Achievements on technologies assessed and refined -2023

ON FARM TRIAL -1

1	Title of On farm Trial	Assessment of Decomposer for in-situ residue management in Rice
2	Problem diagnosed	Residue burning causing environment pollution
3	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO-1 : NRRI consortia @1kg/t of paddy straw + 5 kg urea along with 0.5% jaggery solution + cow dung slurry in 100lit of water for 1 ha. TO 2 : PUSA decomposer @ 4 capsules in 25 lit of water with 2 % jaggery solution and pulse powder for 1 ha.
4	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	IARI,2020&NRRI,2021
5	Production system and thematic area	Rice Residue Management
6	Performance of the Technology with performance indicators	Organic carbon (%) initial & final, Time of decomposition
7	Final recommendation for micro level situation	PUSA decomposer @ 4 capsules in 25 lit of water with 2 % jaggery solution and pulse powder for 1 ha.
8	Constraints identified and feedback for research	PUSA decomposer @ 4 capsules in 25 lit of water with 2 % jaggery solution and pulse powder for 1 ha.
9	Process of farmers participation and their reaction	Farmers are satisfied with the research

Technology option	No. of trials	Yield component			Disease/ insect pest incidence (%)	Decomposition % (within 2 months)	Period for culturable decomposition	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Initial Soil organic Carbon (%)	Final organic Carbon (%)	Initial Soil organic Carbon (%)							
FP: Residue burning	10	0.4	0.42	0.4	NA	-	-	0	NA	NA	NA
TO-1	10	0.4	0.44	0.4	NA	45 %	3-4months	3000	NA	NA	NA
TO-2	10	0.4	0.4	0.4	NA	60 %	2-3months	2200	NA	NA	NA

ON FARM TRIAL -2

1	Title of On farm Trial	Assessment of Decomposer for in-situ residue management in Rice
2	Problem diagnosed	Assessment of Aromatic rice varieties for higher profitability
3	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1: Rice variety Kalikati@ 5 kg/ha (OUAT,2020) TO2: Rice variety Gangabali@ 5 kg/ha (OUAT,2020)
4	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	**Source: OUAT, 2020**
5	Production system and thematic area	Rice-Rice cropping system
6	Performance of the Technology with performance indicators	Organoleptic test, EBT/m2, No of filled grains/panicle, test weight, yield & economics
7	Final recommendation for micro level situation	The aroma of Gangabali and Kalikati were more than Acharmati.
8	Constraints identified and feedback for research	Organoleptic test is very difficult to assess the duration of aroma exist.
9	Process of farmers participation and their reaction	Farmers are satisfied with the research

Technology		Yield (q/ha)	% of increase	Net Income (Rs./ha)	B:C	Remarks
FP:	Rice variety Acharmati @ 5kg/ha	30.4		51200	2.28	Lodging
TO1:	Rice variety Kalikati@ 5 kg/ha (*OUAT,2020*)	24.8	-22.5%	34400	1.86	
TO2:	Rice variety Gangabali@ 5 kg/ha (*OUAT,2020*)	22.4	-35.7 %	27200	1.68	

ON FARM TRIAL -3

1	Title of On farm Trial	Assessment of Wet Land Power Weeders in Paddy
2	Problem diagnosed	Labour intensive, Drudgery prone and time consuming operation in manual weeding
3	Details of technologies selected for ssessment/refinement (Mention either Assessed or Refined)	TO1:MandwaWeeder TO2: Wet Land Power Weeder
4	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	AICRP on ESA, CAET, OUAT, 2011 & 2013
5	Production system and thematic area	Rice-Greengram, Farm mechanization
6	Performance of the Technology with performance indicators	Field capacity (ha/h), Weeding Index(%)
7	Final recommendation for micro level situation	Power operated Wet land power weeders are more efficient in weeding in rice.
8	Constraints identified and feedback for research	Row to row spacing is to be maintained at minimum 25cm.
9	Process of farmers participation and their reaction	Training and demonstration

Technology option	No. of trials	Yield component			Weeding index	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Field capacity (ha/h)	Labour requirement (mandays/ha)	Cost of operation (Rs/ha)						
Manual weeding	7	0.008	15	4500/-	4.7	41.2	41560	76220	34660	1.8
MandwaWeeder	7	0.016	8	2400/-	18.1	41.6	39460	76960	37520	1.9
Wet Land Power Weeder	7	0.08	2	1250/-	16.6	42.5	38310	78810	40380	2.0

ON FARM TRIAL -4

1	Title of On farm Trial	Assessment on different maize shellers
2	Problem diagnosed	Labour intensive, Drudgery prone and time consuming operation
3	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO_1 :A hand operated maize sheller TO_2 :A rotary maizesheller
4	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	AICRP ON FIM CAET, OUAT, 2018-19
5	Production system and thematic area	Rice-Maize
6	Performance of the Technology with performance indicators	Capacity(kg/h), Shelling efficiency(%), Breakage(%), Cost of shelling(Rs./kg), Labour requirement (man-days/ha)
7	Final recommendation for micro level situation	
8	Constraints identified and feedback for research	
9	Process of farmers participation and their reaction	

Technology option	No. of trials					Yield (q/ha)	Cost of cultivation cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Threshing capacity (q/hr)	Threshing efficiency (%)	Labour requirement (mandays/q)						
Manual	7	0.11	100%	1	8850	52.4	66700	131000	64300	1.96
A hand operated maize sheller	7	0.18	100%	1	5400	52.4	63220	131000	67780	2.1
A rotary maize sheller	7	0.45	100%	1	2175	52.4	60025	131000	70975	2.2

