**Details of each On Farm Trial conducted during the year 2020.**

## OFT-1

| | | |
|---|---|---|
| 1 | Title | **Effect of Foliar Application of Boron on Fruit Set & Productivity of Apple** |
| 2 | Problem Diagnose/defined | Poor Fruit Set |
| 3 | Details of technologies selected for assessment/refinement | Foliar Application of Boron at fruit development stages |
| 4 | Source of technology | SKUAST -K |
| 5 | Production system thematic area | Crop production |
| 6 | Thematic area | Crop Production |
| 7 | Performance of the Technology with performance indicators | Satisfactory |
| 8 | Final recommendation for micro level situation | Needs repeated trials |
| 9 | Constraints identified and feedback for research | Adoptability |
| 10 | Process of farmer's participation and their reaction | Satisfactory |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assess ment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Apple | Rainfed/ irrigated | Poor fruit set | Effect of Foliar Application of Boron on Fruit Set & Productivity of Apple | 03 | Foliar application of Boron at 03 stages. | Fruit yield | - | Table below | Satisfied |

**Table**

| Crop | Fruit Set % | Location A | Location B | Location C |
|---|---|---|---|---|
| Apple | **T1** | 25.3 | 23.4 | 22.9 |
| | **T2** | 40.2 | 38.8 | 38.1 |

| Crop | Fruit Retention % | Location A | Location B | Location C |
|---|---|---|---|---|
| Apple | **T1** | 40.1 | 38.4 | 36.9 |
| | **T2** | 55.5 | 48.7 | 46.3 |

| Crop | Fruit Drop % | Location A | Location B | Location C |
|---|---|---|---|---|
| Apple | **T1** | 59.9 | 61.6 | 63.1 |
| | **T2** | 44.5 | 51.3 | 53.7 |

## OFT-2

| | | |
|---|---|---|
| 1 | Title | **Soil and Foliar Application of Potassium for Color Development.** |
| 2 | Problem Diagnose/defined | Poor fruit color |
| 3 | Details of technologies selected for assessment/refinement | Foliar Application of Potassium at fruit development stages |
| 4 | Source of technology | SKUAST-Kashmir |
| 5 | Production system thematic area | Crop production |
| 6 | Thematic area | Crop production |
| 7 | Performance of the Technology with performance indicators | Satisfactory |
| 8 | Final recommendation for micro level situation | Needs repeated trials |
| 9 | Constraints identified and feedback for research | Adoptability |
| 10 | Process of farmer's participation and their reaction | Satisfactory |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assess ment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Apple | Rainfed/ irrigated | Poor fruit color | Soil and Foliar Application of Potassium for Color Development | 03 | Foliar Application of Potassium at 02 stages | Quality improvement & yield | - | Table below | Satisfied |

**Table 1: Fruit Color (%)**

| Crop | Treatments | Darbagh | Chatrihama | Ranbirgrah |
|---|---|---|---|---|
| Apple | **T1** | 69 | 69 | 61 |
| | **T2** | 81 | 84 | 79 |

**Table 2: Yield data (MT/ha)**

| Crop | Treatments | Darbagh | Chatrihama | Ranbirgrah |
|---|---|---|---|---|
| Apple | **T1** | 12.2 | 12.0 | 12.4 |
| | **T2** | 15.3 | 15.5 | 15.7 |

