

Problem: Codling Moth - *Cydia Pomonella*



Hosts: Primarily apples but may also attack pears, crabapples, walnuts, quince and other fruits.

Description: Codling moth overwinters as a full-grown larva within a cocoon. Cocoons may be found under and between loose tree scales or under debris on the ground around the base of the tree. Pupation occurs in the spring at about the time the apple trees are in "pink show" and emergence of the adults happens when the trees enter "full bloom." Emergence occurs over at least a 6- to 7-week period.

Adults are a 3/4 inch long moth that has a cinnamon brown spot on the end of each wing tip. Female moths will have mated and begun laying eggs within two days after emergence. The majority of eggs are deposited on upper and lower leaf surfaces, but some are deposited on twigs and fruit.

Small, newly-emerged larvae immediately seek out the fruit into which they bore. After 3-4 weeks, fully matured larvae exit the fruit, spin their cocoon and pupate. Moths emerge two weeks later and deposit eggs for the second generation.

Stings and deep entries are the two visible types of damage attributable to codling moth larval feeding. Stings occur when larval boring activities are superficial and appear as minor blemishes less than 1/4 inch deep and consist of dead tissue. Deep entry damage occurs when larvae tunnel into and feed upon the developing seeds and flesh in apple cores. Given an apparent instinct for "clean" immediate surroundings, larvae expel frassy materials which appear as messy external extrusions around entry holes.

Recommendations: Newly emerged larvae seek protected sites under which they spin their cocoon. It is possible to provide a substitute location for this larval activity by banding

tree trunks and/or large branches with 6-inch strips of burlap or cardboard. Larvae which congregate under these protected sites can be crushed.

Further reduction of pest populations can be achieved via the removal of debris in and around orchard sites under which larvae would complete their lifecycles.

Though the above methods will reduce populations, there is usually enough codling moths left to cause significant damage to fruit. Therefore, insecticides (or fruit bags) are needed for complete control. Following are insecticides that can be used on apples. Carbaryl (Sevin) is not listed as using this product can lead to spider mite outbreaks.

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| Bonide Malathion | Two applications per year |
| Bonide Fruit Tree & Plant Guard | Four applications per year |
| Captain Jack's Dead Bug Brew | Six applications per year |
| Cyd-X | No limit but read label for instructions |
| Monterey Garden Insect Spray | Six applications per year |

Apply every 7 to 10 days starting 10 days after petal fall. See label for each product to determine when to stop spraying.

Instead of insecticides, fruit bags can be used. Bags act as a barrier to bird damage as well as fruit insects and diseases and can eliminate the need to spray for fruit protection. Apply when the fruit are about the size of a quarter. Remove bags 2 to 3 weeks before harvest to allow the fruit to color. See the second reference below for more detailed information on bagging fruit.

References:

1. [Codling Moth](#), University of Kentucky, Entfact-203
2. [Bagging Apples: Alternative Pest Management for Hobbyists](#), University of Kentucky Entomology, ENTFACT-218
3. [Spray Guide for Growing Apples at Home](#), K-State Research and Extension, MF3429
4. [Fruit Pesticides, Active Ingredients, and Labeled Fruits](#), K-State Research and Extension, MF3431

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