

Melon Fruit Fly

Melon flies are reported to damage 81 host plants and is a major pest of cucurbitaceous vegetables. The extent of losses varies between 30 to 100 % depending on the cucurbit species and the season. Crops damaged are **ridge gourd, bitter gourd, pumpkin, bottle gourd** etc. In addition they are also major impediments for export of fresh vegetables.

Systematic Position

Scientific Name: *Zeugodacus cucurbitae*
 Family: Tephritidae
 Order: Diptera
 Class: Insecta

Important Characters:

- Found in Temperate, Tropical and Sub-Tropical Regions of the world
- Polyphagous
- Multivoltine *i.e.* multiple generations per year
- Difficult to eradicate
- Economic losses
- Major constraint in International Market

Life Cycle:

Egg: Laid below epidermis of fruits and vegetables (1-2 days)

Grub: Eat and damages the pulp inside the vegetables (8-10 days)

Pupa: Pupates below soil at 10-15 cm (6-8 days)

Adult: Lives up to 45 days (both male and females are available)



Management:

- **Cultural practices**
 - Collect infested and fallen rotten vegetables and also remove vegetables with ovipunctures and oozing clear sap from the plant if visible.
 - Destroy these collected vegetables by dumping in a pit (40-60 cm deep) and cover with soil to eliminate all sources of possible breeding sites.
 - In endemic areas, change the sowing date as the fly population is low in hot dry conditions and at its peak during rainy season.
 - Harvest vegetables early when mature green.
 - Plough the topsoil (5-10 cm deep) to expose the pupae to predators, parasites, and direct sunlight.
 - Practice crop and field sanitation
- **Physical Method**
 - Cue lure para pheromone traps capture male flies. Set up cue lure trap in the vegetable field @ 10/ac or 25/ha.
 - Prepare bait with cue lure and malathion 50 EC. Take 10 ml of bait mixture per trap and keep them in 10 different places in one acre.
 - Bait spray - combining any one of the insecticides (fenthion 100EC 1ml/l or malathion 50EC 2 ml/l or dimethoate 30 EC 1 ml/l) and protein hydrolysate or molasses or jaggery 10 g/l. Spray at 2 weeks interval before attaining the maturity stage.
 - Racking up of soil below the plant and drench with chlorpyrifos 20 EC @ 2.5 ml/l to kill the pupa.