On-Farm Trials 2024-2025

OFT-1: Management of pre-harvest fruit drop in apple by the use of PGRs cv. Red Delicious and American Apirouge.

1	Title	Management of pre-harvest fruit drop in apple by the use of PGRs cv. Red Delicious and American Apirouge
2	Problem Diagnose/defined	Excessive fruit drop Lower marketable yield
3	Details of technologies selected for assessment/refinement	T0: Farmers Practice T1: Application of NAA @ 10 ppm about 20 days before anticipatory harvest.
4	Source of technology	SKUAST-K
5	Production system thematic area	Production constraint
6	Thematic area	Apple
7	Performance of the Technology with performance indicators	Decreased fruit drop significantly
8	Final recommendation for micro level situation	-
9	Constraints identified and feedback for research	Working well under selected growing area
10	Process of farmer's participation and their reaction	Positive response

Results of On Farm Trials

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
Apple	Darbagh, Khanmoh and Zakura	Excessive fruit drop, lower yields	Management of preharvest fruit drop in apple by the use of PGRs cv. Red Delicious and American Apirouge	03	Application of NAA @ 10 ppm about 20 days before anticipatory harvest	Fruit drop Productivity Economics	Fruit Drop T0: 32% T1: 7% Productivity T0: 11.5t/ha T1: 15.4t/ha BC ratio T0: 1.98 T1: 2.32	Fruit drop percentage= 7% Increase in productivity = 34% BC ratio reached from 1.98 to 2.32	Satisfied

OFT-2: Pre-harvest application of nutrients for improvement of fruit quality and storage.

1	Title	Pre-harvest application of nutrients for improvement of fruit quality and storage.
2	Problem Diagnose/defined	Inferior fruit quality and less shelf life
3	Details of technologies selected for assessment/refinement	T0= Farmers Practice T1 = Three foliar spray of Calcium @ 0.3% + Boron (0.1%) First Spray= 21 days after petal fall 2nd Spray= 21 days after 1st Spray 3rd Spray= 5 g/ liter, 30 days before expected harvest
4	Source of technology	SKUAST-K
5	Production system thematic area	Production constraint
6	Thematic area	apple
7	Performance of the Technology with performance indicators	Improved fruit quality significantly
8	Final recommendation for micro level situation	-
9	Constraints identified and feedback for research	Working well under selected growing area
10	Process of farmer's participation and their reaction	Positive response
11	Yield improvement	35% over control
12	A-grade % improvement	28% over control
13	Economics (B:C ratio)	2.25

Results of On Farm Trials

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
Apple	Darbagh, Khanmoh and Zakura	Inferior fruit quality and less shelf life	Pre-harvest application of nutrients for improvement of fruit quality and storage	03	T0= Farmers Practice T1 = Three foliar spray of Calcium @ 0.3% + Boron (0.1%) First Spray= 21 days after petal fall 2nd Spray= 21 days after 1st Spray 3rd Spray= 5 g/ liter, 30 days before expected harvest	Fruit quality Shelf life in days	A grade %: T0= 42.8 T1= 67.5 Shelf-life (days): T0= 13 T1= 22	% improvement of A grade apple in T1 by 24.7% over T0 Shelf-life extended by 9 days over T0.	Satisfied

OFT-3: Scientific approach for the propagation of geranium pot plants.

1	Title	Scientific approach for the propagation of geranium pot plants.
2	Problem Diagnose/defined	Unscientific approach towards media and type of cutting used
3	Details of technologies selected for assessment/refinement	Farmer practice:- T0:-Use of Soil media and non-herbaceous cutting T1 : Use of herbaceous cuttings (20 days old) in soilless media (Cocopeat 2 parts: Vermiculite 1 part: Perlite 1 part)
4	Source of technology	SKUAST-K
5	Production system thematic area	Production constraint
6	Thematic area	Geranium
7	Performance of the Technology with performance indicators	Propagation coefficient %
8	Final recommendation for micro level situation	-
9	Constraints identified and feedback for research	Non availability of potting mixture
10	Process of farmer's participation and their reaction	Positive response

