

OFT – 4

1.	Title of On farm Trial	Effect of different type of mulching material on the yield of tomato in Rabi Season
2.	Problem diagnose	Scarcity of irrigation water effect the yield of tomato
3.	Details of technologies selected for assessment/refinement	Farmers practice- Flood irrigation without mulching and need based irrigation Technology option-1 - mulching with Jute Felt and need based irrigation Technology option-II - Poly mulching and need based irrigation Technology option-III- Straw mulching and need based irrigation
4.	Source of Technology	NIRJAFT, Kolkata
5.	Production system and thematic area	Rain fed small production system. Crop management & Water management
6.	Performance of the Technology with performance indicators	No of branches, Number of irrigation, No of Fruits/plant, yield (Kg/ha)
7.	Final recommendation for micro level situation	Technology option-II showed better yield (67.34.ton/ha) ,no of branches , no of of Fruits per plant was increased and minimized the irrigational water than the others has found. Net return (Rs. 272880.00/ha) and BC ratio (2.25.) was also higher than other treatments.
8.	Constraints identified and feedback for research	Lack of polythene supply with low cost proper time
9.	Process of farmers participation and their reaction	Training, Interactive demo, Field visit, Field days

Thematic Area: Moisture Management

Problem definition: Low yield of Tomato due to scarcity of water.

Technology assessed: Effect of black polythene mulching in Tomato production.

Table-2 Performance of Poly mulching to enhance the yield of Tomato during rabi-summer season.

Technology option	No. of trials	Yield component			Disease/ insect pest/weeds incidence (%)	Yield (ton/ha)	Cost of cultivation (Rs./ha)	Gross return (Rs/ha)	Net return (Rs./ha)	BC ratio
		No. of effective branch/plant	No. of Fruits/plant	Test wt. (10 Fruits.)						
Farmers practice- Flood irrigation without mulching and need based irrigation	10	5	40	460	-	36.58	141101.00	232350.00	91249.00	1.64
Technology option-I - mulching with Jute Felt and need based irrigation		8	49	547	-	50.2	202200.00	374700.00	172500.00	1.85
Technology option-II - Poly mulching and need based irrigation		11	63	615		67.34	217500.00	490380.00	272880.00	2.25
Technology option-III- Straw mulching and need based irrigation		7	42	512	-	40.24	162300.00	281680.00	119380.00	1.73
SEM±			2.038			2.438				
CD at 5%			4.34			5.20				

Result: Technology option-II showed better yield (67.34ton/ha) ,no of branches , no of of Fruits per plant was increased and minimized the irrigational water than the others has found. Net return (Rs.272880.00/ha) and BC ratio (2.25.) was also higher than other treatments.