

Achievements on technologies assessed and refined

OFT-1

1	Title of On Farm Trial	Assessment of herbicides for weed management in transplanted rice
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 30DAT TO1- Application of PE Pendimethalin @ 0.75 kg/ha at (1 -3) DAT fbPoE 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 (79.3%) along with yield (46.2 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	Broad leaf						
FP	7	1.85*	1.64	1.59	-	45.2	43,290	70,610	27320	1.63

TO1	7	1.44	1.35	1.54	79.3	46.2	46,878	81,258	34380	1.73
TO2	7	1.60	1.02	1.87	73.3	45.7	45,682	78,642	32960	1.72

*Transformed values

Results: TO-1 gives better control of weeds and resulted highest WCE (79.3%) along with yield (46.2 q/ha) over FP

OFT-3

1	Title of On farm Trial	Assessment of PSB and VAM on Groundnut (Rabi)-2023
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 ₂ O ₅ -K ₂ O @ 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	STBF+0.2LR+Rhizobium @50g/kg of seed + PSB@5kg/ha+VAM@5kg/ha resulted in highest pod yield
8	Constraints identified and feedback for research	Availability of good quality VAM is a problem
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

Table:

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	16.0	16.8	-	55,000	98,280	43,280	1.79
TO1	7	20.8	21.6	28.57	57,000	1,26,360	69,360	2.22
TO2	7	21.4	22.7	35.11	58,500	1,32,795	74,295	2.27

Results: STBF+0.2LR+Rhizobium @50g/kg of seed + PSB@5kg/ha+VAM@5kg/ha resulted in highest pod yield of 22.7q/ha.

OFT-4

1	Title of On farm Trial	Assessment of nano urea liquid fertilizer in transplanted rice(Kharif)2022
2	Problem diagnosed	Low yield due to Improper use of urea fertilizer
3	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed FP - Application of N:P: K(80:40:40) kg/ha To1 - 50 % recommended N + 100 % P and K as basal application and two sprays Nano urea @ 0.2 % tillering and PI stage To2 - 75 % recommended N + 100 % P and K as basal application and two sprays Nano urea @ 0.2% at tillering and PI stage
4	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	Annual Report (IFFCO Project), OUAT 2020-21,AAU, Annual report 2019-20
5	Production system and thematic area	Rice- Greengram, INM
6	Performance of the Technology with performance indicators	Initial and post harvest soil test value, No. of effective tillers /sq m, No. of filled grain per panicle, 1000 grain weight (gm), Yield (q/ha) , Economics
7	Final recommendation for micro level situation	This OFT need to be repeated in 2 nd year for confirmation of results
8	Constraints identified and feedback for research	Research on physiology of nano urea is required
9	Process of farmers participation and their reaction	Training, Oft, Method demonstration etc.

Thematic area: INM

Problem definition: Low yield due to Improper use of urea fertilizer

Technology assessed: To1: 50 % recommended N + 100 % P and K as basal application and two sprays Nano urea @ 0.2 % tillering and PI stage

To2 :75 % recommended N + 100 % P and K as basal application and two sprays Nano urea @ 0.2% at tillering and PI stage

Table:

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of effective tillers/hill	No. of spikelet per panicle	Test wt. (100 grain wt.)						
FP	7	10.6	278.1	21.0	21.6	40.4	55000	82416	27416	1.50
To1	7	12.3	292.3	21.3	11.5	45.2	56000	92208	36208	1.65
To2	7	12.8	295.4	21.4	10.4	46.3	56350	94452	38102	1.68

Results:75 % recommended N + 100 % P and K as basal application and two sprays Nano urea @ 0.2% at tillering and PI stage resulted in highest grain yield of 46.3q/ha

OFT-5

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 2% 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, dipping the polythene and wiping the rack with calcium carbonate for management of inkap
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: TO1- Pre Soaking of substrate in 2% bleaching powder for 6hrs
TO2 - Pre Soaking of substrate in 2% Calcium Carbonate for 6hrs

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, dipping the polythene and wiping the rack with calcium carbonate for management of inkap

OFT-6

1.	Title of On Farm Trial	Assessment the performances of FPOs with various level of task and commodity to enhance the net return
2.	Problem diagnosed	Distress sale of Farm produce
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	Assessed FP - <i>Farmers market their produce individually through intermediaries</i> TO1- FPO Dealing with multiple commodities with multi tasking TO2 – FPOs dealing with multiple commodity with single tasking
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	
5.	Production system and thematic area	Agricultural marketing
6.	Performance of the Technology with performance indicators	Perception of the respondents about the performance of FPO in marketing of their produce on Social aspect, Technical Aspect, marketing aspect, and organizational Aspect
7.	Final recommendation for micro level situation	FPOs dealing on Multi commodity and single tasking are more profitable
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: Agricultural marketing

Problem definition: To assess the performance of FPOs a structured schedule was developed to study the opinion of the member about the role of FPO in successful marketing of the produce. Different aspects were studied in relation to the FPOs using the (3-point Linkert scale of SA-Strongly agree, PA-Partially agree, NA-Not agree) on various aspects like 1. Social aspect 2. Technical aspect 3. Marketing Aspect 4. Organisational Aspect

Technology assessed: TO1- FPO Dealing with multiple commodities with multi tasking
TO2 – FPOs dealing with multiple commodity with single tasking

Table:

	TO1 (N=50)		TO2 (N=32)	
Aspects	Mean score	Gap (%)	Mean score	Gap (%)
Social aspect	2.11	29.6	2.07	30.9
Technical Aspect	1.96	34.6	1.78	40.9
Marketing Aspect	2.13	28.8	1.88	37.2
Organisational Aspect	1.96	34.8	1.79	40.6