Results of On Farm Trials

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
Flowers	Irrigated	Unscientific approach towards media and type of cutting used	Scientific approach for the propagation of geranium pot plants.	03	Farmer practice: - T0:- Use of Soil media and non-herbaceous cutting T1: Use of herbaceous cuttings (20 days old) in soil less media (Cocopeat 2 parts: Vermiculite 1 part: Perlite 1 part)	Propagation coefficient %	T0: 32% T1: 85.0%	T1 Increased propagation coefficient by 155%	Satis-fied

OFT-4: Scientific approach for transplanting annual seedlings (Pansy, Snapdragon & Gazania) into polybags.

Results of On Farm Trials

1	Title	Scientific approach for transplanting seedlings (Pansy, Snapdragon & Gaza polybags
2	Problem Diagnose/defined	Mortality above economic threshold lev
3	Details of technologies selected for assessment/refinement	Farmer practice:- T0:- Use of poor soil media and aged s T1 : Optimum aged seedling (20 da rich soil media (2 parts soil: 1 part V part sand)
4	Source of technology	SKUAST-K
5	Production system thematic area	Production constraint
6	Thematic area	Annual seedlings (Pansy, Snapdr Gazania)
7	Performance of the technology with performance indicators	Success and mortality %age after trans
8	Final recommendation for micro level situation	-
9	Constraints identified and feedback for research	Identification of hybrids at seedling sta
10	Process of farmer's participation and their reaction	Positive response

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

Annual seedlings (Pansy, Snapdragon & Gazania)	Irrigated	Mortality above economic threshold level	Scientific approach for transplanting annual seedlings (Pansy, Snapdragon & Gazania) into polybags	03	T0:-Use of poor soil media and aged seedlings T1: Optimum aged seedling (20 days old) in rich soil media (2 parts soil: 1 part VC and 1 part sand)	Success and mortality %age after transplanting	Mortality %age: T0= 45 T1= 18 Success %age: T0= 55 T1= 82	Decreased mortality by 150%. Whereas success increased by 49.09%	Satisfied

OFT-5: Evaluating the Efficiency of Natural Farming Practices in leafy vegetables.

1	Title	Evaluating the Efficiency of Natural Farming Practices in leafy vegetables.
2	Problem Diagnose/defined	Deteriorated Soil Health More cost of cultivation Ill effects of Inorganic fertilizers
3	Details of technologies selected for assessment/refinement	T1: Farmers Practice T2: Waaphasa + Beejamrita + Jeevamrita +Agniastra
4	Source of technology	SKUAST-K
5	Production system thematic area	Production constraint
6	Thematic area	Leafy vegetables
7	Performance of the Technology with performance indicators	Soil and Yield Parameters and Economics
8	Final recommendation for micro level situation	-
9	Constraints identified and feedback for research	Quality & yield maintenance under natural farming conditions
10	Process of farmer's participation and their reaction	Positive response

Results of On Farm Trials

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of	Technology Assessed	Parameters of Assessment	Data on the	Results of assessment	Feedback from the farmer

				trials			Parameter		
1	2	3	4	5	6	7	8	9	10
Leafy vegetables	Irrigated	Deteriorated Soil Health More cost of cultivation Ill effects of Inorganic fertilizers	Evaluating the Efficiency of Natural Farming Practices in leafy vegetables	03	T1: Farmers Practice T2: Waaphasa + Beejamrita + Jeevamrita +Agniastra	Soil Yield Parameters Economics	Yield/ ha (qtls): T0= 53.6 T1= 41.8 BC ratio: T0= 3.24 T1= 2.69 SFI: T0= 69.4 T1= 78.3	T1 decreased the yield by 22% over T0	Satisfied

OFT-6: Soil test-based fertilizer application in rice.

