OF**

**KVK ANANTNAG**

FOR THE YEAR 2022-23



DIRECTORATE OF EXTENSION, SHER-E-KASHMIR UNIVERSITY OF AGRICULTURAL SCIENCES AND TECHNOLOGY OF KASHMIR

|  |  |
| --- | --- |
| **KVK Manpower and Facilities** | |
| Programme Coordinator | 01 |
| No. of SMSs in position  No. of Prog. Assistants  Supporting staff  Driver | 04  01  02  01 |
| Total Land with KVK (in ha) | 9.6 |
| Under Buildings | 04kanal |
| Under Demonstration Units | 4 |
| Orchard/Agro-forestry | 10 |

|  |  |  |
| --- | --- | --- |
| **Operational areas details proposed** | | |
| **Crop/ enterprise** | **Problem (Quantify)** | **Nature /mode of intervention** |
| Paddy | Abiotic and biotic stress,Cold injury, Low yield , Nutrient imbalance | **OFT, FLD and Training** |
| Maize | Non availability of quality seed of early maturing varieties,Low productivity due to imbalanced nutrition and high incidence of weed and Lack of IPM | **FLD, Training and Field days** |
| Brown Sarson | Poor drainage, Higher seed rate, Incidence of aphids,Imbalanced nutrition | **FLD, Training and Field days** |
| Rajmash | Incidence of wilt, Incidence of leaf spot, Non availability of quality seed of SKUAST-K released varieties | **FLD** |
| Moong | Non availability of quality seed of SKUAST-K released varieties and Incidence of wilt | **FLD** |
| Fodder Oats | Non-availability of quality seed and Imbalanced Nutrition | **FLD** |
| Vegetables | Lack of quality seed, Lack of knowledge about seed production ,Shortage of vegetables during offseason | **OFT and Training** |
| Apple | Faulty training and Pruning,proper INM, IDM & IPM, Improper plant propagation techniques, Russeting, Monocrop, Lack of pollinizers, Poor quality and yield | **OFT, FLD and Training** |
| Walnut | Non descriptive cultivars. Higher gestation period. Poor quality & market due to traditional varieties. Lack of budded / grafted walnut | **Training** |
| Honey Production | Lack of disease management. Seasonal management. Migration | **Training** |
| Crops & enterprises | Lack of knowledge on improved agricultural technologies in crops & livestock enterprise | **Training** |
| SHGs | Unemployment for young women | **Training** |
| Resource related problem  (Soil & Cropping System) | Less soil fertility due to non addition of organic manures & imbalanced nutrients, Erosion due to lack of soil and water conservation measures in sloppy areas, Less income due to non adoption of crop diversification and enterprises in the existing cropping system | **OFT, FLD and trainings** |
| Rural Youths | Decreased interest of rural youths in agriculture & allied enterprises, Lack of orientation on self employment avenues, Lack of capital for investment | **Trainings** |

|  |  |  |
| --- | --- | --- |
| **Details of Operational areas proposed** | | |
| **Cluster** | **Name of cluster villages identified for** | **Target commodity for intervention** |
| Cluster-1 | Bragam, Kreri, Nowpora, Qammer, Thamankot,andRakhBrah | Focus on field crops& livestock |
| Cluster-2 | Madhama, Semthan, Kanalwan, Bhijbehara, Khiram, Sirhama, Nambal, Sirgufwara | Focus on apple, field crops& Dairying |

**AGRONOMY**

***On Farm Testing***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Crop** | **Title of OFT** | **Technology**  **Options** | **No.**  **of**  **trails** | **Parameters**  **to be**  **studied** | **Team Member** |
| Paddy | Modified System of Rice Intensification for Higher Productivity | T1: Traditional method of cultivation (FP)  T2: Recommended method of cultivation.  T3: SRI Technique | 03 | Number of effective tillers/hill  Grain yield  Harvest index  Economic returns |  |