ON FARM TRIAL - 5

Title	Technology
Assessment of the performance of FPOs with varied levels of task and commodity to enhance income	Farmers Practice -Farmers marketing their produce through intermediaries TO_1 -FPO dealing with a single commodity with a single task i.e., Millet-Marketing TO_2 -FPO dealing with multi-commodity with multi-task i.e., Pulses, Crops Vegetable - sorting, grading, packing, value addition, branding, leveling and marketing

To access the performance of FPOs , a structured scheduled was developed to study the opinions from the Members about the role of FPOs in successful marketing of the produce. Different aspects were studied In relation to FPOs (3 point Likert scale- SA- Strongly agree, PA- Partially Agree, NA-Not Agree1. Social aspects 2.Technical aspects 3.Marketing aspects 4.Organisational aspects

Aspects (N=30)	TO_1(N=35)		TO_2 (N=35)		
	Mean Score	Gap %	Mean Score	Gap %	
Social Aspects	2.12	29.8	2.06	30.8	Stat analysis Z calculated 2.86 Z tab 1.96 As Z cal> Z tab there is a significance difference between two sample means
Technical aspects	1.95	35.6	1.77	38.2	
Marketing aspects	2.14	28.8	1.86	35.9	
Organisational aspects	1.93	39.8	1.78	31.3	

TO_1- In TO_1 maximum gap were observed in organizational aspects where as in TO_2 technical gap were maximum. In both the groups responded were satisfied about the marketing aspects of the FPOs . As TO_2 is performed diversified activities emphasis should be more on strengthening of Technical aspects where as TO_1should focus on providing organizational and guidance for higher profitability

ON FARM TRIAL - 6

1	Title of On farm Trial	Assessment of different feed regime on milk production in dairy cows
2	Problem diagnosed	High grain cost leading to high cost of production and otherwise low milk production due to no grain feeding
3	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO-1: Grazing + Straw @ 6-8 kg/day + Local available oil cake @ 100g/day TO2: Grazing + Straw @ 6-8 kg/day + Local available pulse residue (Gandhiri) @ 250g/day + Maize @ 250g/day
4	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	Annual Report ICAR-ATARI, Kolkata, 2014
5	Production system and thematic area	Homestead, LPM
6	Performance of the Technology with performance indicators	Milk yield/day, Lactation length, Health status
7	Final recommendation for micro level situation	Acceptable for the farmers interested to feed grain to their cows
8	Constraints identified and feedback for research	Trial may be done with decrease amount of Maize and locally available pulse residue to see the result
9	Process of farmers participation and their reaction	Farmers were well interested

Technology option	No. of trials	Yield component			Health status of cow	Milk yield /day/cow	Cost of Production(Rs. /cow/day)	Gross return (Rs./cow/day)	Net return (Rs./cow/day)	BC ratio
		Quality of milk Avg. LR Value	-	-						
FP- Grazing, straw feedng, unscientific concentrate feeding (lesser than required)	05	29			Good	4.2	49	126	77	2.57
TO-1	05	28			Seldom loose motion	5.62	61	169	108	2.77
TO-2	05	29			Good	5.15	52	154	102	2.96

ON FARM TRIAL - 7

1	Title of On farm Trial	Assessment of two different ethno-veterinary formulations for treatment of lumpy skin disease in cattle.
2	Problem diagnosed	Incidence of Lumpy Skin Disease leading to morbidity and lower milk production
3	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO_1:Prepare a paste by mixing betel leaves 10 nos., black pepper- 10 gm., salt-10 gm.. Mix this paste with jaggery. Day-1: Feed this one dose to infected animal every 3 hr interval. Day-2: Feed three doses daily from second day onwards for 2 weeks TO_2: Ingredients: Garlic- 2 pearls, coriander-10 g, Cumin-10 gm, Tulsi-1 handful, Dry cinnamon leaves- 10 g, Black pepper-10 g, Betel leaves- 5 nos, Shallots- 2 bulbs, Turmeric powder- 10 g, Chirata leaf powder-30 g, Sweet basil-1 handful, Neem leaves- 1 handful, Aeglemarmalos(Bel) leaves-1 handful, Jaggery-100 g. Mix all the ingredients. Day-1: Feed this one dose to infected animal every 3 hr interval. Day-2: Feed two doses daily in the morning and evening from second day till conditions resolve
4	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	NDDB, 2022
5	Production system and thematic area	Homestead, LPM
6	Performance of the Technology with performance indicators	Time of recovery and milk production status
7	Final recommendation for micro level situation	
8	Constraints identified and feedback for research	
9	Process of farmers participation and their reaction	

Technology option	No. of trials
FP- Chemical treatment when situation gets worsen	02
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TO_2: Ingredients: Garlic- 2 pearls, coriander-10 g, Cumin-10 gm, Tulsi-1 handful, Dry cinnamon leaves- 10 g, Black pepper-10 g, Betel leaves- 5 nos, Shallots- 2 bulbs, Turmeric powder- 10 g, Chirata leaf powder-30 g, Sweet basil-1 handful, Neem leaves- 1 handful, Aeglemarmalos(Bel) leaves-1 handful, Jaggery-100 g.	03

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