

OFT –02 (Horticulture)
(Kharif 2024-25)

- **Thematic area:** Integrated Crop Management
- **Problem definition/Name of OFT:** Inter cropping in mango orchard

1.	Title of On farm Trial (OFT)	Inter cropping in mango orchard																																																																																										
2.	Problem diagnosed	Low per capita income due to sole cropping and poor fertility in upland (Low productivity and less income)																																																																																										
3.	Details of technologies selected for assessment/refinement	FP - Mango orchard without intercropping. TO ₁ – Mango + turmeric TO ₂ – Mango + Elephant foot yam. TO ₃ – Mango + Ginger.																																																																																										
4.	Source of Technology (ICAR/ AICRP/SAU/other, please specify)	ICAR-FSRCHPR, Palndu, Ranchi																																																																																										
5.	Production system and thematic area	Horticulture based Production System and Integrated crop management																																																																																										
6.	Performance of the Technology with performance indicators	<table><tr><th colspan="10">Table- Intercropping in Mango orchard</th></tr><tr><th rowspan="2">Technology Option</th><th rowspan="2">No. Of replication</th><th rowspan="2">Yield of Intercrop (q/ha)</th><th>Date related problem addressed</th><th>Yield component</th><th>Yield of main crop mango (q/ha)</th><th rowspan="2">C.C. (Rs.ha)</th><th rowspan="2">Gross income</th><th rowspan="2">Net Return (Rs/ha)</th><th rowspan="2">B:C</th></tr><tr><th>Mango equivalent yield (q/ha)</th><th>Weed population (cm²)</th><th></th></tr><tr><td>FP - Mango orchard without intercropping.</td><td rowspan="3">10</td><td>-</td><td>-</td><td>30.50</td><td>80.15</td><td>62500</td><td>160300</td><td>97800</td><td>2.56</td></tr><tr><td>TO₁ – Mango + Turmeric</td><td>145.50</td><td>145.0</td><td>12.80</td><td>-</td><td>105000</td><td>291000</td><td>186000</td><td>2.77</td></tr><tr><td>TO₂ – Mango + Elephant foot yam</td><td>211.47</td><td>317.20</td><td>23.10</td><td>-</td><td>165000</td><td>634400</td><td>469400</td><td>3.84</td></tr><tr><td>TO₃ – Mango + Ginger.</td><td></td><td>170.35</td><td>340.69</td><td>18.30</td><td>-</td><td>172000</td><td>681380</td><td>509380</td><td>3.96</td></tr><tr><td>SEM+</td><td></td><td></td><td>1.85</td><td>0.825</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CDCP=0.05</td><td></td><td></td><td>5.41</td><td>2.40</td><td></td><td></td><td></td><td></td><td></td></tr></table>										Table- Intercropping in Mango orchard										Technology Option	No. Of replication	Yield of Intercrop (q/ha)	Date related problem addressed	Yield component	Yield of main crop mango (q/ha)	C.C. (Rs.ha)	Gross income	Net Return (Rs/ha)	B:C	Mango equivalent yield (q/ha)	Weed population (cm ²)		FP - Mango orchard without intercropping.	10	-	-	30.50	80.15	62500	160300	97800	2.56	TO ₁ – Mango + Turmeric	145.50	145.0	12.80	-	105000	291000	186000	2.77	TO ₂ – Mango + Elephant foot yam	211.47	317.20	23.10	-	165000	634400	469400	3.84	TO ₃ – Mango + Ginger.		170.35	340.69	18.30	-	172000	681380	509380	3.96	SEM+			1.85	0.825						CDCP=0.05			5.41	2.40					
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7.	Final recommendation for micro level situation	The on Farm Trail Was Conducted on 10 Farmers Field in Village Teliya of Raidih Block, Shivrajpur of ghaghra block During Kharif (2024-25) to find out profitable inter cropping system and maximizing the yield and income. The data collected during the trail Clearly indicated that minimum weed population (18.30) and mango equivalent yield of 340.69 q / hac maximum in technology option 3 that is mango + ginger which is significantly superior to technology option 1 (mango + turmeric) and technology option 2 (mango + elephant foot yam) technology option- 3 (mango+ ginger) also achieving the maximum net return of rs. 509380/hac																																																																																										

		with B:C ratio of 3.96. whereas 80.15 q/hac yield with net income of rs. 97800/hac was recorded under farmer practice that is mango orchard without intercropping. Hence with this finding Technology option T03 (Mango+ ginger) is being recommended for better yield and income.
8.	Constraints identified and feedback for research	<ul style="list-style-type: none"> Lack of knowledge about suitable intercropping in mango orchard More number of awareness is required about intercropping with mango orchard
9.	Process of farmers participation and their reaction	<ul style="list-style-type: none"> Participatory and interactive. Best option for risk management

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

Thematic area	Technology options with detailed treatments	Area (ha in crop & Fodder)/ Nos (in livestock)		Yield (q/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		Proposed	Actual					
Integrated Crop Management	FP - Mango orchard without intercropping.	0.375	0.375	80.15	62500	160300	97800	2.56
	TO ₁ – Mango + Turmeric	0.375	0.375	145.0	105000	291000	186000	2.77
	TO ₂ – Mango + Elephant foot yam	0.375	0.375	317.20	165000	634400	469400	3.84
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