



Box T Pro Press®

Mating disruption for box tree moth (*Cydalima perspectalis*)



The only Mating Disruption (MD) solution on the ornamental crops market



Innovative format



Biocontrol solution

Composition : 70 g/kg of (Z)-11-hexadecenal (7% p/p)

Formulation : capsule suspension (CS)

A.M.M.: N°2189998. Product under evaluation in France and Central Europe. Emergency Authorization in France between 01/04/2020 to 20/07/2020, Article 53 from the Regulation n°1107 / 2009.



PHYTOPHARMACEUTICAL PRODUCTS ARE INTENDED FOR PROFESSIONAL USE : APPLY CAUTION. READ THE LABEL AND THE INFORMATION CONCERNING THE PRODUCT CAREFULLY BEFORE USE.

MODE OF ACTION AND RECOMMENDED DOSE

Box T Pro Press® is a product developed for professionals by M2i Biocontrol R&D team. Its target is the Box Tree moth. Box T Pro Press effectively reduces the pest population using pheromone to interrupt the mating cycle. Mating disruption is a pest management technique used to disrupt chemical communication and mating behavior by dispensing synthetic sex pheromone, thereby affecting the insects' chance of meeting and reproduction (Cardé and Minks, 1995). This biocontrol solution will therefore disrupt the pest's reproductive cycle and ultimately reduce its numbers in the plot where the product has been applied.

Box T Pro Press® must be applied before the first and the second Box tree moth's flights. The second application must be done 10 to 12 weeks after the first one, with both applications limited to 750 g / ha.

PRODUCT PRESENTATION

Box T Pro Press® comes in an innovative format, practical and easy to use. The sealed aluminium pouch contains a 250-g capsule suspension, corresponding to 250 diffusion points. The bag is equipped with a trigger and a nozzle. Box T Pro Press® is used with a manual plexiglas dispenser with compressed air: the reusable Phero Pump® device.



RECOMMENDATION FOR USE

Box T Pro Press® must be applied inside the box bush in dollops (small and discrete points) on the trunk or the nook of the branches. The application is carried out by pressing the trigger of the hand dispenser. A short pressure on the trigger will deliver a standard dose the size of a small coin. It is important to always apply the same pressure on the trigger in order to obtain homogeneous diffusion spots. A few hours after applying, the water contained in the product will evaporate, leaving a thin, scarcely-visible layer of wax.

Please ensure the absence of significant rainfall (25 mm) within the 24 hours after the application. If this condition is not met, the application must be renewed.

One dollop of Box T Pro Press® emits the dose of sex pheromone required to shut down mating during one flight (= one generation of moths). There are usually two flights (= two generations of moths) per year. To protect your box bush from the Box tree moth for an entire year, a second application of Box T Pro Press® should therefore be considered, 10 to 12 weeks after the 1st one.

To be most effective, M2i recommends associating the Box T Pro Press® with a biocontrol insecticide such as *Bacillus thuringiensis*. This treatment serves to eradicate the caterpillars at the beginning of the season, to clean the box bush. Depending on the presence of caterpillars in the Box tree, this insecticide treatment might have to be renewed during the season.

March 2020

Cardé, R.T., Minks, A.K., 1995. Control of moth pests by mating disruption: successes and constraints. *Annu. Rev. Entomol.* 40, 559–585.



Insecticide application against caterpillars



March

Box T pro Press® application
1st moth generation



April

May

Box T pro Press® application
2nd moth generation



June

July

August

September

Insecticide application against caterpillars



October

For an efficient mating disruption, the infestation level of the Box trees (historical, environmental) must be known/documented and moderate. Night lighting and the proximity with wild/untreated Box trees are external risk factors and should be avoided if possible or taken into account when planning a treatment.

