



# Box Tree Caterpillar Killer

## Beneficial Nematodes

### Application periods



- Please read inside of pack for detailed application information
- Use nematodes on receipt or fridge store (do not freeze)
  - Do not fridge store longer than use by date
- Contains 2 treatments of Box Tree Caterpillar Killer nematodes
- Box Tree Caterpillar Killer is safe for children, pets and wildlife



For more information, please visit [www.dragonfli.co.uk](http://www.dragonfli.co.uk)



# Box Tree Caterpillar Killer

## Beneficial Nematodes

- Natural control of Box Tree Caterpillars
  - Applied with water
- Contains 2 x 25 million nematodes
  - Treats up to 35sqm



# Box Tree Caterpillar Killer

## Beneficial Nematodes

Box Tree Caterpillar Killer provides a biological control solution for Box Tree moth caterpillars (*Cydalima perspectalis*) using entomopathogenic nematodes (*Steinernema carpocapsae*). Nematodes are living organisms that can be used to control insect pests including Box Tree Caterpillars. This relatively new non-native pest is very destructive towards Box plants and hedges. The damage shows as eaten foliage covered in webbing; in severe cases the Box plants can be completely killed. The adult moths are white with a brown border on the wings and the caterpillars are green-yellow with black heads. There can be three generations a year from March-October.

Box Tree Caterpillar Killer nematodes provide a safe, natural solution for control of Box Tree moth caterpillars. The nematodes enter the caterpillars via a natural opening like the mouth and feed on the contents of the caterpillar. A natural bacterium is produced by the nematodes inside the caterpillar, which kills it. The nematodes also reproduce inside the caterpillar, releasing more nematodes into the surrounding area. Due to the location of the Box tree caterpillars in the middle of plants and hedges, it can be difficult to get good contact coverage of them with nematodes, so it is important to apply the second application not longer than 7 days after the first. For new generations of Box tree moths, it maybe required to repeat treatments. The use of Box Tree pheromone traps to monitor and catch Box tree moths is recommended.

Once the Box Tree caterpillars are killed, the nematodes die back. Box Tree Caterpillar Killer nematodes have no negative effects on plants, humans, birds, fish or mammals.



### Preparation prior to application

- For best results apply when Box Tree caterpillars present on plants.
- Normally 3 generations a year from March-October.
- Apply on dull or wet days, avoid application on bright days, as nematodes are U.V sensitive.
- Humidity and moisture aids nematode activity on surface areas.
- Apply early or late in the day when humidity levels at highest.
- Avoid frosty conditions.
- Clean spraying equipment and do not apply with insecticides.
- Apply second application 7 days after first treatment.

### Application

- Open nematode sachet and empty entire contents into a bucket of 2.5 litres of water to create nematode concentrate solution (store un-opened second sachet in fridge).
- Stir thoroughly to break up and dissolve carrier material.
- Remove any filters in sprayers to prevent nematodes getting caught in filter.
- Add nematode concentrate solution to sprayer and add 5.5 litres of water to make 8 litres and stir.
- Spray nematode solution plants from bottom to top, making sure that the middle of the Box hedge gets plenty of spray solution, ensuring good coverage of Box Tree caterpillars.
- One nematode sachet will treat an area of plants up to 35 square metres.
- Use all the contents of the pack once opened and do not store made up concentrate solution.
- Repeat these instructions for the second nematode sachet application, 7 days after the first.



### Post application

- Check for any new caterpillars and repeat treatment if required.



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# Long Lasting Box Tree Moth Trap

**Pheromone trap for the monitoring and capture of Box Tree Moths (*Cydalima perspectalis*)**

## Pack Contents:

- 1 Re-usable Box Tree Moth Trap
- 2 Pheromone Lures
- 1 Circular Sticky Pad
- 1 String Hanger
- 1 Instruction Leaflet



Cap



Pheromone lure



Plastic cage



Lid



Funnel



Circular sticky card



Bucket

## Assembly Of Trap:

1. Remove paper from yellow sticky pad and place at bottom of bucket
2. Attach the funnel to the bucket by aligning the slots on the funnel with the tabs on the bucket and twisting to lock together.
3. Attach the lid to the funnel by aligning the 4 inserts with the 4 pegs on the funnel. Push the pegs into the holes so the lid is fully attached.
4. Remove a pheromone lure from its sachet and place in the plastic cage, then fasten the cap onto the cage. Store additional lures in the fridge.
5. Push the lure cage through the hole in the lid from above so that the cage effectively hangs below the lid.
6. Thread the supplied hanging cord through the two tab-holes on the lid and tie at both ends.

