

# MONITORING GUIDE

## ORIENTAL FRUIT MOTH

*Grapholitha molesta*

### Oriental Fruit Moth



### Suggested Traps

#### Delta 1



Product No. 2050201

#### Delta 2



Product No. 2050202

#### Diamond Trap



Product No. 2050204

### GENERAL INFORMATION

Insect monitoring traps are used to identify not only the presence or absence of a certain insect species, but also to establish the extent of their activity in a particular location. This information can be used to determine which stage of the insect life cycle is occurring at any time, allowing for more accurate and timely applications of control methods. Basic knowledge of the insect's life cycle is necessary, since the monitoring traps are only effective on the adult stage of the insect.

Regular recording of the trap catch is essential and over the years will provide a reliable blueprint with which the grower can properly manage the pest. In addition to collecting trap-catch information, it is also vital to assess the amount of insect damage that occurs in every generation of the insect, as a measure of the effectiveness of the control treatments.

### LIFE HISTORY

The Oriental Fruit Moth is a common pest problem on peaches and nectarines in most parts of the world and was originally introduced into North America from Japan in 1913. The Oriental Fruit Moth is dark gray and similar in shape to the closely related Codling Moth (*Cydia pomonella*), although somewhat smaller (6mm long). The larvae are pinkish-white with a black comb-like structure on the last abdominal segment, and reach a length of nearly 12mm when fully grown.

In Ontario, the Oriental Fruit Moth is the principal pest of peaches, completing 3-4 generations during the summer months. Overwintering as a late stage larva on the ground or under tree bark, they pupate in early May and emerge as adult moths in late May or early June. Mating takes place soon after emergence and the eggs are laid on twigs and foliage (later on fruits). These eggs hatch in 3-7 days and the emerging larvae tunnel into the tips of green twigs, where they cause the characteristic wilting or "shoot strike". The larvae continue to develop for the next two weeks, then leave the twigs, spin a silken cocoon around themselves on a nearby object and transform into pupae. About 10 days later the adult moth emerges, and the cycle continues. Each generation takes about 1 month to complete.

### TRAP PLACEMENT

Traps should be hung at least 20 metres apart within the tree canopy at approximately head height (eg. in a 4 ha. orchard, hang 2 traps in the central part of the orchard and 4 traps about 2 trees in from the outside edge). Hang the traps mid to late May prior to moth emergence and inspect the traps once or twice a week on a regular basis throughout the season. Record the catch in each trap at every inspection and **scrape out** the moths each time so that they are not re-counted at the next check. Calculate an average catch per trap and plot this on your graph chart. Trapcatches will reach a peak and then begin to drop down again. Cool weather will suppress the moth activity so be certain that the peak is reached by waiting until you can confirm at the next check date. The second generation of moths should emerge in early July and the third generation in early to mid August. A partial fourth generation may develop in September. Sprays are recommended between 3-6 days following the peak, but cooler conditions will delay the hatch, and the spray application will likewise have to be delayed. After spraying, carefully check for live larval presence in the twigs (later in the fruits), to ensure good control, but observe the safe re-entry period when doing this.

**Continue to check the traps on the same regular twice-a-week basis all season.**

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