APPLICATION PROTOCOLS

The quantity of Box T Pro Press® to apply on the box bush depends on the characteristics of the area to be treated.

a. Isolated Box tree treatment:

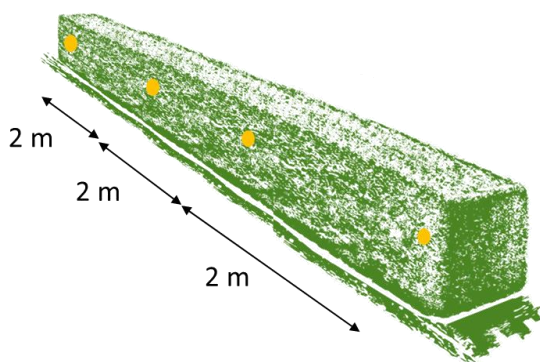
From 10 to 30 dollops according to the foliar volume.



b. Box tree hedge treatment :

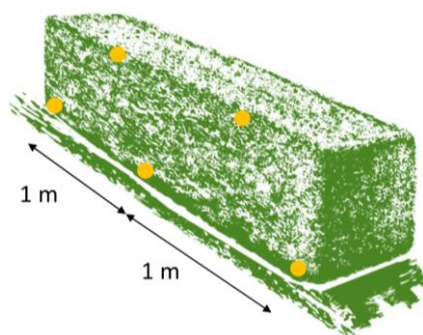
Height <1 m and width <1 m:

1 dollop every 2 m inside the Box tree hedge/bush



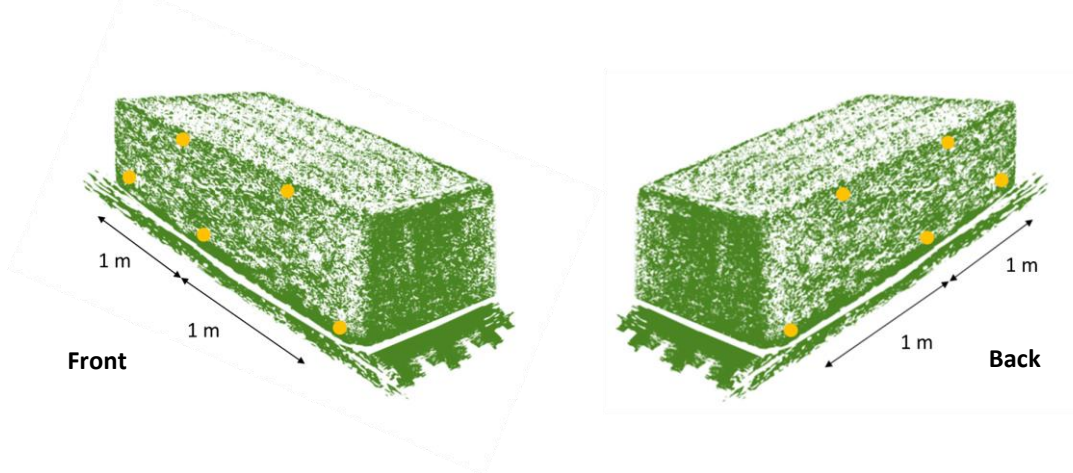
Height >1 m and width <1 m:

1 dollop every meter following a V-shape pattern, inside the Box tree hedge/bush



Height >1 m and width >1 m:

