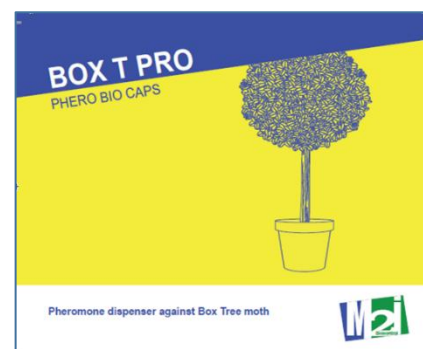


Pheromone trap: Box tree moth



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: Box T 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 lower part. 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 Box T Pro Caps®

Type of product	Pheromone dispenser
Use	Monitoring
Active substance	Z-11-hexadecenal
Volume of formulation	1 mL
Indicative diffusion*	3 months
Targeted insect life-stage	Adult (moth)
Estimated radius of diffusion	Moths attracted on a radius of 5m

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

Monitoring setup

Detection period: from May to September (adapt and renew the pheromone dispenser according to the recommended diffusion time).

Trap location: hung on the external side, at half-height of the box trees.

Recommended density: 1 trap every 10 meters.



Pest monitoring and recommendations

Trap follow-up frequency	Weekly
Recommended intervention threshold	10 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 advisory technician.
Possible preventive measures	Before purchasing or planting box trees, verify that they are healthy. Cut and mulch or burn infested branches. Eliminate fallen leaves.

Pheromone trap: Box tree moth



Box tree moth (*Cydalima perspectalis*)

Pest life-stage: caterpillar **Order:** Lepidoptera

A native from East Asia, the box tree moth has been accidentally introduced into Europe in 2007. This moth wingspan is 36 to 44 mm. There are 2 adults morphs: (1) a bicolor one with white pearly wings trimmed with brown (the most common) ; (2) a fully brown one. Both bear a half-moon-shaped spot on the forewing. The adults live about 15 days. Females lay their eggs on the lower part of leaves. Eggs hatch after a week.

The box tree moth caterpillars are green with a black head and striated lengthwise by black and white stripes. They are 35 to 40 mm long. They feed on box tree leaves and sometimes bark, which leads to a drying of the shrubs and sometimes to their death. At the end of their development, caterpillars spin a silken cocoon between 2 leaves or 2 shoots to complete their metamorphosis.

This pest can spawn 2 to 5 generations per year. It flies from May to October, with infestation peaks in May-June, July-August and September-October. Its presence can be detected by white silks on the shrubs and bite marks from caterpillars on leaves. Its development stops below 8 °C. Caterpillars over-winter between 2 box tree leaves and emerge in march of the following 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

This pest is specific to box tree : *Buxus sempervirens*, *Buxus sempervirens* L. *rotundifolia* or *Buxus colchica* for instance.

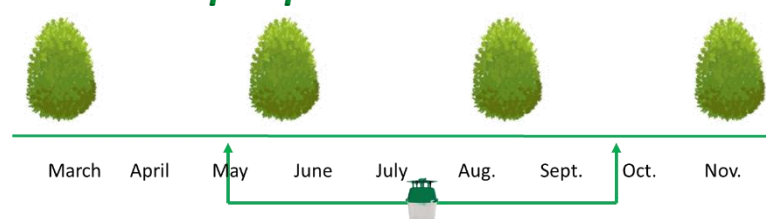
Detection strategy: pheromone monitoring

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. perspectalis*



Indicative period for
European countries

Icons from shutterstock.com