

## OFT – 1 (F.Y. 2024-25)

Discipline: Agronomy

- Thematic area: NRM
- Problem definition/Name of OFT: Assessment of efficacy of Nano DAP on Rice

1.	Title of On farm Trial (OFT)	<b>Assessment of efficacy of Nano DAP on Rice</b>
2.	Problem diagnosed	Excess use of DAP in rice results in high cost of cultivation which also causes adverse effect on soil health
3.	Details of technologies selected for assessment/refinement (Mention either Assessed or Refined)	<b>Control – Farmers Practice</b> - RDF (100: 40: 20: N: P <sub>2</sub> O <sub>5</sub> : K <sub>2</sub> O) kg/ha <b>T.O. I</b> – 50% RDF of P <sub>2</sub> O <sub>5</sub> + 100% N & K <sub>2</sub> O + Seed treatment with Nano DAP (5 ml/ kg seed) + One spray with Nano DAP (4ml/l water) at 25 DAT/P of rice <b>T.O. II</b> – <b>T.O.I</b> + 2 <sup>nd</sup> sprays of Nano DAP (4ml/l water) at 45 DAT/P of rice
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	ICAR – RCER, Patna (Annual Report 2021)
5.	Production system and thematic area	NRM
6.	Performance of the Technology with performance indicators	Plant height, No. of Grains/Panicle, Panicle length, Test weight, Grain yield, Cost of cultivation, Net income, and B:C ratio
7.	Final recommendation for micro level situation	Trail to be repeated
8.	Constraints identified and feedback for research	Trail to be repeated
9.	Process of farmers participation and their reaction	Participatory and farmers are enthusiastic about this trial.

**Results with Table and good quality photographs in jpg.**

Thematic area	Technology options with detailed treatments	Area (ha)		Plant ht. (cm)	Panicle length (cm)	Grains/ Panicle	Test wt. (g)	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Proposed	Actual									
NRM	Control – FP	1.0	1.0	110.8	22.3	193.2	24.7	51.3	41500	123440	81940	2.97
	T.O. I	1.0	1.0	113.1	22.0	192.6	24.9	50.1	42125	120760	78635	2.86
	T.O. II	1.0	1.0	112.4	23.1	195.4	24.5	52.7	43520	127230	83710	2.92

The result indicated that T.O.II resulted in the maximum grain yield (52.7 q/ha) of Paddy (var. Sabour Sampanna) including the highest panicle length (23.1cm) and grain/panicle i.e, 195.4 and gross return (Rs. 127230/-). However, B:C ratio of T.O.II was marginal lower than Farmers' practice.