**Front Line Demonstrations**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Crop** | **Technology demonstrated** | **Variety/**  **Critical input** | **Farming situation** | **No. of Demo** | **Area (ha)** |
| Maize | Popularization & Seed production of KG-2 Maize at an elevation of 2000-2800 m amsl. | Seed & Fertilizer | Rainfed | 15-20 | 15 |
| Demonstration of Hybrid Maize in collaboration with DARS, Budgam | 5-8 | 2.0 |
| Demonstration of hybrid Maize 745. | Seed & Fertilizer | Rainfed | 01 | 0.20 |
| Demonstration of hybrid Maize 740. | Seed & Fertilizer | Rainfed | 01 | 0.20 |
| Demonstration of hybrid Maize Gugan. | Seed & Fertilizer | Rainfed | 01 | 0.20 |
| Paddy | Varietal evaluation of High Yielding varieties of Rice (SR 3 and 4) Plains of District upto an altitude of 1700 m amsl | Seed & Fertilizer | Irrigated | 20-25 | 6 |
| Varietal evaluation of High Yielding varieties of Rice (SR5) at an altitude of > 2000 m amsl | 05 | 01 |
| Oilseed | CFLD on Shalimar Sarson 2. | Seed and biofertilizer | Irrigated | 10-20 | 20 |
| Pulses | CFLD on Pulses (Rajmash ) | Seed and biofertilizer | Rainfed | 10 - 20 | 20 |
| CFLD on Pulses (Pea) | Seed and biofertilizer | Rainfed | 10-20 | 20 |
| CFLD on Green gram (Moong) | Seed and biofertilizer | Rainfed | 10-20 | 20 |
| Walnut | Popularization of Walnut Dehuller among walnut growers of District Anantnag through Demonstrations | --- | Rain fed | 05 | 10 |
| Wheat | Demonstration of Shalimar wheat. | Seed + fertilizer | Rainfe/irrigated | 25 | 10 |

**Proposed Seed Production at Kendra**

|  |  |  |
| --- | --- | --- |
| **S No** | **Particulars** | **Area** |
| 1 | Maize | 01 |
| 2 | Beans | 01 |
| 3 | Moong/ Cowpea | 01 |
| 4 | Oats | 01 |
| 5  6 | Pea  oilseed | 01  01 |

**Awareness for Farmers**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Training Title** | **Awareness** | **No. of Days Locations** |
| 1 | Integrated management of rice blast | 01 | 10 |
| 2 | Awareness regarding maize Sheller/paddy thrusher | 01 | 07 |
| 3 | Intercropping of Legumes with maize | 01 | 02 |
| 4 | Water Harvesting | 01 | 05 |
| 5 | Awareness regarding protected cultivation | 01 | 10 |
| 6 | Self employment avenues for rural youth | 01 | 02 |

**Training for rural youth**

|  |  |  |  |
| --- | --- | --- | --- |
| S.No | Training Title | No. Of Trainings | No. of Days |
| 1 | Post harvest management of fruits and vegetables. | 01 | 07 |
| 2 | Seed production technology and nursery management in Rice. | 01 | 03 |
| 3 | Intercropping of Legumes with maize | 01 | 02 |
| 4 | Role of farm mechanization in crop production | 02 | 07 |
| 5 | Water Harvesting | 01 | 02 |
| 6 | Protected cultivation in vegetables | 02 | 02 |
| 7 | Organic And Zero Budget Natural Farming | 01 | 03 |

**Training for Extension persons**

|  |  |  |  |
| --- | --- | --- | --- |
| S.No | Training Title | No. of Trainings | No. of Days |
| 1 | Organic And Zero Budget Natural Farming | 01 | 03 |
| 2 | Economic production of field crops. | 02 | 03 |
| 3 | Techniques of data collection. | 01 | 02 |
| 4 | Farm mechanization for drudgery reduction | 02 | 03 |
| 5 | Effective Communication Skills. | 01 | 02 |
| 6 | Techniques for water Harvesting | 01 | 02 |
| 7 | Post harvest management of vegetables. | 01 | 03 |
| 8 | Entrepreneur opportunities of rural youth | 01 | 02 |
| 9 | Processing and Marketing of Agriculture products. | 02 | 03 |

**Vocational Trainings**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Training Title** | **No. of Trainings** | **No. of**  **Days** |
| 1 | Cutting and Tailoring | 01 | 30 |