1	Title	Soil test-based fertilizer application in rice.
2	Problem Diagnose/defined	Low yield
3	Details of technologies selected for assessment/refinement	T1: Farmers Practice T2: Soil Test Crop Response based fertilizer application
4	Source of technology	SKUAST-K
5	Production system thematic area	Production constraint
6	Thematic area	Rice
7	Performance of the Technology with performance indicators	Pre & Post Soil analysis Yield
8	Final recommendation for micro level situation	-
9	Constraints identified and feedback for research	Cost effective soil testing kit
10	Process of farmer's participation and their reaction	Positive response

Results of On Farm Trials

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
Rice	Irrigated	Low yield	Soil test-based fertilizer application in rice	03	T1: Farmers Practice T2: Soil Test Crop Response based fertilizer application	Pre & Post Soil analysis Yield	Yield/ ha (qtls): T0= 54.6 T1= 71.5 BC ratio: T0= 1.32 T1= 1.74	T1 improved yield by 30.95% over T0	Satisfied

OFT-7: Effect of number of seedling/hills on growth and yield of transplanted rice in lowlands of District Srinagar.

1	Title	Effect of number of seedling/hills on growth and yield of transplanted rice in lowlands of District Srinagar.
2	Problem Diagnose/defined	Irrational number of seedlings
3	Details of technologies selected for assessment/refinement	T0: Farmers Practice (>8) T1: 2-3 seedling per hill
4	Source of technology	SKUAST-K
5	Production system thematic area	Production constraint
6	Thematic area	Rice
7	Performance of the Technology with performance indicators	Yield and BCR
8	Final recommendation for micro level situation	-
9	Constraints identified and feedback for research	-
10	Process of farmer's participation and their reaction	Positive response

Results of On Farm Trials

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
Rice	Irrigated	Irrational number of seedlings	Effect of number of seedling/hills on growth and yield of transplanted rice in lowlands of District Srinagar.	03	T1: Farmers Practice (>8) T2: University Recommendations 2-3 seedling per hill	Yield and BCR	Yield/ ha (qtls): T0= 51.8 T1= 73.5 BC ratio: T0= 1.32 T1= 1.84	T1 Improved yield by 41% over T0	Satisfied

OFT-8: Preparation of green chilli powder.

1	Title	Preparation of green chilli powder.
2	Problem Diagnose/defined	Poor Shelf Life Value Addition
3	Details of technologies selected for assessment/refinement	T0: Farmer's Practice T1: Destaking, washing, blanching + dipping in sodium chloride solution (2%) for 2–3 h, followed by solar drying to reduce the moisture content to less than 10% and grinding
4	Source of technology	SKUAST-K
5	Production system thematic area	Value addition
6	Thematic area	Chilli
7	Performance of the Technology with performance indicators	Colour retention, preservation of nutrients
8	Final recommendation for micro level situation	-
9	Constraints identified and feedback for research	The dried green chilli pieces were ground and the powder was stored in airtight container upto 8–10 months at room temperature (22–30°C) without loss of green colour, nutrients and sensory attributes
10	Process of farmer's participation and their reaction	Farmers showed a good response and were satisfied with the technology

Results of On Farm Trials

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
Chilli	Irrigated	Poor Shelf Life and no value addition	Preparation of green chilli powder.	03	T0: Farmer's Practice (No value addition) T1: Destaking, washing, blanching + dipping in sodium chloride solution (2%) for 2–3 h at 40–50°C, followed by drying at 50–60°C for 8–10 h to reduce the moisture content to less than 2%.	**Ascorbic acid (%)** Before Drying: 7.88 After Drying: 2.80 **Chlorophyll Content(mg/100g)** Before Drying: 1.25 After Drying: 1.125 **Capcasin content (µg/g)** Before Drying: 128.5 After Drying: 105.37	-	The dried green chilli pieces were ground and the powder was stored in airtight container upto 8–10 months at room temperature (22–30°C) without loss of green colour, nutrients and sensory attributes	Farmers showed a good response and were satisfied with the technology

OFT-9: Effect of edible coating on post-harvest quality of Capsicum at ambient storage.

