

Graphotec

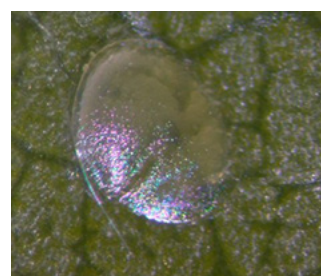
Use in mating disruption to manage the Oriental fruit moth *Grapholita molesta*

The oriental fruit moth, *Grapholita molesta* (Lepidoptera: Tortricidae) is a species that attacks mainly stone fruits such as peach and nectarine. It may also affect plums, apricots, cherries and pome fruits like apple and pear

This species overwinters as last instar larva sheltered under the bark or in the soil. Pupation takes place towards March and first adults start to emerge by then. Females lay eggs individually in the underside of the apical leaves of the tender shoots or beside the fruits. In 7-14 days the eggs hatching occurs. Subsequently larvae penetrates inside the shoots or fruits where they feed. It usually presents 5 generations per year, starting the flight of the first adults around March. Second generation begins at the end of May and from then on the following generations overlap. Adults can be found in the field until the end of October approximately. Damage is observed either on sprouts or fruits. The attack on sprouts is highly critical in growing trees.



Grapholita molesta
Lepidoptera:
Tortricidae



CONTROL MANAGEMENT

Chemical treatments should be focused mainly on young larvae. These applications should be done once the corresponding tolerance thresholds are exceeded. An alternative to chemical treatment is the use of mating disruption. This technique consists of creating a saturated atmosphere with sex pheromone of the target insect to confuse males and therefore avoid mating between individuals. The use of mating disruption has increased significantly in the last years with a very good efficacy in the management of this species.

FORMULATION

Dispensers

The product GRAPHOTEC is a dispenser comprising (Z)-8-dodecenyl acetate, (E)-8-dodecenyl acetate and (Z)-8-dodecen-1-ol. These compounds are described as the sex pheromone of *G. molesta*.

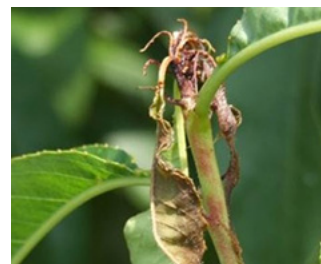
The dispenser is a plastic vial with the liquid pheromone inside. The material of the vial is permeable to the vapors and allows the emission of the product at a controlled rate.

In regular weather conditions, the persistence of the dispenser is 240 days approximately. This persistence may be reduced at high temperatures and/or strong winds.



APPLICATION

- Dispensers should be placed in the field a few days before the first flight of adults.
- Each dispenser should be hung in a branch in the upper third of the tree.
- The quantity of dispensers recommended is 400 units per hectare. In those cases where the pest pressure is not very high the number of units per hectare could be reduced to 300 dispensers/ha. It is recommended to place them homogeneously in the field.
- It is recommended to monitor the species by the positioning of 1-2 delta traps per hectare with the corresponding monitoring dispenser (GRAPHOLAB). • Traps should be checked periodically in order to control pest pressure and also confirm the proper functioning of the technique.
- Also regular assessments of shoots and fruit damage should be carried out. If damage is higher than the thresholds established in the area, then a complementary treatment should be applied.



HANDLING AND STORAGE

The dispensers GRAPHOTEC are supplied in parcels with 50 units. The material of the packaging is impermeable to the vapors of the product.

It is recommended to keep the product in its original packaging, unopened in the freezer until ready to use. Under these conditions the product can be stored for at least two years.

Avoid cutting, perforating and opening the dispensers.

With the usual handling of the product, there is no risk of toxicity on people, animals or plants. The product is a dispenser that emits to the air vapors of the active substance at a low and controlled rate. For the same reason, risk of water and soil pollution may be excluded.

It is recommended to use gloves in the handling of the dispensers. The dispensers used and their packaging have to be managed according to current legislation for residues disposal.



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