

Pheromone Trap : Codling 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: Cydia 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 Cydia Pro Caps®

Type of product	Pheromone dispenser
Use	Monitoring
Active substance	Codlemone
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

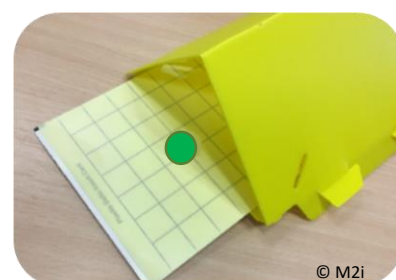
* depending on climatic conditions, for an average temperature of 30°C and without strong winds

Monitoring setup

Detection period: from mid-April to September (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

Trap follow-up frequency	Weekly
Recommended intervention *(for 2 consecutive weeks of catches)	G1: 10 moths/trap/week* G2: 15-20 moths/trap/week*
Pest control methods	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 (ephy.anses.fr) and/or to your technical advisor.
Possible preventive measures	Favor the introduction of predators (auxiliary insects, birds) ; pick damaged fruits ; use sticky strips set on trunks to trap hibernating caterpillars ; eliminate infestation sources nearby the orchard (wild apple trees, hawthorn).

Pheromone Trap : Codling moth



The Codling moth (*Cydia pomonella*)

Pest life-stage: caterpillar

Order: Lepidoptera

The Codling moth is native from Eurasia and is considered one of the major pest in orchards. Adults are ash-gray with brown wing tips bordered by shiny golden-brown markings. Their wingspan is 15 to 22 mm. They live around 15-18 days. Females lay their eggs one by one (up to 100 eggs in their lifetime) on the top side of leaves, on fruits or shoots. They hatch around 1-2 weeks later.

Caterpillars are white or pale pink to reddish. They measure 16 to 20 mm and can develop in 20 to 30 days depending on weather conditions. Caterpillars feed inside the fruits (pulp and especially seeds), inducing a premature fall of infested fruits and favor diseases development.

When fully grown, caterpillars of the first generation (G1) leave the fruit and spin a cocoon under the bark or in the litter at the foot of the tree. Either they pupate and metamorphose into a moth which will give the 2nd generation, or they enter diapause as caterpillars until next season. Adults emerge 20 to 30 days after the beginning of pupation. The flight period extends approximatively from May to September (1-4 generations per year depending on the geographical area).

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

This orchard pest is present in numerous countries in the world. It is notably found on apples, pears, walnuts but also quinces, apricots and other stone fruits.

Detection strategy: pheromone monitoring

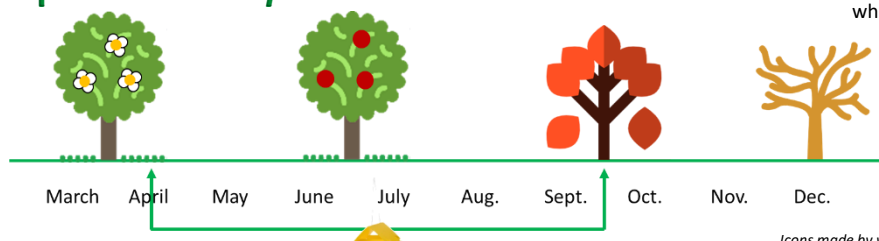
Pheromones are substances produced by insects which operate as a signal between individuals of a same species. There are different types of pheromones: alarm, aggregation, sexual... Monitoring with sexual pheromones is based on a lure placed inside a trap which mimics the substance produced by the female. 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 *C. pomonella*

Indicative period for most areas where *C. pomonella* is present



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