CONOGETHES PUNCTIFERALIS

Conogethes punctiferalis Guenee is a polyphagous insect pest that is difficult to manage because it feeds within plant tissue. In India, Conogethes has been reported feeding on guava, castor, mulberry, pomegranate, mango, peach, loquat, citrus, apple, plum, cherry, papaya, chestnut, cocoa, durian, cotton, tamarind, hollyhock, sorghum, macadamia, etc. The alternate hosts include chikoo, marang, rambutan, jackfruit and cacao.

The crop failure due to the attack of this borer is not uncommon, and it is a major pest of castor and cardamom and a minor pest of pomegranate, jackfruit and tamarind.

Eggs laid on top leaf axils, inflorescence, tender part of plant and fruits, egg period 6-7 days. Larva pale reddish brown with numerous tubercles on body. Larval period 12- 16 days. Pupation inside the fruit in a silken cocoon, pupal period 4-11 days. Adults are medium sized bright orange yellow color has numerous black dots on wings. Life cycle completed in 25-33 days. Caterpillar bores into young fruits. Feeds on internal contents (pulp and seeds) making the fruit hollow from inside resulting fruit rotting and dropping.

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Symptoms of damage

- Caterpillar bores into young fruits
- Feeds on internal contents (pulp and seeds)
- Dry up and fall off in without ripening
- The presence of granular faecal matter entangled in the webbing, at the entrance hole, was a typical symptom for identification of damage.

Identification of pest

- **Larva**: Pale greenish with pink tinge and fine hairs with dark head and prothoracic shield.
- **Adult**: Yellowish moth with black spots on the wing and body

Management

- Collect and destroy damaged fruits
- Clean cultivation as weed plants serve as alternate hosts
- Use light trap @ 1/ ha to monitor the activity of adults
- Insecticides: malathion 50 EC 0.1% or dimethoate 30 EC 0.06%, two rounds, one at flower formation and next at fruit set.

Damage symptoms on different crops as follows:
GUAVA: Conogethes is a major pest from the beginning of the twenty-first century infesting up to 20% fruits in Jammu and Kashmir, and Allahabad Safeda is the most susceptible cultivar to infestation. Serious damage of this pest was recorded both in winter and rainy seasons on guava. Larvae feed on guava fruits and pass larval and pupal stages inside them and the infested fruits dry up and drop before maturity.

Papaya - After hatching, larva penetrates the hollow leaf stalk of papaya and, after feeding for a time on its succulent bases, bores into the crown in which it pupates.

Mango - Larvae boring into young mango fruits but confined to pulp only and did not attack the stone. On hatching, the caterpillars bore into mango fruit, bud or shoot and feed within on pulp and seeds or soft tissues. The fruit borer affects both

mesocarp and the seed preferably the seeds in mango; the pest renders fruits unfit for human consumption. The larva feeds on the rinds of fruits, later bores inside and feeds on internal contents. The granular faecal pellets are seen outside the fruits. When fruits are in close proximity, it forms favourable niche for the larva to bore into fruits.

Litchi - The larvae bore into the litchi fruits either from peduncle or the lateral side of the fruit. The larvae were found feeding on pulp as well as nut. As the larvae grew, they tunnelled into the centre of the nut and pupated inside. The adults were observed to emerge from these tunnels through the entrance hole. Caterpillars feed on rind and pods causing premature drying and shedding of flowers and fruits,

Peach - Severe damage was observed on the fruits of peach in PAU, Ludhiana, during May to June 2015. The larvae bore into the fruits and feed on the pulp. The hanging of faecal material with the silken webs was a typical symptom of identification of this borer, and peak activity was recorded during March to May.

The amount of loss caused by *C. punctiferalis* can be difficult to determine due to damage by other pests in the same crop and the attraction of secondary pests and diseases to existing damage (CABI 2011).

Conogethes punctiferalis was found to complete its life-cycle within a shorter period in castor, followed by cardamom, guava and ginger under laboratory conditions. The number of days taken by the neonate larva to become adult was 27.76 in castor and 30.69 days in cardamom, while it was 32.05 in ginger. A unit increase in relative humidity resulted in 2.73% increase in damage by *C. punctiferalis* in castor, thus favouring the pest.

Management by mass trapping using semiochemicals, especially pheromones, represents a viable option to control such borers. One of the ideal measures of protection would be to prevent moths from ovipositing on fruits.

Recommended for: Castor, Cardamom, Guava, Mango, Peach, Cocoa,

Use 8 -10 No's of traps per acre.

Always use Phero – Sensor ™ – SP / BP for best results.

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