OFT – 04 (Soil Science) (Rabi 2023-24)

- Thematic area: Organic Cultivation
- Problem definition/Name of OFT: Excessive use of fertilizers in cauliflower

1.	Title of On farm Trial (OFT)	Evaluation of organic cultivation package in cauliflower									
2.	Problem diagnosed	Excessive use of fertilizer in cauliflower									
3.	Details of technologies selected for assessment/refinement	 FP - Application of 5 MT FYM/ha. + 32 kg N+23 kg P₂O₅ +15 kg K₂O/ha through inorganic source. TO₁ - Application of 5 MT FYM/ha. + 25% of RDF (NPK) through organic source. (RDF 200:150:100), for 50kg N supply through organic sources 625 kg Karanj cake and 2500 kg Vermicompost. TO₂ - Seed and seedling treatment with Beejamrit + 3 Spray of Jeevamrit at 21 days interval + application Ghanjeevamrit @ 1q./ha as basal application and 30DAS. Calculation of RDF on the basis of N only. 25% RDF with be applied through karanj cake and vermicompost. (N in Karanj cake 4.0% and N in Vermicompost 1.0%) 									
4.	Source of Technology	RKM KVK Ranchi & National centre on organic farming, Gaziabad.									
5.	Production system and thematic area	Maize/Black gram based production system and organic cultivation									
6.	Performance of the Technology with	Table- Evaluation of organic cultivation package in cauliflower									
	performance indicators	Technology option	No of	Data related problem addressed	Yield component		Curd yield	C.C.	Gross	Net Return	В:С
		Technology option	replication		Curd diameter (cm)	Curd weight (g)	(q/ha.)	(Rs.ha)	income	(Rs/ha)	D:C
		FP - Application of 5 MT FYM/ha. + 32 kg N +23 kg P ₂ O ₅ +15 kg K ₂ O/ha through inorganic source	10		12.46	0.625	156.47	82946	312940	229994	3.77
		TO ₁ - Application of 5 MT FYM/ha.+25% of RDF (NPK) through organic source			13.27	0.732	181.36	90500	362720	272220	4.01

		TO ₂ - Seed seedling treatmen Beejamrit + 3 Sp Jeevamrit at 21 interval + appl Ghanjeevamrit 1q./ha as application and 3	nt with pray of days ication @ basal		11.38	0.605	133.16	75350	266320	190970	3.53
		SE(m)			0.327	0.029	5.209				
	T1 1 1 1 1	C.D.	1 1 1	1 . 1.	0.971	0.076	14.346	T 111	1 ~ 1	1.5. 1	. 1: 2
7.	Final recommendation		The trial was conducted during rabi season 2023 on 10 farmers field in village Nawadih and Sehal Banshitoli of								
	for micro level situation	Ghaghra Block	Ghaghra Block to find out the suitable technological option for enhancing crop yield and income. Data collected during the								
		trial clearly indicated that the maximum yield (181.36q/ha), net income (Rs 272220/ha) and B:C ratio (4.01) was found under									
		technology option 1 i.e. TO₁ - Application of 5 MT FYM/ha. + 25% of RDF (NPK) through organic source.									
		The per	The percentage yield increase observed in TO1 was 15.91 higher than that of FP and (-) 14.90% low yield was								
		observed in TO	observed in TO2 than that of FP. Therefore technology option TO1 is being recommended for maximum yield income and								
		better soil fertility.									
8.	Constraints identified	Organic sources like vermicompost and karanj cake is not easily available at all places and cost effective.									
	and feedback for		_				_				
	research										
9.	Process of farmers	1.	Participatory and	interactive							
	participation and their		2. Field day								
	reaction	3.	Farmer to Farmer	interaction							

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

Thematic area	Technology options with detailed treatments	Area (ha in Fodder)/ livesto	Nos (in	Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio	
		Proposed	Actual	,					
Organic Cultivation	FP - Application of 5 MT FYM/ha. + 32 kg N +23 kg P ₂ O ₅ +15 kg K ₂ O/ha through inorganic source	0.2	0.2	156.47	82946	312940	229994	3.77	
	TO ₁ - Application of 5 MT FYM/ha.+25% of RDF (NPK) through organic source	0.2	0.2	181.36	90500	362720	272220	4.01	
	TO ₂ - Seed and seedling treatment with Beejamrit + 3 Spray of Jeevamrit at 21 days interval + application Ghanjeevamrit @ 1q./ha as basal application and 30DAS	0.2	0.2	133.16	75350	266320	190970	3.53	

Balance Sheet

Sampling Time	OC%	pН	Av. N kg/ha	Av. P ₂ O ₅ kg/ha	Av. K ₂ O kg/ha
Before Transplanting	0.59	5.87	295.76	10.05	244.13
After harvesting					
FP	0.58	5.85	307.57	11.56	245.18
T_1	0.62	5.90	312.58	13.29	250.15
T_2	0.60	5.88	30336	12.05	247.53







Activities Photos





