

Pheromone Trap :

Gypsy moth



PHEROMONE DISPENSER



M2i technology

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

User guide

M2i recommends: Dispar Pro Caps® syringe + Funnel trap

Trap setup: place the pheromone holder (cage) in the upper part of the trap. Put a drop of the product into the bottom of the trap simply by pressing the plunger (no need to cut the tip). Snap the upper part of the trap into place. Empty the remaining content of the syringe into the pheromone holder. The moths are attracted by the sexual pheromone, enter the trap and are caught.

Characteristics of Dispar Pro Caps®

Type of product	Pheromone dispenser
Use	Monitoring
Active substance	Racemic disparlure
Volume of formulation	0,5 mL
Indicative diffusion*	3 months
Targeted insect life-stage	Adult (moth)
Estimated radius of diffusion	Moths attracted on a radius of 2-5m

*for an average temperature of 30°C and in the absence of strong winds

Monitoring setup

Detection period: from June to August.

Trap location: hung as high as possible in the tree's canopy. Use a weighted string to set up the trap.

Recommended density: 4-5 traps/forest plot (1 in each side and 1 in the middle); 1 trap/isolated tree.



Pest monitoring and recommendations

Trap follow-up frequency	Weekly
Recommended intervention	If caterpillars detected in the trees.
Pest control methods	According to observations of the pest (caterpillars, moths): it is possible to perform an additional 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	Remove the eggs masses present on the trunks. Differ the plantations of young trees (1 or 2 years) in infested areas.

Pheromone Trap : Gypsy moth



The Gypsy moth (*Lymantria dispar*)

Pest life-stage: caterpillar

Order: Lepidoptera

The Gypsy moth is native from Eurasia. Adult males are grey-brown with dark wing markings; females are white with wavy black bands across the forewings. Their wingspan is 3 to 7 cm depending on the gender. They live around 1 week. Females lay eggs in yellowish masses that they coat with hair from their abdomen on trunks, low branches and other mediums (rocks, walls, etc.). The pest overwinter as eggs (diapause). They hatch around 9 months later, the following Spring.

Young caterpillars are grey-black; older stages present variation in colors (black, yellow with blue and red spots) and non-urticating hairs. They measure up to 70 mm and develop in 2 to 3 months. Caterpillars feed on buds and leaves, which can induce a total defoliation. This leads to the weakening of attacked trees, which thus favors their colonization by other pests and affect the acorn (or other fruits) production. Defoliation does not usually lead to the mortality of the tree.

At the end of their development, caterpillars pupate in bark crevices or other cryptic locations. Adults emerge 2 weeks later. The flight period extends from June to August (1 generation per year).

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

These Lepidoptera prefer oak trees (*Quercus spp.*) but can also be found on other deciduous trees (linden, poplar, willow...) and on softwood trees (spruce, scotch pines, Douglas...).

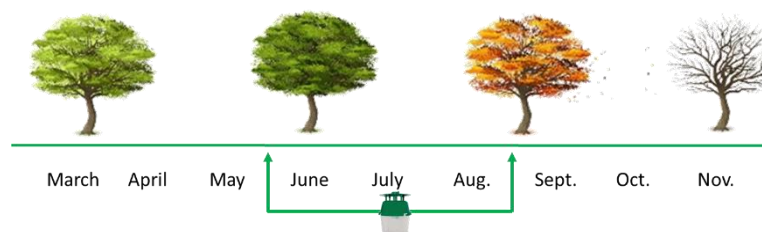
Detection strategy: pheromone monitoring

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. Lures attract 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 *L. dispar*



Indicative period for Europe (according to climatic conditions and geographical location)

Icons made by Vecteezy