## OFT-3

| | | |
|---|---|---|
| 1 | Title | **Supplementation of UMMB for Maximizing Production Potential in Dairy Cows** |
| 2 | Problem Diagnose/defined | Nutrient deficiency, Low quality feed resources, Low production |
| 3 | Details of technologies selected for assessment/refinement | T1- Farmers practice,<br>T2- UMMB lick |
| 4 | Source of technology | SKUAST-K |
| 5 | Production system thematic area | Poultry Production |
| 6 | Thematic area | Backyard Poultry |
| 7 | Performance of the Technology with performance indicators | Milk production, Milk composition, feed intake, body condition score |
| 8 | Final recommendation for micro level situation | UMMB supplementation is recommended for enhancing production potential for cows. |
| 9 | Constraints identified and feedback for research | Poor quality, feed availability. |
| 10 | Process of farmer's participation and their reaction | Satisfactorily |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assess ment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Cattle | - | Nutrient deficiency, Low quality feed resources, Low production | Supplementation of UMMB for maximizing production potential in dairy cows | 03 | T1- Farmers practice,<br>T2- UMMB lick | Milk production, Milk composition, feed intake, body condition score | Milk yield/day Milk fat, milk protein, milk SNF, and total solids | 1.Milk production was increased<br>2. Feed intake or body condition score was improved.<br>3. Milk composition awaited | Farmers are satisfied. |

**OFT-4**

| | | |
|---|---|---|
| 1 | Title | **Socioeconomic upliftment of rural women through rearing of elite strains of backyard poultry.** |
| 2 | Problem Diagnose/defined | Poor production |
| 3 | Details of technologies selected for assessment/refinement | T1- Traditional practice of poultry rearing (desi birds)<br>T2- elite strains of backyard poultry rearing (Keystone Golden birds) |
| 4 | Source of technology | SKUAST-K |
| 5 | Production system thematic area | Poultry Production |
| 6 | Thematic area | Backyard Poultry |
| 7 | Performance of the Technology with performance indicators | 1. Age at first egg<br>2. Adult body weight<br>3. Egg Production |
| 8 | Final recommendation for micro level situation | Elite strains of backyard poultry are ideal for upliftment of rural women. |
| 9 | Constraints identified and feedback for research | Low reproduction and less growth rate of desi birds. |
| 10 | Process of farmer's participation and their reaction | Learning by doing & seeing is believing |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assess ment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Poultry | - | Poor production | Socio economic upliftment of farm women through rearing of elite strains of backyard poultry birds | 05 | T1- Traditional practice of poultry rearing (desi birds)<br>T2- elite strains of backyard poultry rearing (Keystone Golden birds) | Age at first egg<br><br>Adult body weight<br><br>Egg Production | No of eggs per year | Increased body weight + Egg production is ongoing | Under process |

**OFT-5**

| | | |
|---|---|---|
| 1 | Title | **Effect of Different Rooting Media on rooting of different Ornamental Plants.** |
| 2 | Problem Diagnose/defined | Poor rooting |
| 3 | Details of technologies selected for assessment/refinement | T1- Soil (farmers practice)<br>T2- Sand |
| 4 | Source of technology | SKUAST-K |
| 5 | Production system thematic area | Ornamental Nursery Production |
| 6 | Thematic area | Nursery Production |
| 7 | Performance of the Technology with performance indicators | Rooting percentage |
| 8 | Final recommendation for micro level situation | Sand is better media for rooting. |
| 9 | Constraints identified and feedback for research | Lack of know how. |
| 10 | Process of farmer's participation and their reaction | Satisfactorily |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assess ment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Ornamental plants | Irrigated | Poor rooting | Effect of different rooting media on rooting of different ornamental plants | O3 | T1- Soil (farmers practice)<br>T2- Sand | Rooting percentage | T1-50% rooting<br>T2- 80% rooting | Medium sand improves rooting percentage by 30% | Satisfactory |

**Table:**

| Technology Assessed | Production per unit | Net Return in Rs/unit | BC Ratio |
|---|---|---|---|
| Different media for rooting | T1- 500 | 2500 | 1:2.5 |
| | T2- 800 | 5000 | 1:3.1 |

