Achievements on technologies assessed and refined -2024-25

ON FARM TRIAL -1

1.	Title of On farm Trial	Assessment of Non Ragi millet crops for diversification of Millet production system
2.	Problem diagnosed	Scope for improvement in yield of millet crops and crop diversification
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO_1 :Little millet TO_2 :Pearl millet TO_3 :Sorghum
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	**Source :** IIMR, 2023
5.	Production system and thematic area	Rice-Rice cropping system, Crop improvement
6.	Performance of the Technology with performance indicators	yield of individual crops, ragi equivalent yields, economics
7.	Final recommendation for micro level situation	Although Sorghum showed more Ragi equivalent yield, it is recommended to grow Ragi in farmers field due to easy procurement centre.
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	Farmers are satisfied with the research

Technology options	**Yield Q/ha**	**Ragi Equivalent Yield**	**Net return**	**B:C ratio**
FP : Ragi (Var. Arjun)	8.2	8.2	14178	1.68
TO1 : Little millet (Var. kalingaSua)	8.8	7.18	11800	1.47
TO2 :Pearl millet (Var. PC 6012)	7.8	6.36	10300	1.30
TO3 :Sorghum (Var. CSV 14)	12.4	10.12	20400	2.07

ON FARM TRIAL -2

1.	Title of On farm Trial	Assessment of High yielding medium duration Rice Varieties in Kharif
2.	Problem diagnosed	Scope for improvement in yield in medium land
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1: Kalinga Dhan 1203 is of medium slender grain type with the average yield of 54.3 q/ha, 135days duration and suitable for irrigated medium lands. TO2: Kalinga Dhan 1205 is of medium slender and fine grain type with the average yield of 51.8 q/ha, 132days duration and suitable for rainfed and irrigated medium lands.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	**Source : OUAT, 2022**
5.	Production system and thematic area	Rice- fallow cropping system, Crop improvement
6.	Performance of the Technology with performance indicators	Yield (q/ha), Additional income over additional investment and B:C ratio
7.	Final recommendation for micro level situation	Kalingadhan 1203 resulted in 14.28 % higher yield as compare to existing variety of rice. Recommended to grow under rainfed medium land condition of balangir district.
8.	Constraints identified and feedback for research	
9.	Process of farmers participation and their reaction	Farmers are satisfied with the research

Technology options	**Yield Q/ha**	**% of increase**	**Net Income (Rs./ha)**	**B:C ratio**
FP: Lalat	**39.2**		36160	1.67
To1: KalingaDhan 1203	**44.8**	14.28	47040	1.84
To2: KalingaDhan 1205	**42.6**	8.6	41980	1.75

ON FARM TRIAL -3

1.	Title of On farm Trial	Assessment of Aromatic rice varieties for higher profitability
2.	Problem diagnosed	Non availability of suitable Aromatic rice
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	T O $_1$:Rice variety Kalikati@ 5 kg/ha (OUAT,2020) TO_2: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, Crop improvement
6.	Performance of the Technology with performance indicators	Yield (q/ha), Additional income over additional investment and B:C ratio
7.	Final recommendation for micro level situation	**For persistence of Aroma Gangabali was recommended.**
8.	Constraints identified and feedback for research	Higher doses of chemical fertilizer resulted in lodging of crop before harvesting
9.	Process of farmers participation and their reaction	Farmers are satisfied with the research

Technology options	**Yield Q/ha**	**% of increase**	**Net Income (Rs./ha)**	**B:C ratio**
FP: Kalajeera	19.6		26,400	1.51
TO_1: Kalikati	28.2	43.8	58,800	2.08
TO_2 : Gangabali	24.6	25.5	44,400	1.82

ON FARM TRIAL -4

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 assessment/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	0.007	16	4600	5.2	40.8	42360	76220	33860	1.80
MandwaWeeder	7	0.018	7	2200	11.0	41.9	39810	76960	37150	1.93
Wet Land Power Weeder	7	0.075	3	1450	12.4	43.3	38460	78810	40350	2.05

ON FARM TRIAL -5

1.	Title of On farm Trial	Assessment on Irrigation through Sprinkler for Enhancing Yield of Greengram
2.	Problem diagnosed	Moisture stress due to uneven or no irrigation and reduced yield during critical growth stages.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO_1 :One irrigation through sprinkler **before pre-flowering stage** – improves water use efficiency and promotes early crop vigor TO_2 :Two sprinkler irrigations: **1) before pre-flowering, 2) before pod formation** – ensures adequate moisture during critical stages, enhancing yield potential
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	IIWM, Bhubaneswar, Annual Report 2017-18
5.	Production system and thematic area	Green gram
6.	Performance of the Technology with performance indicators	Water Use Efficiency (kg/ha-mm), Labour requirement (man-days/ha), Yield (q/ha), cost of cultivation
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 (Rs./ha)	Gross Return (Rs./ha)	Net Return (Rs./ha)	B:C Ratio
FP (No irrigation)	7	6.8	₹22,000	₹47,600	₹25,600	2.16
TO1	7	8.4	₹25,000	₹58,800	₹33,800	2.35
TO2	7	9.8	₹27,000	₹68,600	₹41,600	2.54

ON FARM TRIAL -6

Title of the OFT	Technology options
Assessment of effectiveness of different extension methods to access information on Rice production	FP:Farmers generally rely upon information through print media TO1: FP+ Short Video Lecture+ Focus Group Discussion TO2: FP+ Using “Rice X pert app”.

