

# Pheromone Trap : Oriental Fruit Moth



## M2i technology

- Unique patented process of pheromone micro-encapsulation
- Controlled rate of pheromone release for greater efficiency
- 100% biodegradable
- Easy storage, at room temperature
- Extended shelf life: 2,5 years

## User guide

**M2i recommends:** Grapholita Pro Caps® syringe + Delta trap

**Trap setup:** empty the content of the syringe into the cup. Remove the protective film from the sticky sheet. Stick the cup containing the pheromone formulation in the middle of the sheet. Place the sticky sheet in the trap. The moths are attracted by the sexual pheromone, enter the trap and are caught.

### Characteristics of Grapholita Pro Caps®

Type of product	Pheromone dispenser
Use	Monitoring
Active substance	Z8-dodecenyl acetate, E8-dodecenyl acetate, Z8-dodecenol
Volume of formulation	1,2 mL
Indicative diffusion*	3 months
Targeted insect life-stage	Adult (moth)
Estimated radius of diffusion	Moths attracted on a radius of 5-10 m

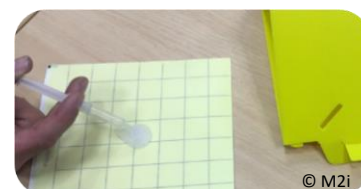
\* depending on climatic conditions, for an average temperature of 30°C and without strong winds.

### Monitoring setup

**Detection period:** from March to October (adapt and renew the pheromone dispenser according to the recommended diffusion time).

**Trap location:** hung on the upper part of the tree's canopy.

**Recommended density:** 1-2 traps/ha



## Pest monitoring and recommendations

<b>Trap follow-up frequency</b>	Weekly
<b>Recommended intervention</b>	8 moths/trap/week
<b>Pest control methods</b>	During the critical season and depending on trapping levels: it is possible to perform an additional insecticide and/or a biocontrol treatment according to the insect life stage. Refer to recommendations of registered products for plant protection ( <a href="http://ephy.anses.fr">ephy.anses.fr</a> ) and/or to your technical advisor.
<b>Possible preventive measures</b>	Favor the introduction of predators (auxiliary insects, birds); pick damaged fruits; favor soil tillage; eliminate infestation sources nearby the orchard (wild apple trees, hawthorn).

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## The oriental fruit moth (*Grapholita molesta*)

**Pest life-stage:** caterpillar

**Order:** Lepidoptera

The oriental fruit moth (OFM) is native from China and the Korean peninsula. Adults are dark-grey with marbled patterns on their wings and measure 6.5 mm. They live around 15 days. Caterpillars live hidden in the shoots and fruits.

Damages on the plant are caused by caterpillars feeding on shoots/fruits, inducing a delayed growth of the tree and reducing yield and fruit quality. Infested fruits are unsuitable for sale and consumption.

*Grapholita molesta* perform between 3 and 6 generations per year depending on the climate and the latitude. For instance, 3 generations have been observed in Southern France. Caterpillars overwinter in the ground or in the tree bark. Adults of the first generation (G1) emerge in March-April. Generations will follow one another until October.

### Recommendations / Security

Keep out of reach of children. Keep away from domestic animals.

Store away from food and drink. Do not freeze.

Do not eat, drink or smoke during use.

Wash hands after use.

Store in original packaging. Comply with doses, conditions, instructions and precautions for use mentioned in the user's guide.

Dispose of the empty and clean packaging in the household trash.

### First aid

If eye contact occurs, rinse with water for several minutes.

In case of skin contact, wash with plenty of water.

If swallowed, do not induce vomiting, rinse mouth and see a doctor.

In case of faintness, see a doctor and show him the product label.

Product approved for organic agriculture.

## Host plants

The oriental fruit moth caterpillar are polyphagous and can feed on different plant species. Mainly found on peach tree (*Prunus persica*), it can also be found on apple tree (*Malus pumila*), pear tree (*Pyrus communis*), quince tree (*Cydonia oblonga*), apricot tree (*Prunus armeniaca*), etc.

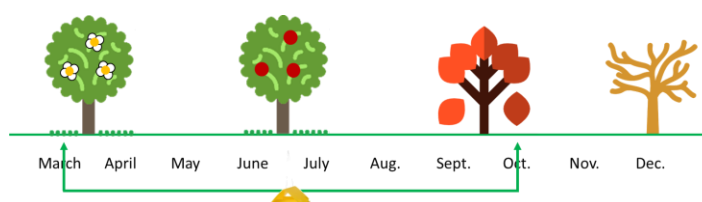
## Detection strategy: pheromone monitoring

Pheromones are substances produced by insects which operate as a signal between individuals of a same species. There are different types of pheromones: alarm, aggregation, sexual... Monitoring with sexual pheromones is based on a lure placed inside a trap which mimics the substance produced by the female. Lure attracts males which are captured. This enables the detection of the pest's onset and the follow-up of its infestation level. Monitoring also helps decision-making (to launch a curative intervention) and/or measuring the efficiency of a treatment.

## Benefits

This method is efficient, selective and harmless for fauna, flora, operators and local residents. It does not generate residues, inputs or resistance mechanisms.

## Detection period for *G. molesta*



Indicative period for Europe

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