## OFT-6

| | | |
|---|---|---|
| 1 | Title | **OFT on Effect of Dis-budding Techniques on Bulb Production of Tulip** |
| 2 | Problem Diagnose/defined | Low bulb production |
| 3 | Details of technologies selected for assessment/refinement | T0= farmers practice (no dis-budding)<br>T1= Dis-budding at green bud stage<br>T2= Dis-budding at flower opening stage |
| 4 | Source of technology | SKUAST-K |
| 5 | Production system thematic area | Ornamental Nursery Production |
| 6 | Thematic area | Nursery Production |
| 7 | Performance of the Technology with performance indicators | Bulb production |
| 8 | Final recommendation for micro level situation | Under Process |
| 9 | Constraints identified and feedback for research | --- |
| 10 | Process of farmer's participation and their reaction | Learning by doing & seeing is believing |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assess ment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Ornamental plants | Irrigated | Low bulb production | Effect of dis-budding techniques on bulb production of tulip | O3 | $T_0$= farmers practice (no dis-budding)<br>$T_1$= Dis-budding at green bud stage<br>$T_2$= Dis-budding at flower opening stage | Bulb production | No. of flowering bulbs/plant | Under process | Under process |

**OFT-07**

| | | |
|---|---|---|
| 1 | Title | **Solid Waste Management using waste Decomposers** |
| | Problem Diagnose/defined | Soil, water/air pollution |
| 3 | Details of technologies selected for assessment/refinement | Use OF waste decomposing bacteria (Shalimar microbes) for decomposing solid waste. |
| 4 | Source of technology | SKUAST- K |
| 5 | Production system thematic area | Production of Input at site |
| 6 | Thematic area | Composting |
| 7 | Performance of the Technology with performance indicators | ---- |
| 8 | Final recommendation for micro level situation | Need repeated trials |
| 9 | Constraints identified and feedback for research | No Constrains |
| 10 | Process of farmer's participation and their reaction | Farmers were cooperative and got satisfied by the results |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assess ment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Waste Decomposing | -- | 1. Solid, water and air pollution. 2. Hazardous effects on crops. | Solid Waste Management using waste Decomposers | 04 | Use of Shalimar microbes for solid waste management | 1.Yield 2.Quality of Compost 3.Time taken for composting | - Table Below- | | Satisfactory |

| Treatment | Quality of Compost | | | | | |
|---|---|---|---|---|---|---|
| | Recovery % | Color | N% | P % | K% | Time taken for composting |
| **T1 (Farmers Practice)** | 50 % | Light brown | 0.50 % | 0.26 | 0.54 | 180 days |
| **T2 (Shalimar Microbes )** | More than 70% | Dark brown | 1.26 | 0.64 | 0.82 | 60 to 90 days |

**OFT-08**

| | | |
|---|---|---|
| 1 | Title | **Efficiency of *Eisenia fetida* Earthworm Species for Vermicomposting** |
| | Problem Diagnose/defined | Improper method of preparation of compost |
| 3 | Details of technologies selected for assessment/refinement | Use of Eisenia fetida cold tolerant vermiculture for vermi- composting |
| 4 | Source of technology | SKUAST- K |
| 5 | Production system thematic area | Production of Input at site |
| 6 | Thematic area | Composting |
| 7 | Performance of the Technology with performance indicators | Preparation of the compost using earthworm species Eisenia fetida works efficiently in breaking down and decaying natural remains and turning these scrapes into high quality compost. |
| 8 | Final recommendation for micro level situation | In Kashmir composting should be done by using Eisenia fetida cold tolerant vermiculture for vermicomposting. |
| 9 | Constraints identified and feedback for research | No Constrains |
| 10 | Process of farmer's participation and their reaction | Learning by doing and seeing is believing |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assessment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Vermicomposting | - | Improper method of preparation of compost | Efficiency of *Eisenia fetida* Earthworm Species for Vermicomposting | 03 | Use of *Eisenia fetida* cold tolerant vermiculture for vermin-composting | 1.Yield 2. Quality of compost 3.Time taken Composting | -Table Below- | | Satisfactory |

| Treatment | Quality of Compost | | | | | |
|---|---|---|---|---|---|---|
| | Recovery % | Color | N% | P % | K% | Time taken for composting |
| T1 (Farmers Practice) | 50 % | Light brown | 0.67 | 0.82 | 1.8 | 180 days |
| T2 (Eisenia fetida) | More than 80 % | Dark brown to black | 1.50 | 1.08 | 2.50 | 40 to 45 days |