**HORTICULTURE**

***On farm testing***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Prioritized Problem** | **Title of technology** | **Details of Technology** | **Source** | **Trials** | **Observations** | **Estimated cost/demo** |
| Apple | Poor Survival of Hard wood Cuttings of Apple in the Nursery | Evaluation of Different Doses of Indole -3-Butyric Acid (IBA) and Rooting Media on the Rooting of Apple Clonal rootstocks | T0:Farmers Practise no treatment- (FP)  T1 : IBA @ 2500 ppm + Sand:  Vermicompost: Cocopeat (1:1:1)(RP)  T2: IBA @ 3000 ppm + Sand: Vermicompost: Perlite (1:1:1) (RP) | SKUAST-K | 03 | Sprouting (%) | Rs. 10000/- |
| Apple | Pre- harvest fruit drop | Assessment of different PGRs for the Management of Pre-harvest Fruit Drop In Apple | T1: Use of non specific Chemical-(FP)  T2 : NAA @ 10ppm before 03 weeks of Anticipated Harvest (WBAH) -(RP)  T3 : 2,4,5-TPA @ 30 ppm 04 weeks before Anticipated Harvest – (RP) | SKUAST-K | 03 | % Pre harvest fruit drop  Yield (kg/tree) | Rs 7500/- |

***Frontline Demonstration***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop/**  **Enterprise** | **Prioritized Problem** | **Title of FLD** | **Technology to be Demonstrated** | **Source of Technology/ Collaboration** | **No.**  **of**  **trails** | **Parameters**  **to be**  **studied** | **Estimated**  **Cost**  **(Rs/demo)** |
| Apple | Poor Fruit set,  Poor Yield and Quality | Popularization of Boron and Bouquet Pollination on Fruit set, quality and yield in Apple | Boron Sprays and Bouquet Pollination | SKUAST-K | 05 | Yield (Kg/tree) Quality (% grades)  Economics | Rs8000/- |
| Apple | Low Yield and Poor quality | Popularization of Improved Cultivars of Apple through Rejuvenation (Top Working) | Jeromine  Scartlet spur  Royal Gala  Super chief Sandige  Granny Smith | SKUAST-K | 08 | Success( % ) Annual shoot growth (cm) | Rs.24000 |

**Training/Awareness/Method demos for Farmers/Farm Women**

|  |  |  |
| --- | --- | --- |
| **S.No** | **Training Title** | **No. of Trainings** |
| 1. . | Layout, Planting and Early care of temperate fruit crops | 03 |
|  | Propagation Techniques in Temperate Fruit crops with special reference to walnut | 02 |
|  | Methods of Fertilizer Application in Apple Orchards | 02 |
| 1. 4 | Role of Pollinizers/Pollinators in Temperate fruit crops | 03 |
|  | Importance of Mulches in different fruit crops | 01 |
|  | Importance of Micro-Irrigation techniques for enhanced Water Use Efficiency (WUE) in Agri. & Horti crops. | 01 |
|  | Budding Techniques in fruit crops | 02 |
|  | Techniques for collection of leaf samples from apple orchards | 02 |
|  | Scientific techniques of harvesting, grading/packing and truthful labelling in apple | 01 |
|  | Scientific Training and pruning to improve quality and productivity in apple. | 10 |
| 1. 1 | Awareness Programme on the Importance of High Value and Exotic vegetables. | 01 |
| 1. . | Production management technology of cut flowers. | 01 |

**Training for Rural Youth/Entrepreneurs**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.**  **No** | **Training Title** | **Duration (Days)** | **No. of Trainings** |
| 1. | Mass Multiplication of Clonal rootstocks of Apple for Entrepreneurship Development | 3 | 01 |
| 2. | Nursery Raising Techniques in Temperate Fruit Crops | 02 | 01 |
| 3. | Training and pruning to improve quality and productivity in apple with special reference to HDP Apple | 03 | 01 |

**In-Service Extension Personnel**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Training Title** | **Duration**  **(Days)** | **No. of Trainings** |
| 01. | Good Horticultural Practice(GHP) | 02 | 01 |
| 02. | Canopy Management in High Density Apple Orchards | 02 | 01 |

**ANIMAL SCIENCES**

**On Farm Testing**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Problem** | **Title of technology** | **Technology** | **Source** | **critical inputs** | **Quantity** | **Amount/demo** | **Demo** | **Amount** | **Parameters to be studied** |
| Cattle | Low Milk Production in dairy cattle.  Poor Body condition score. | Urea MolassesMineral Block-a cost effective feed supplement for increasing milk production. | T1: Farmers practice (FP)  T2: UMMB as lick @200-500gm/day/ animal for 2 months. | SKUAST-K | UMMB. | 150 | 7500 | 2 (10 cows each) | 15000 | Milk yield  Body condition score |
| Fodder | Shortage of quality fodder | Impact of African tall composite variety or (KDFM-1) of maize on fodder production | T1: Farmers practice FP  T2: ATC variety RP | SKUAST-K | ATC /KDFM-1 seeds  NPK | Seed :5kg  NPK(kg) : 12:8:4 | 5000 | 2 ( 04 kanals each) | 15000 | Number of leaves/plant,  Leaf area,  Plant height  Green fodder yield (t/ha) |

