

Carpocapsae-System

Carpocapsae-System provides us with the ideal, biological solution for the control of harmful moths, Duponchelia, crane flies and several beetle larvae. Leaf and soil treatments can be applied depending on the intensity of the plague.

GENERAL

Carpocapsae-System contains the parasitic nematode *Steinernema carpocapsae*. This nematode searches for pests found in the root zone of a plant. Once found, the nematodes penetrate the organisms through natural openings or directly through the skin. Bacteria that live in symbiosis with the nematodes are released as soon as the nematodes have penetrated the larvae.

The nematodes have to be mixed with water until a suspension is obtained. Afterwards, this suspension can be sprayed on the surface requiring treatment.

Carpocapsae-System is delivered as a gel formulation in packages of 5 million, 50 million and 250 million nematodes.

APPLICATION

The type of treatment depends on the location of the pest. The suspension is either sprayed on foliage, drenched or irrigated on soil.

Soil treatment

- Preventative: 500.000 nematodes/m².
- Curative: 1.000.000 nematodes/m².
- Apply at least 1 litre per m² of suspension.
- The soil must be moist for at least 2 weeks after the treatment.

Foliage treatment

- 0.25 million nematodes/m².
- 1000 litres of spray suspension per hectare. Make sure that the suspension does not run-off from the plant, otherwise the nematodes will end up in the soil.
- In order to guarantee uniform coverage, it is recommended to add spreader-sticker to the spray suspension.

Weather conditions

- The soil must be moist
- The temperature should be between 14 °C and 30 °C
- The best time to apply the nematodes is in dark weather conditions or at night. Do not apply the nematodes in bright sunshine; direct exposure of nematodes to sunlight should be avoided, UV-light kills nematodes.

PESTS

Moths

Moths belong to the Noctuidae family, which contains approximately 25.000 species. The most common ones harmful in horticulture are: the Golden Twin-spot (*Chrysodeixis chalcites*), the Small Mottled Willow (*Spodoptera exigua*), the Bright-line Brown-eye (*Lacanobia oleracea*), the Silver Y (*Autographa gamma*), and the Cabbage Moth (*Mamestra brassicae*). Most species fly mainly at night and are strongly attracted to light. The larvae (caterpillar) are not very hairy and they can live both in soil and on foliage. The harmful larvae feed at night and during the day they rest in the soil or in the openings of the plant.

Duponchelia fovealis

This moth originates from the Mediterranean. The caterpillar usually finds itself on ornamental plants that are very sensitive to damage. The caterpillars of this moth are often located on the underside of the crop where they stuff themselves within living plant material. They sometimes remain in the substrate because they can also feed on dead organic material. This caterpillar is very hard to control with chemicals due to its concealed way of living. Nematodes are therefore the perfect solution to control this pest. They will eliminate the caterpillars while chemicals fail to do so.

Chrysoteuchia topiaria

This moth is mainly known for the damage it causes to cranberries. The larvae eat the roots and the lower part of the plant. This weakens or possibly kills the plant. The dosage for a satisfactory control is 750.000 nematodes per m².

Other pests

Carpocapsae-System also controls the larvae of the crane fly (Tipulidae) and several larvae originating from the family of the Coleoptera and the Orthoptera, such as beetles and mole crickets.

- Avoid using centrifugal pumps as those can kill the nematodes.
- Always use an entire package at one time as each contains a measured dose of nematodes for one application because the nematodes may not be uniformly distributed within a package. Using only part of a package may result in an insufficient application rate.

PRECAUTIONARY MEASURES

- This nematode may be combined with some chemical agents. For more detailed information on the compatibility with chemical agents, check Biobest's side effect manual on www.biobest.be.
- The best time to apply the nematodes is in dark weather conditions and at night when U.V. light is minimal and there is more humidity.
- In case of spraying, remove all fine filters (diameter smaller than 1 mm) from the irrigation or spraying system to prevent clogging. Pressure in the irrigation or spraying system must not exceed 20 bar to avoid damage to the nematodes.

ADVANTAGES

- **No residue on the crop**
- **Can be integrated in resistance management**
- **No re-entry time**
- **Can be introduced in combination with other biological or integrated systems**
- **Completely safe for users, consumers and the environment.**