

1 Achievements on technologies assessed and refined

OFT-1

1	Title of On Farm Trial	Assessment of herbicides for weed management in transplanted rice (Kharif)
2	Problem diagnosed	Yield loss due to high weed infestation
3	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed FP - Hand weeding at 30-40 DAT TO1- Application of PE Pendimethalin @ 0.75 kg/ha at (1 -3) DAT fb PoE application of Chlorimuron ethyl + Metasulfuron methyl @ 4.0 g/ha at 20 DAT TO2 - Post emergence application of Cyhalofop butyl+ Penoxulam @ 135g/ha at 20 DAT
4	Source of Technology(ICAR/ AICRP/SAU/other, please specify)	SLREC 2020-21, OUAT
5	Production system and thematic area	Rice-Pulse, Rainfed medium land
6	Performance of the Technology with performance indicators	Weed flora composition, Weed control efficiency Effective panicles/m ² , No of Filled grains /Panicle, 1000 grain weight
7	Final recommendation for micro level situation	TO-1 gives better control of weeds and resulted highest WCE (75.9%) along with yield (43.5 q/ha) over TO-2
8	Constraints identified and feedback for research	-
9	Process of farmers participation and their reaction	The farmers actively participated in the trial and satisfied with the technology (Training, Method Demonstration)

Thematic area:

Problem definition: Low yield due to heavy weed infestation

Technology assessed: Herbicides for weed management in transplanted rice

Table:

Technology option	No. of trials	Weed Density (No/m ²)			WCE (%)	Grain Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Grass	Sedge	Broadleaf						
FP	7	2.41 (1.85)*	1.67 (1.64)	2.70 (1.59)	-	37.8	43,290	70,610	27320	1.63
TO1	7	1.08 (1.44)	0.82(1.35)	1.37 (1.54)	75.9	43.5	46,878	81,258	34380	1.73
TO2	7	1.92(1.60)	1.22 (1.02)	2.37 (1.87)	69.3	42.1	45,682	78,642	32960	1.72

Results: TO-1 gives better control of weeds and resulted highest WCE (75.9%) along with yield (43.5 q/ha) over FP

OFT-2

1.	Title of On Farm Trial	Assessment on different method of pasteurization of straw for controlling of Inkcaps in paddy straw mushroom bed (Kharif)
2.	Problem diagnosed	Lack of knowledge on pasteurization of substrate for controlling competitive mould (inkcap)
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed FP - <i>No pasteurization of substrate</i> TO1- Pre Soaking of substrate in 2% bleaching powder for 6hrs TO2 - Pre Soaking of substrate in 0.02% Calcium Carbonate for 6hrs
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	Proceedings of 8 th International conference on Mushroom Biology, 2015-16
5.	Production system and thematic area	Homestead
6.	Performance of the Technology with performance indicators	Intensity of copernicus% No of Inkcaps /bed, Yeild (Kg/bed)
7.	Final recommendation for micro level situation	Pre Soaking of substrate in 2% Calcium carbonate for 6hrs lowering the inkap infection
8.	Constraints identified and feedback for research	Unavailability of good quality straw
9.	Process of farmers participation and their reaction	The farmers actively participated in the trial and satisfied with the technology (Training, Method Demonstration)

Thematic area:

Problem definition: Lack of knowledge on pasteurization of substrate for controlling competitive mould (inkcap)

Technology assessed: Different method of pasteurization of straw for controlling of Inkcaps in paddy straw mushroom bed in Kharif

Table:

Technology option	No. of trials	Intensity of Inkcaps / Copernicus %	Yield (q/ha)	Biological Efficiency	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
FP	7	33.01	465	6.6	85	93.0	8.0	1.09
TO1	7	11.30	681	9.7	95	136.2	41.2	1.43
TO2	7	4.0	856	12.2	95	171.2	76.2	1.80

Results: *Pre Soaking of substrate in 2% Calcium carbonate for 6hrs lowering the inkap infection*