**Front line demonstrations**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Thematic area** | **Problems** | **Technology title** | **Source of technology** | **Technology** | **Critical inputs quantity** | **Cost of demo** | **No of demos** | **Total cost** | **Parameters studied** |
| Livestock | Dairy animals  (Cross-Bred cows) | Incidences of Mastitis in cross bred cows.  Decrease milk production. | Prevention of mastitis in dairy cattle | PAU-Ludhiana | Povidine iodine and glycerin teat dip. | Povidine iodine =40  and glycerin =40 | 6000 | 02 of 20 cows each | 12000 | Percent Incidence of mastitis  Milk production |
|  | Sheep | Lack of feed & fodder during winter.  Incidence of pre &post-partum problems in sheep during winter | Impact of feeding conc. supplementation during transition period in pregnant ewes | SKUAST-Kashmir | Conc. Diet | 5kg per ewe(for 20days) = 150kg | 3750 | 02 of 15 sheep each | 7500/ | Birth weight of lamb  Growth rate  Mortality in lamb if any |
|  | (Backyard Poultry)  Kuroiler Chicks | Less body weight  Low egg production  Low feed conversion efficiency | Popularization of Kuroiler birds under Backyard poultry system | SKUAST-Kashmir | Kuroiler chicks | 15 | 1500 | 25 | 37500/ | Body weight gain  Egg production.  Mortality if any |

**I). Trainings for Farmers / Farmwomen.**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No** | **Title of training** | **No. of trainings** | **No of Days** |
| 1 | Importance of vaccination in livestock production. | 02 | 3 |
| 2 | Demonstration on clean milk production. | 01 | 3 |
| 3 | Demonstration on good quality hay and silage preparation. | 02 | 1 |
| 4 | Demonstration on value addition of milk and milk products. | 03 | 1 |
| 5 | Management of backyard poultry birds. | 01 | 3 |
| 6 | Demonstration on urea treatment of wheat and paddy straw. | 01 | 2 |

**II). Trainings for Rural Youth.**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No** | **Title of training** | **No. of trainings** | **No of Days** |
| 1 | Profitable fish farming | 03 | 1 |
| 2 | Demonstration on preparation of UMMB. | 03 | 1 |
| 3 | Scientific management of commercial poultry farming (broiler production). | 01 | 7 |
| 4 | Scientific Sheep farming: A profitable enterprise | 01 | 3 |

**III). Trainings for extension personals**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No** | **Title of training** | **No. of trainings** | **No. of Days** |
| 1. | Diagnosis of some economically important diseases in sheep | 01 | 3 |
| 2. | Diagnosis and treatment of reproductive diseases in dairy cows. | 01 | 3 |
| 3 | Nutritional Management of dairy cows and sheep during winter. | 04 | 1 |
| 4 | Diagnosis and management of milk fever in dairy cows. | 04 | 1 |
| 5 | Awareness on IFS: A way towards sustainable agriculture | 04 | 1 |

**Plant Protection**

**On Farm Trials**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **Prioritized Problem** | **Title of technology** | **Details of Technology** | **Source** | **Trials** | **Observations** | **Estimated cost/demo** |
| Apple | Post hail diseases and deformities | Management of diseases and deformities post hail injury in Apple. | T1: Farmers practice **(FP)**  T2: Zineb 68%+Hexaconazole 4% @100gm/100 litres of water or Metiram 55%+Pyraclostrobin5% and urea@ 200gm .  T3:- Carbendiazim 12%+ Mancozeb 63% WP  @100gm /100 litres of water **(RP)** | SKUAST-K | 3 (45 Trees each) | Recovery percentage | **Rs.2000/-** |
| Apple | Burning and wilt of flowers and consequent poor yield. | **Integrated management of Apple blossom thrips in Apple** | T1: **(FP)**  T2:Thiocloprid 21.7% SC @ 0.5 ml per litre of water.  T3 : Dimethoate 30EC@ 1ml per litre of water | SKUAST-K | 3 (45 Trees each) | Disease incidence% & yield (q/ha) | **Rs.3000/-** |
| Apple | Blotching of leaves and leaf fall, consequent poor yield. | **Integrated management of Exotic Apple blotch leaf miner in Apple** | T1: **(FP)**  T2: Thiamethoxam 25%WG @50 gm per hundred litres of water and Thiocloprid 21.7% SC @ 0.5 ml per litre of water.  T3: Imidacloprid plus Thiamethoxam@ 50 ml per hundred litres of water. | SKUAST-K | 3 (45 Trees each) | Disease incidence% & yield (q/ha) | Rs.10500/ |