## How To Use:

- 1 Place traps out from the end of April until the end of October
- 1 Apply one trap per 150 square metres
- 1 Hang the trap at a height of approximately 1.5m
- 1 Replace the pheromone lure every 6-8 weeks
- 1 At the same time, empty the trap contents





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# Long Lasting Box Tree Moth Trap

Box tree moth (*Cydalima perspectalis*) is a moth from East Asia that is now present in the UK. The larvae or caterpillars of this moth feed on box plants (*Buxus*). The moths lay pale yellow flat eggs that overlap each other in a flat sheet on the underside of leaves. The young larvae that hatch are greenish yellow with black heads. Each female can lay up to 700 eggs and there are 5-7 larval stages.

As the larvae/caterpillars mature the green body develops dark brown stripes. Very mature larvae have thick black and thin white stripes down the body with large black dots outlined in white. The caterpillars start at between 1.5 to 2.0 cm long and develop up to 4cm long. The moths have a wingspan of about 4cm. The body is mainly white with a brown head and white wings. The moth overwinters as a cocoon.

The Box Tree Caterpillars eat the box leaves. This leaves the box plants disfigured with patches of what looks like dieback (not to be confused with box blight) caused by the severe loss of leaves. The caterpillars develop into pupae that wrap themselves in white webbing. In severe cases complete defoliation can occur. Once the leaves are eaten, the larvae will eat the bark.

There are several generations of Box tree caterpillars in a season from April-October. The Dragonfli Box Tree moth trap uses a funnel trap design with a specific pheromone lure that attracts this species. The male moths are attracted to the lure and then drop down into the funnel trap. By catching males, mating and egg laying can be reduced and populations monitored for additional control measures.



## Other pheromone and attractant traps in the Dragonfli range:

**Long Lasting Codling Moth Trap**

- Pheromone trap for Codling Moth (*Cydia pomonella*)
- Features Long Life Pheromone lure active for 16 weeks
- No sticky trap
- Clear free system - beneficial insect and bird friendly



**Long Lasting Horse chestnut leaf miner Moth Trap**

- Pheromone trap for Horse Chestnut leaf miner moth (*Camponotus arboricola*)
- Supplied with three Pheromone lures
- Reusable trap
- Clear free system - beneficial insect and bird friendly



**Long Lasting Garden Chafer Trap**

- Trap and attractant lure for Garden Chafer beetle (*Phyllopertha horticola*)
- Reusable trap
- Clear free system - beneficial insect and bird friendly
- Can be used in combination with biological control nematodes



**Long Lasting Plum Fruit Moth Trap**

- Pheromone trap for Plum Fruit Moth (*Grapholitha funebrana*)
- Features Long Life Pheromone lure active for 16 weeks
- No sticky trap
- Clear free system - beneficial insect and bird friendly





## New & Improved Box Tree Moth Pheromone Lure

Dragonfli Box Tree Moth (*Cydalima perspectalis*) pheromone lures release a powerful sex pheromone that attracts and catches male Box Tree Moths. These pheromones are now supplied in a rubber bung formulation that provides better protection and ensures a more consistent release of the pheromone. The pheromone contained within is very powerful and released through the rubber bung. There is no need to attempt to cut open the bung, as this will release the pheromone too quickly. Due to the strength of the pheromone only a very small quantity of pheromone is infused with each bung, this is not visible to the human eye.

### Directions For Use:

- To prepare the Box Tree Moth pheromone lure for use, cut open the sachet that the pheromone lure is supplied in and remove the rubber bung lure
- Do not try to open or cut the top off the lure
- Insert the Box Tree lure into the cage of your Box Tree Moth trap. The Box Tree pheromone lure is now active and will begin releasing the pheromone
- Place the Box Tree trap outside near your Box Tree plants

### Next Steps:

- Each Box Tree Moth pheromone lure will release pheromone for at least six weeks. There can be multiple generations of Box Tree moths per year, so replacement lures may be required

### Storage:

- Unopened lures can be temporarily fridge stored, or stored in freezers for up to a year





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**Box Tree Moth Egg Killer Sachets (*Trichogramma evanescens*) -  
Application Instructions**

**Please use immediately upon receipt**

**Required conditions:**

- Temperature: between 15 and 35°C
- Insecticides: Do not apply *Trichogramma* if insecticides have been used in the past 1-2 weeks

**Before application:**

- Do not open the sachet. The sachet already contains a small emergence hole

**Application:**

- Place the sachets within your Box hedges and plant foliage
- Avoid blocking the emergence hole of the sachets
- Do not place objects on sachets as you may damage the eggs inside
- One sachet can treat an area of up to 10 square metres or 5 linear metres

**Next Steps:**

- The tiny parasitic wasps will emerge from the sachet over the next 3-4 weeks
- Consider introducing Box Tree Moth Egg Killer Sachets on plants for at least the first two generations of Box Tree Moths (**May-June & July-August**)
- Remove your sachets after 4 weeks