

Pheromone technology for the management of mango fruit fly *Bactrocera dorsalis*

The fruit fly *Bactrocera dorsalis* is the most destructive insect pest of mango in India. The polyphagous fruit fly damages mango, guava, citrus, plum, peach and sapota. It causes yield loss ranges from 5 to 30% on different fruit crops and pest of quarantine importance.

Usage of Methyl eugenol pheromone traps

Crops:

Mango, Guava, Sapota, Citrus, Papaya, Banana, Apple, Peach, Plum and other fruit crops

Attracted fruit flies

Bactrocera dorsalis, *Bactrocera correcta*, *Bactrocera zonata*, *Bactrocera caryeae*



Mango fruit fly



Methyl Eugenol trap

Preparation of Methyl eugenol lure

Methyl eugenol solution:

- Mix Ethyl Alcohol - 60 ml + Methyl eugenol - 40ml + DDVP (Pesticide) - 20ml (i.e. in the ratio of 6:4:2).
- Take Plywood or soft board or straw board squares of approximately 5 x 5 x 1.2 cm in size
- Otherwise take ½ inch thick cotton rope and cut the rope into 2 inches size, tie the cut ends with thin wire.
- Soak any one of these in methyl eugenol solution for 24 hrs. Now the methyl eugenol lure is ready.
- Around 30 lures can be prepared from the above proportions and quantity.



Plywood in methyl eugenol



Cotton rope in methyl eugenol



Methyl eugenol trap



Chemicals for preparation of lure

Preparation of low cost trap

- Take used plastic water bottle (1L). Make 3 or 4 windows of 1 inch size with a knife at 3 inches from top of the bottle
- Hang the lure inside the trap and place it in the field at least 3-4 feet above the ground level



Training on preparation of methyl eugenol traps

Recommendation or dosage of methyl eugenol trap for mass trapping

- Around 10-12 lures / acre is recommended
- The pheromone trap should be placed from onset of flowering to harvest of the crop
- The lure need to be replaced once in 30-40 days
- The trap should be serviced at 15 days interval

Precautions

- The Lures and mixtures are to be prepared in well ventilated room.
- Wear disposable gloves and use separate containers and measuring jars.

Benefits

- Eco-friendly approach, safe to environment and human beings
- Reduce the insecticide usage and residue free fruits and vegetables
- Easy to adopt the pheromone technology

Availability

- It is available from ICAR- CCARI, Old Goa or Zonal agricultural office or private agro farms.

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