

OFT-3

1.	Title of on-farm trials	Assessment of the effect of different doses of plant growth substances on the fruit yield of bitter gourd during rabi season.
2.	Problem diagnosed	Low yield of bittergourd because of different growth substances deficiency
3.	Details of technologies selected for assessment/refinement	Farmers' Practice: Application of FYM (farm yard manure) @ 5t/ha Technology Option -1: Spraying of tricontanole 0.05% @ 2ml/lt at 40 and 65 DAS. Technology Option -2: Spraying of Alfa-NAA 3.5% (sodium salt) @ 5ml/lt at 40 and 65 DAS.
4.	Source of technology	WBSAU
5.	Production system and Thematic area	Horticulture based production system through nutrient management
6.	Performance of the technology with performance indicators	As the plants were sprayed with different growth substances, there was better vegetative growth with more female flowers in the field thus resulting better yield. Among them Tech. Option-2 proves best.
7.	Final recommendation for micro level situation	Yet to come as the OFT just completed 1 st year.
8.	Constraints identified and feedback for research	No constraints so far.
9.	Process of farmers participation and their reaction	Farmers participated in collaborative mode.

Table: Effect of different doses of plant growth substances on the fruit yield of bitter gourd:

Technology option	No. of trials	Data related to			Yield components		Yield (q/ha)	Cost cultivation of (Rs./ha)	Gross return (Rs./ha)	Net Return (Rs / ha)	BC Ratio
		Disease incidence (%)	*	**	No. of fruits/plant	No. of branches/plant					
Farmers' Practice: Application of FYM (farm yard manure) @ 5t/ha	7	36			39	16	206	118656	247200	128544	2.08
Technology Option -1: Spraying of tricontanole 0.05% @ 2ml/lt at 40 and 65 DAS.		12			48	19	285	157320	342000	184680	2.17
Technology Option -2: Spraying of Alfa-NAA 3.5% (sodium salt) @ 5ml/lt at 40 and 65 DAS.		10			52	22	360	186350	432000	245650	2.31
SEm+		0.8			0.5	0.3	5.4	-	-	-	-
CD(P=0.05)		1.8			1.1	0.7	11.8	-	-	-	-

B. 3. TECHNOLOGY ASSESSMENT AND REFINEMENT IN DETAIL

Thematic Area: Nutrient management

Problem Definition: Inadequate profit from bitter gourd due to low yield

Technology Assessed: Efficacy of different growth substances

KVK took up on farm trial on performance of different growth substances undermaize-vegetable based production system. As the crop was sprayed with growth substance in different interval, the photosynthetic activities of the crop was better with healthy root systems leading better vegetative growth. The growth regulator particularly alfa-NAA induces more female flowers as well thus resulting better yield. Among them **Tech. Option-2 proves best with 26 % increase** in yield over farmers' practice.