

OFT – 07 (Plant Protection)
(Rabi 2023-24)

- **Thematic area: IPM**
- **Problem definition/Name of OFT: Assessment of management practices for Red banded caterpillar in Mango.**

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|----|--|--|---|---|---|---|---|---|--|--|---|---|--|
| 1. | Title of On farm Trial (OFT) | Assessment of management practices for Red banded caterpillar in Mango. | | | | | | | | | | | |
| 2. | Problem diagnosed | Major yield losess due to wilt disease and fruit borer | | | | | | | | | | | |
| 3. | Details of technologies selected for assessment/refinement (Mention either Assessed or Refined) | Farmer Practice: Spray of Chlorpyriphos 20 EC (2 ml/lit) as and when when symptoms appear TO1 • Collection and destruction of all fallen fruits • Spray Deltamethrin 0.0028 % (Deltamethrin 2.8 EC@ 1ml/lit) at marble size and repeat after two weeks TO2 : • Two sprays of Thiacloprid 21.7 SC 0.04 % (@ 2ml/lit) at 25-30 days interval. | | | | | | | | | | | |
| 4. | Source of Technology (ICAR/ AICRP/SAU/other, please specify) | BAU Sabour | | | | | | | | | | | |
| 5. | Production system and thematic area | Mango + Wheat/ Mustard/ Lentil, Integrated Pest Management | | | | | | | | | | | |
| 6. | Performance of the Technology with performance indicators | Technology option FP TO1 TO2 CD at 5% | No of trials 10 10 10 10 | % yield Losses 55.52 17.75 0.00 0.00 | % infected fruits before spray 6.80 7.10 7.00 0.00 | % infected fruits 10 days after 1st spray 8.33 6.10 4.60 1.086 | % infected fruits 10 days after 2nd spray 5.63 3.20 1.53 0.533 | Yield (Kg/tree) 22.03 29.10 34.26 0.00 | Yield (q/ha) 88.12 116.40 137.04 0.00 | Gross cost (Rs/ha) 55500 59300 61500 0.00 | Gross Return (Rs/ha) 176260 232800 274120 0.00 | Net Return (Rs/ha) 120760 173500 212620 0.00 | B:C 3.17 3.92 4.45 0.00 |
| 7. | Final recommendation for micro level situation | On farm trial was conducted on 10 farmers' field of village Shivrajpur & Belagara of Ghaghra block on Mango (Variety- Amrapali) during 2023 to find out appropriate management practices against red banded caterpillars in mango. The data collected during the trial clearly indicated that the minimum infected fruits 10 days after 1st spray (4.60%) and minimum infected fruits 10 days after 2nd spray (1.53%) and yield Losses percentage (00%) was found under Technology option T0 ₂ , though infected fruits percentage was maximum (7.00%) before spray in Technology option T0 ₂ . In same Technology option (T0 ₂) maximum yield (137.04 q/ha), net income (Rs. 212620.00) and B:C ratio (4.45) was found. Which is significantly superior over FP and T0 ₁ . The percent yield enhancement 55.51 and 17.73 over FP and T0 ₁ | | | | | | | | | | | |
| 8. | Constraints identified and feedback for research | a. Lack of awareness about commercial Mango farming and their management practices. b. More no. of awareness cum skill training is required for better fruit harvest. | | | | | | | | | | | |
| 9. | Process of farmers participation and their reaction | a. Farmers meeting, interaction & field day b. Un-availability of bio inputs in local market | | | | | | | | | | | |

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

| Thematic area | Technology options with detailed treatments | Area (ha in crop) | | Yield (q/ha) | Cost of cultivation (Rs./ha) | Gross return (Rs/ha) | Net return (Rs./ha) | BC ratio |
|---------------|---|--------------------|--------|--------------|------------------------------|----------------------|---------------------|----------|
| | | Proposed | Actual | | | | | |
| IPM | Farmers Practices | 1.5 | 1.5 | 88.12 | 55500 | 176260 | 120760 | 3.17 |
| | TO1 | | | 116.40 | 59300 | 232800 | 173500 | 3.92 |
| | TO2 | | | 137.04 | 61500 | 274120 | 212620 | 4.45 |