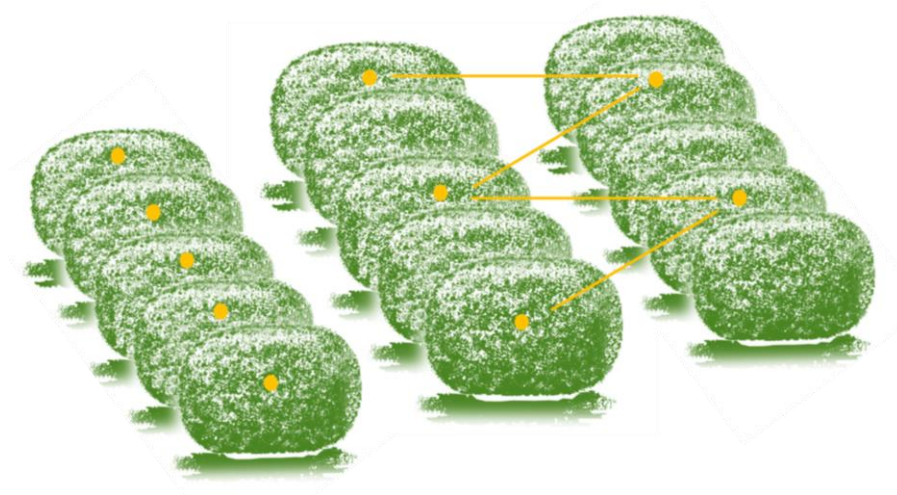
1 dollop every meter following a V-shape disposal on each side of the hedge



c. Large homogeneous Box tree surface treatment (plantation type):

- Surface < 1 ha: 750 dollops / ha, corresponding to 1 dollop every 3,5 m following a V-shape pattern.
- Surface > 1 ha: 500 dollops / ha, corresponding to 1 dollop every 5 m following a V-shape pattern.

Strengthen the edge protection by placing on 1 more dollop every 2 m.



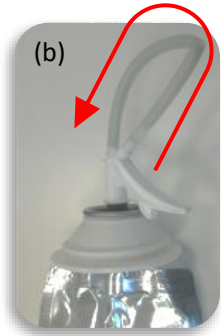
MONITORING AND EFFICIENCY MEASUREMENT

Mating disruption is a proven and effective method of biological control. However, incidental encounters between males and females remain possible if the pest pressure is high. It is therefore important to know the Box tree moth pressure in the box bush. A monitoring of the plant on a weekly basis using pheromone traps (e.g. Box T Pro Caps syringes + Funnel trap) is strongly advised once the application has been done. Up to 4 traps per plot can be used and will provide information about the mating disruption efficacy.

To properly monitor the Box tree moth flights, we highly recommend placing 2 additional traps in untreated (wild) Box trees. This will provide information about the pest pressure throughout the season.

STORAGE AND PACKAGING

Box T Pro Press® must be stored in its original sealed aluminium pouch (a), away from light, in a dry and well-ventilated place (temperature <math><40^{\circ}\text{C}</math>). Box T Pro Press® can be stored for up to 2 years at room temperature (5 to 25°C), if the pouch has not been opened.



Opened bags can be stored in the refrigerator until the next application.

If the pouch is opened and the next application will take place within 3 months: bend the application tube and use to plug the opening on the trigger superior part and store in the refrigerator (b).

If the pouch is opened and the next application will not take place within 3 months: remove the trigger, snap the cap back on (c) and store in the refrigerator.



Do not re-use empty pouches.

Empty pouches and unused products in their original packaging must be collected, stored and disposed of by a hazardous waste treatment program. For more information, contact your partner distributor or the local waste treatment program.

PRECAUTION FOR USE

During the handling of the product and its application, please wear gloves and suitable clothing.

To ensure the operator safety, we recommend the following equipment: EN 374-3-standard certified gloves (chemical protection), such as nitrile gloves, protective goggles, EN 166-standard "symbol 3" compliant mask or protection visor with CE marking.

FIRST AID


**IN CASE OF AN EMERGENCY,
DIAL 112 or your local emergency number
Call the poison control center closest to you**



Safety data sheet available at www.m2i-lifesciences.com/fds-tds-fr

LEGAL NOTICES

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Caution :  H411: Harmful to aquatic life with long lasting effects. P273: Avoid release into the environment. P391: Collect any spilled product. P501: Dispose of the contents/container in a hazardous or special waste collection centre (approved facility) in accordance with local, regional, national and/or international regulations. EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

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M2i Biocontrol,
industrial ambition through excellence and innovation.



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