**OFT-09**

| | | |
|---|---|---|
| 1. | Title | **Utilizing Dal Weed in Compost Preparation** |
| 2. | Problem Diagnose/defined | Dal weed Menace |
| 3. | Details of technologies selected for assessment/refinement | Use OF waste decomposing bacteria (Shalimar microbes), molasses, bio fertilizers, lime and Trichoderma for decomposing Dal weed. |
| 4. | Source of technology | SKUAST- K |
| 5. | Production system thematic area | Production of Input at site |
| 6. | Thematic area | Composting |
| 7. | Performance of the Technology with performance indicators | Composting of Dal weed is a relevant scientific technology for the production of nutrient rich compost using locally available raw material such as Dal weed and FYM |
| 8. | Final recommendation for micro level situation | Need repeated trials |
| 9. | Constrains identified and feed back for research | Adoptability |
| 10. | Process of farmers participation and their reaction | Learning by doing and seeing is believing |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assess ment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Composting | | Dal weed Menace | Utilizing Dal Weed in Compost Preparation | 02 | Use OF waste decomposing bacteria (Shalimar microbes), molasses, bio fertilizers, lime and Trichoderma for decomposing Dal weed | 1.Yield 2. Quality of compost 3.Time taken Composting | -Table Below- | | Satisfactory |

| Treatment | Quality of Compost | | | | | |
|---|---|---|---|---|---|---|
| | Recovery % age | Color | N% | P % | K% | Time taken for composting |
| T1 (Farmers Practice) | 40 to 50 % | Light brown | 0.38% | 0.10% | 0.15% | 260 to 300 days |
| T2 (Shalimar Microbes + biofertilizers + Trichoderma) | 70 to 80 % | Brownish black | 1.18% | 0.30% | 0.56% | 90 to 120 days |

**OFT-10**

| | | |
|---|---|---|
| 1. | Title | **Integrated Nutrient Management in Kale in Dal Catchment areas** |
| 2. | Problem Diagnose/defined | Eutrophication of fertilizers in Dal Lake which causes excess weed growth in Dal lake |
| 3. | Details of technologies selected for assessment/refinement | Integrated Nutrient Management (Inorganic fertilizers + vermicompost + biofertilizer) |
| 4. | Source of technology | SKUAST- K |
| 5. | Production system thematic area | Crop Production with reference to nutrient Management |
| 6. | Thematic area | Integrated Nutrient Management |
| 7. | Performance of the Technology with performance indicators | Increase in the yield |
| 8. | Final recommendation for micro level situation | Integrated nutrient Management |
| 9. | Constrains identified and feed back for research | No Constrains |
| 10. | Process of farmers participation and their reaction | Farmers were cooperative and got satisfied by the results |

**Results of On Farm Trial**

| Crop/ enterprise | Farming situation | Problem Diagnosed | Title of OFT | No. of trials | Technology Assessed | Parameters of Assessment | Data on the Parameter | Results of assess ment | Feedback from the farmer |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Crop production | Irrigated | Eutrophication of fertilizers in Dal Lake which causes excess weed growth in Dal lake | Integrated Nutrient Management in Kale in Dal Catchment areas | 02 | INM<br>a. Inorganic fertilizers<br>b. vermicompost<br>c. Biofertilizer | 1.Yield<br>2. yield attributing characters | -Table Below- | | Satisfactory |

| Treatments | Plant Height (cm) | Plant Spread (cm) | No of leaves/plant | Leaf yield (q/ha) |
|---|---|---|---|---|
| T1 (Farmers Practice) | 41.03 | 48.65 | 11.38 | 433.38 |
| T2 (Inorganic Fertilizer + Vermicompost + Biofertilizer ) | 45.98 | 53.57 | 13.34 | 522.67 |