

Eco friendly Management of Papaya Mealybug

Recognize the problem

Papaya mealybugs are small to medium sized yellow insects with a mealy or waxy coating, measuring 2.3mm long and 1.5 mm wide. They are oval to elongate with 17 pairs of lateral and terminal waxy filaments which are characteristic to the particular genus.

There are four stages in the female lifecycle: egg, larva I, larva II and adult, and six stages in the male lifecycle: egg, larva I, larva II, pre-pupa, pupa and adult. The first instar larva, referred to as a crawler, is the active stage. Upon hatching, it moves out, selects a suitable place (normally on tender soft portions) and starts feeding. Thereafter, there will be no movement. The adult male has a distinct head, thorax and abdomen and has a pair of membranous wings in the meso-thorax and a second pair which are modified into halteres. Males are short-lived and don't feed.

The following symptoms will be shown in the tree by pest infestation:

- Yellowing of leaves
- Malformation of affected portion due to toxin injection
- Stunted leaf growth and leaf and fruit drop
- Presence of red/black ants
- Sooty mould growth due to capnodium fungus

Background

Papaya mealybug is an important pest that causes severe damage in papaya plants. Farmers struggle to control this pest for the following reasons:

It is polyphagous (feeds on many plants)

- It has a high reproductive potential
- It has a short generation period
- It has a waxy protective coat which acts as chemical barrier
- Overuse of insecticides
- Use of broad spectrum insecticides
- Increased temperatures due to climate change

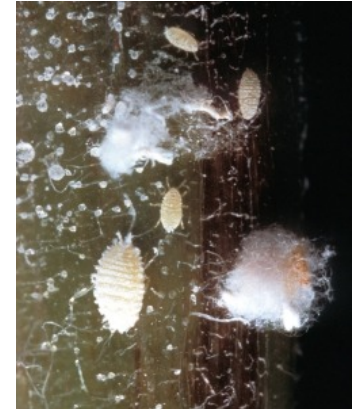
Management

- Remove alternative hosts
- Monitor the incidence regularly and look for crawler emergence
- Begin management as early as possible to get maximum control
- Flashout with high speed water
- Remove and destroy infested parts of the plant
- Release parasitoids (*Acerophagus papayae*) on infested plants
- If the population of natural enemies is high, avoid chemical application
- Application of neem oil 2% or NSKE 5%

Reference: Directorate of Centre for Plant Protection Studies, TNAU, Coimbatore-641003

Scientific name(s) > *Paracoccus marginatus*

Female mealy bug. (Photo by ARS-USDA, Bugwood (CC BY-NC))



Infested papaya leaf. (Photo by A. Vakeesan, CABI)



The recommendations in this factsheet are relevant to: Sri Lanka

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