1	Title	Effect of edible coating on post-harvest quality of Capsicum at ambient storage.
2	Problem Diagnose/defined	Shrinking of Capsicum during storage
3	Details of technologies selected for assessment/refinement	T0: Farmer's Practice T1: Dipping of Capsicum in 1% chitosan solution for 3 mins, air dried and stored in plastic crates
4	Source of technology	SKUAST-K
5	Production system thematic area	Storage
6	Thematic area	Capsicum
7	Performance of the Technology with performance indicators	Physiological Weight Loss, Shriveling, Decay Incidence
8	Final recommendation for micro level situation	-
9	Constraints identified and feedback for research	Storage at ambient conditions (25.51 ± 0.72 °C and 79.00 ± 5.98% RH)
10	Process of farmer's participation and their reaction	Positive response

Results of On Farm Trials

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
Capsicum	Irrigated	Shrinking of Capsicum during storage	Effect of edible coating on post-harvest quality of Capsicum at ambient storage	03	T1: Farmer's Practice T2: Capsicum will be dipped in 2% chitosan solution for 3 mins, air dried and stored in plastic crates Note: Dissolve 10g of chitosan in 5ml of glacial acetic acid and make volume	See Table Below	**Shriveling rating:** 1: no shriveling 5: extreme shriveling (50% or more of the surface area shriveled) **Decay rating:** 1: No decay 5: extreme decay (16% or more of the surface area decayed)	Chitosan coating (T1) enhanced shelf life in terms of visual quality, reduced shriveling and PLW significantly over control.	Satisfied

Storage at ambient conditions (25.51 ± 0.72 °C and 79.00 ± 5.98% RH)

Parameters		Day 0	Day 5	Day 10	Day 15
Physiological Weight Loss (%)	T0	-	35.70±1.01	61.96±1.45	65.01±1.03
	T1	-	20.41±1.23	30.09±2.01	45.01±2.01
Shriveling (Rating 1-5)	T0	1	4	5	-
	T1	1	1	2	4
Decay Incidence (Rating 1-5)	T0	1	2	5	5
	T1	1	1	2	3

OFT-10: Impact of feeding creep ration on the performance of lambs

1	**Title**	Impact of feeding creep ration on the performance of lambs
2	Problem Diagnose/defined	Poor performance of lambs
3	Details of technologies selected for assessment/refinement	T0: Farmers Practice = No Creep feeding T1= Creep ration @1.5% body weight up to 3 months
4	Source of technology	SKUAST-K
5	Production system thematic area	Livestock
6	Thematic area	Sheep
7	Performance of the Technology with performance indicators	36.53% increase in weight gain over Farmers practice.

		Achieved marketable weight 2 months early as compared to lambs reared in farmers practice group
8	Final recommendation for micro level situation	Adopting Creep ration feeding @1.5% body weight up to 3 months of age in lambs, starting from 2 weeks of age improves the body weight gain and achieve early marketable body weight.
9	Constraints identified and feedback for research	Availability of creep ration at higher rates
10	Process of farmer's participation and their reaction	Farmers were highly satisfied with the intervention of introducing creep ration feeding in lambs

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
Livestock	Extensive	poor performance of lambs and lamb mortality	Impact of feeding creep ration on the performance of lambs	3 (15 ewes each)	T1= Creep ration @1.5% body weight up to 3 months	Weight gain Marketable weight Marketable age %Mortality	8.25Kg 25Kg 12 months 5.0	Lambs in T1 attained marketable weight 2 months early as compared to T0. T1 registered 53.49 % increase in weight gain against 33% in T0.	Farmers were highly satisfied with the intervention of introducing creep ration feeding in lambs
				3 (15 ewes each)	Farmers Practice = No Creep feeding	Weight gain Marketable weight Marketable age %Mortality	13Kg 24.3Kg 10 months Nil		