Results :

Tech. Options	**Understanding Of The Message**		**Time Based Information**		**Suitability Of Technology**		**Increase In Knowledge**		**User Friendliness**	
	MS	Gap (%)	MS	Gap (%)	MS	Gap(%)	MS	Gap(%)	MS	Gap(%)
FP	1.96	**34.66**	1.56	**48.0**	1.66	**44.66**	1.73	42.3	1.53	49.00
TO1	2.33	22.33	1.60	46.6	2.03	32.33	1.96	34.6	1.76	41.30
TO2	**2.53**	15.66	**2.80**	06.6	**2.46**	18.00	**2.56**	**14.6**	**2.63**	12.33

Observation : The understanding of the technology and message is more in using X pert app which is available in time and user friendly and suitable to their situation and farming system

ON FARM TRIAL -7

Title of OFT	Technology options
Assessment of point of discontinuance in Rice fallow management	FP: Farmers keeping areas fallow after rice Cultivation TO1: Farmers cultivating pulses/oilseeds in fallow areas under any govt. (line dept./KVK) assistance/programme TO2: Farmers discontinue after discontinuance of govt. assistance

Result:

Treatments	Awareness on crop diversification N=30			Effective Extension approach N=30			Aavailability of resource N=30			Feasibility of Technology N=30		
	SA	A	DA	SA	A	DA	SA	A	DA	SA	A	DA
FP	3	9	18	0	7	23	0	7	23	4	11	10
TO1	12	8	10	14	9	7	5	14	11	12	8	10
TO2	5	16	9	4	8	18	2	6	12	8	16	6

Recommendations-

Awareness on crop diversification and feasibility of technology is there, but discontinuation is due to lack of resource availability like inputs, irrigation and approach

ON FARM TRIAL -8

1.	Title of On farm Trial	Assessment of low cost concentrate mixture on CB heifer for early onset of estrus
2.	Problem diagnosed	Delayed estrous in CB heifers due to Improper nutrition of dairy heifer animals, late puberty
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO-1: Grazing + Straw @ 6-8 kg/day + Conc. Mix 1 (Maize-50%, Wheat bran- 30%, GNOC-17%, mineral mix -2.5%, salt -0.5%) TO2: Grazing + Straw @ 6-8 kg/day + Conc. Mix 2 (Maize-25%, Broken rice- 25% Wheat bran – 30%, GNOC-10%, Chuni-7%, mineral mix -2.5%, salt -0.5%)
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	ICAR-IGFRI, Jhansi -2017
5.	Production system and thematic area	Grazing and Homestead
6.	Performance of the Technology with performance indicators	Body weight at puberty, age at first heat, conception rate
7.	Final recommendation for micro level situation	Concentrate feeding increased the BW gain and supported early maturity
8.	Constraints identified and feedback for research	Interested farmers are doing eagerly.
9.	Process of farmers participation and their reaction	Participated farmers were happy and satishfied

Technology option	No. of trials	Yield component			Avg. Age at first heat (month)	Avg. Conception rate (%)	Net Return/Cow (6 months)	BC ratio
		Avg. BW at puberty (Kg)	-	-				
FP- Grazing , heavy straw feeding and occasional concentrate feeding (4-5 kg wheat bran	05	252			23	16	11,500	2.57
TO1	05	273			19	37	21,400	2.96
TO2	05	266			21	31	17,500	2.77

ON FARM TRIAL -9

1.	Title of On farm Trial	Assessment of Duck breeds in Bolangir District
2.	Problem diagnosed	Ducks reared are either Desi or from local sellers. Duckling mortality is more in case of local sellers and associated with poor growth in case of desi ducks.
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	TO1: Khaki Campbell Day old ducklings each 10 nos. TO2: DK (Desi X Khaki Campbell) Day old ducklings each 10 nos.
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	ICAR-CARI, BBSR, 2016-17
5.	Production system and thematic area	Homestead, LPM
6.	Performance of the Technology with performance indicators	Duckling mortality, Weight Gain in 6,8,10 and 16 weeks, Egg production status
7.	Final recommendation for micro level situation	Weight gain in DK breed is better in comparision to Khaki. Mortality is also less in case of DK
8.	Constraints identified and feedback for research	Availability of DK breed may be a constrain
9.	Process of farmers participation and their reaction	Participated farmers were happy and satishfied

Technology option	No. of trials	Avg. mortality up to 4 weeks	Avg. BW at 6week age	Avg. BW at 16week age	Net return 20 birds	BC ratio
FP-Local ducks or ducklings from local sellers	10	14%	485 g	Results awaiting		
TO1	10	15%	850 g			
TO2	10	11%	970 g