

Advanced Biocontrol for the Control of Codling Moth (*Cydia pomonella*)

Benefits of Nemasys® C

- High levels of control of mature and overwintering larvae of codling moths
- A true biocontrol agent; effects begin between 24 to 48 hours
- No pest resistance issues
- No pre-harvest interval
- No re-entry interval
- Use as part of an integrated management program

The Problem

Codling moth (*Cydia pomonella*) is a globally distributed pest and is a major pest of pome fruit including apple, pear, quince, asian pear, crab apple, hawthorn and cherry. Codling moths overwinter in cocoons as fully grown fifth instar larvae. The cocoons are located under loose bark and other protected areas on the tree or in debris around the base of the tree. Larvae pupate in the spring and emerge as adults around first bloom. Peak flight occurs approximately two to three weeks after full bloom and may continue for several weeks.

The Solution

Nemasys® C Beneficial Nematodes contains the naturally occurring insect parasitic nematode, *Steinernema carpocapsae*. This resilient nematode is applied in its infective juvenile stage to search out and enter the larvae. Once inside, the nematode releases symbiotic bacteria that quickly kill targeted insects. Reproduction inside the insect releases new generations of infective juvenile nematodes that disperse in search of further prey.

Nemasys® C is active against the mature and overwintering larvae of codling moth (*Cydia pomonella*) and oriental fruit moth (*Grapholita molesta*). Nemasys® C is also an effective tool on a variety of lepidoptera, borers and root-dwelling weevils in outdoor crops including peachtree borer, cranberry girdler, black vine weevil, naval orangeworm and strawberry root weevil. With no restricted entry interval and no adverse effects on beneficial insects or soil microorganisms, Nemasys C is ideally suited for use in integrated pest management programs as an important tool for resistance management, worker safety, and environmental responsibility.



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Technical Information Bulletin

Why Use Nemasys® C?

The codling moth life cycle is synchronized over winter by the presence of fifth instar larvae. These larvae are in cocoons in the tree trunks and in the soil.

This larval stage is very susceptible to nematode attack. Extensive global trials have proven that applications of Nemasys® C can reduce the codling moth population before the first flights, thus providing long lasting control.

In addition, Nemasys® C works in harmony with other control methods that require a low initial pest population (e.g. mating disruption or granulovirus (CpGV)).



***Steinernema
carpocapsae***

**Overwintering Codling
Moth (*Cydia pomonella*)**



To learn more about crop protection products from BASF, visit www.betterplants.basf.us

Best Use Recommendations

- Spraying Nemasys® C after harvest as a “clean up” application can significantly reduce pest pressure the following year
- Lower pest pressure in the spring will enhance the use of mating disruption and may delay the need for chemical insecticide or virus sprays
- Spray Nemasys® C at the rate of 750 million nematodes per orchard acre in the autumn to target overwintering codling moth larvae
- Apply in an application volume of no less than 100 gallons per acre using a high volume orchard or air-blast sprayer
- Direct the spray at the first six feet of the tree trunk of each tree as well as the soil and ground surfaces under the tree canopy. If applicable, turn off upward facing nozzles.

Application Considerations

- Nemasys® C must be applied to moist trees/soil during moist conditions
- Sunlight at application should be avoided in order to prevent desiccation
- The use of a spray adjuvant can improve application conditions (contact your advisor for best recommendation)
- Air temperatures should be between 57°F – 86°F, and should remain higher than 57°F for at least five hours after application
- Remove all filters of 50 mesh or finer and maintain pump pressure below 300 psi (20 bar) to avoid damaging nematodes
- **WARNING:** Do not use with piston pumps as internal pressure can exceed 300 psi

Pest	Application Method	Dose per Acre	Volume per Acre	Area per Pack
Codling moth 5th instar (overwintering stage)	Soil and tree drench	750 mill nematodes	100 gallons (minimum)	One pack (3 bill) treats 4 Acres
Oriental fruit moth 5th instar (overwintering stage)				

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Nemasys® C
Beneficial Nematodes