OFT-3

1.	Title of On Farm Trial	Assessment of PSB and VAM on Groundnut (Rabi)
2.	Problem diagnosed	Low yield due to poor nutrient management and water stress
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed FP –Application of $N-P_2O_5-K_2O$ @ 20:40:40 kg/ha TO1- STBF+0.2LR+Rhizobium @50g/kg of seed + PSB@5kg/ha TO2 - STBF+0.2LR+Rhizobium @50g/kg of seed + PSB@5kg/ha+VAM@5kg/ha
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	All India Network Project on soil bio-diversity & Bio-fertilizers 2010
5.	Production system and thematic area	Rice-groundnut, Irrigated medium land, INM
6.	Performance of the Technology with performance indicators	Pod yield(q/ha), No of pods/plant, B:C Ratio
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	The farmers actively participated in the trial and satisfied with the technology (Training, Method Demonstration)

Thematic area:

Problem definition: Low yield due to poor nutrient management and water stress

Technology assessed: PSB and VAM application in Groundnut

Technology option	No. of trials	No of pods/Plant	Pod Yield (q/ha)	% increase over FP	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
FP	7	16.9	17.5	-	54000	97125	43125	1.80
TO1	7	21.1	20.2	15.42	56000	112110	56110	2.00
TO2	7	21.8	21.6	23.42	57500	119880	62380	2.08

Results:

OFT- 4

1.	Title of On Farm Trial	Assessment of lime application in greengram (Rabi)
2.	Problem diagnosed	Low yield of greengram in acid soil due to poor growth & nutrient uptake
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed FP –Application of NPK (20:40:40) and no application of lime TO1- TO1-STBR + Seed coated with lime (CaCO ₃) @ 160gm/kg seed TO2-STBR + 0.2LR as CaCO ₃ (furrow application)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	All India Network Project on Soil bio-diversity & bio-fertilizer, 2016-17 & 2018-19
5.	Production system and thematic area	Rice-Greengram, Irrigated medium land, INM
6.	Performance of the Technology with performance indicators	Pod yield (q/ha), No of pods/plant, B:C Ratio
7.	Final recommendation for micro level situation	
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	The farmers actively participated in the trial and satisfied with the technology (Training, Method Demonstration)

Thematic area:

Problem definition: Low yield of greengram in acid soil due to poor growth & nutrient uptake

Technology assessed: Lime application in greengram

Technology option	No. of trials	No of pods/Plant	Pod Yield (q/ha)	% of Increase	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
FP	7	11.2	7.8	-	25000	56745	31745	2.27
TO1	7	14.3	9.0	15.38	25800	59475	39675	2.54
TO2	7	14.6	9.3	19.23	28200	67657	39457	2.40

Results:

OFT- 5

1.	Title of On Farm Trial	Assessment of suitable varieties of tomato for long term keeping (Rabi)
2.	Problem diagnosed	Poor keeping quality of existing tomato varieties
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed FP –Cultivation of Tomato var: Laxmi TO1- F1 hybrid Ark Rakshyak TO2 - F1 hybrid Arka Samrat
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	ICAR-IIHR, Bengaluru, 2018
5.	Production system and thematic area	Vegetable-vegetable, Rainfed, Varietal evaluation
6.	Performance of the Technology with performance indicators	Fruit Yield(kg/plant), yield- q/ha, Keeping Period in days
7.	Final recommendation for micro level situation	ArkaRakshyak was found to have best keeping quality (13-14) days under normal condition
8.	Constraints identified and feedback for research	The variety is subject to fruit rot in absence of staking & plant height is higher
9.	Process of farmers participation and their reaction	The farmers actively participated in the trial and satisfied with the technology (Training, Method Demonstration)

Thematic area:

Problem definition: Poor keeping quality of existing tomato varieties

Technology assessed: suitable varieties of tomato for long term keeping

Technology option	No. of trials	Avg No of fruits/Plant	Keeping Period in days	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
FP	7	26.5	2.5	230.35			1,65,500	
TO1	7	35.7	13.1	300.50			2,19,000	
TO2	7	32.5	8.4	272.37			1,87,000	

Results: Arka Rakshyak was found to have best keeping quality (13-14) days under normal condition