**Front Line Demonstration**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Crop/**  **Enterprise** | **Prioritized Problem** | **Title of FLD** | **Technology to be Demonstrated** | **Source of Technology/ Collaboration** | **No.**  **of**  **trails** | **Parameters**  **to be**  **studied** | **Estimated**  **Cost**  **(Rs/demo)** |
| Apple | Rodent damage to Apple roots | Management of Rodents in apple orchard | T1: (**FP)**  T2: Use of tin box filled with water and piece of apple as a bait and  T3:Fumigator | ITK  (Reported and verified by KVK-Bandipora) | 3 (45 Trees each) | 1. No. of tree attacked  2. No. of dead rats | Rs 5000/ |

**Details of training programmes**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.N** | **Title** | **Participant type** | **Duration (days)** |
| 1 | Integrated management of diseases and insect pests of rice | Rural youth/farmers | 3-5 |
| 2 | Integrated management of rice diseases | Farmers/Farm women | 3-5 |
| 3 | Integrated management of root-rot and collar-rot of apple | Rural youth/farmers/Farm women/In Service Extension Functionaries | 5-7 |
| 4 | Integrated management of foliar diseases of apple | Farmers/Farm women/In Service Extension Functionaries | 5-7 |
| 5 | Integrated management of apple insects and pests | Farmers/Farm women | 3-5 |
| 6 | Integrated management of major disease of vegetable crops in the region | Farmers/Farm women | 3-5 |
| 7 | Safe and effective use of pesticides | Rural youth/farmers/In Service Extension Functionaries | 3-5 |

**CAPACITY BUILDING AND GROUP DYNAMICS  
Details of training programmes**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.N** | **Title** | **Participant type** | **Duration (days)** |
| 1 | Scientific methods of bee Keeping | Farmers/Farm women/Rural youth | 2-3 |
| 2 | Economic production of cocoons | Farmers/Farm women/Rural youth | 2-3 |

**Important campaigns in collaboration with line departments:**

|  |
| --- |
| Integrated disease & insect pest management if fruit crops |
| Seasonal Management of Honeybees and bee keeping as an important input in increasing crop production |
| Integrated Rodent Management in apple orchards |
| Role of orchard sanitation in prevention of diseases and pests in Apple. |
| Management of apple blossom thrips. |
| Management of hail injury in apple. |
| Management of Rice blast. |

**Other Extension activities**

* Animal Diagnostic visits: Need Based
* Animal clinical camps: Two mega animal clinical camps
* Need based awareness and training programmes
* Celebration of special days.
  + World veterinary Day last Saturday of April.
  + World Milk day 29th May
  + World Zoonoses Day 6th July
  + World Rabies day 28th September
  + World egg day. 12th October
  + World hug a sheep day 28th October.
  + Farmers Day 23rd December.

|  |  |
| --- | --- |
| **Extension Activities** |  |
| Advisory Services | NEED BASED |
| Diagnostic visits | NEED BASED |
| Field Day | NEED BASED |
| Group meeting | NEED BASED |
| KisanGhosthi | NEED BASED |
| KisanMela | NEED BASED |
| Exhibition | NEED BASED |
| Scientists' visit to farmers field | NEED BASED |
| Plant/Soil health/Animal health camps | NEED BASED |
| Farm Science Club | NEED BASED |
| Ex-trainees Sammelan | NEED BASED |
| Farmers' seminar/workshop  (Climate change, Farm Implements, medicinal plants) | NEED BASED |
| Method Demonstrations | NEED BASED |
| Celebration of important days | NEED BASED |
| Special day celebration | NEED BASED |
| Exposure visits | NEED BASED |
| Technology week, | NEED BASED |
| Farm innovators meet | NEED BASED |
| Awareness programs | NEED BASED |

**Details of Budget Estimate (2022-23) based on proposed action plan**