

(revision date:2/14/2019)

Pear: Codling moth

Use *Integrated Pest Management (IPM)* for successful plant problem management.

Biology

The brownish-gray wings of adult codling moths are marked with dark bands and a dark brown spot near the tip. Wingspan is up to 3/4" across. Adult females lay eggs on leaves or fruit. The larvae burrow into fruits, usually through the blossom end, where they eat the core and seeds. The fruit appears dirty brown or rotted in the center when cut open. Mature caterpillars are pinkish-white with brown heads and about 3/4" long. The mature larvae tunnel out of the fruit and make cocoons under bark or in the ground beneath the tree. They overwinter in the cocoons and pupate in the spring. Adults typically emerge around May-June. There can be two generations per year. Codling moth is a serious problem in commercial apple and pear orchards. Because home-grown fruit trees can serve as alternate hosts for codling moth, homeowners in fruit-growing areas are encouraged to manage this pest to help control regional codling moth infestations. Control may be required by law in some regions--contact your local extension office if you have questions.

Management Options

Non-Chemical Management

- ~ Remove loose bark to remove hiding places for cocoons.
- ~ Attach corrugated cardboard or burlap around trunk to attract migrating larvae about to pupate. Periodically remove and destroy cocoons underneath.
- ~ Some naturally-occurring parasites may help control codling moth populations. Avoid use of broad-spectrum insecticides which may kill beneficial insects.
- ~ Bagging fruit may be effective against codling moth if the bags are placed before adult moths emerge in the spring. Options include paper lunch bags, wax paper bags, and double-layer Japanese fruit bags. Nylon mesh "footie" bags may be less effective against codling moth. Clear plastic sandwich bags may retain moisture and contribute to disease problems on the bagged fruit. Bags should be placed on UNINFESTED fruit 4-6 weeks after petal fall (when the fruit is approximately dime-sized) and should be left on for the entire growing season. Bags can be removed about 3 weeks before harvest to improve fruit color, but exposed fruit may be attacked by second-generation codling moth adults emerging mid-July to early September.

Select non-chemical management options as your first choice!

Chemical Management

IMPORTANT: Visit Home and Garden Fact Sheets for more information on using pesticides

Apply about 10 days after full petal fall or 17-21 days after full bloom (follow label instructions for kaolin clay products). Malathion and esfenvalerate are toxic to bees. Do not apply products containing esfenvalerate or malathion on or near blooming plants. To minimize risk to bees, apply in the evening after bees have stopped foraging for the day. Homeowners should not make foliar applications to trees over 10 ft tall. Consult a commercial pesticide applicator for treatment of trees and shrubs over 10 ft. tall.

Listed below are examples of pesticides that are legal in Washington. Always read and follow all label directions.

- ~ Bonide Captain Jack's Deadbug Brew R-T-U [Organic]
 - active ingredient: spinosad (spinosyn A+D)
 - EPA reg no: 4-472
- ~ Bug Buster-O [Organic]
 - active ingredient: pyrethrins
 - EPA reg no: 1021-1771-54705
- ~ Bull's-Eye Bioinsecticide
 - active ingredient: spinosad (spinosyn A+D)

- EPA reg no: 62719-314-56872
- ~ Hi-Yield 55% Malathion Spray
 - active ingredient: malathion
 - EPA reg no: 7401-10-34911
- ~ Ortho Bug B Gon Garden Insect Killer R-T-U
 - active ingredient: acetamiprid
 - EPA reg no: 8033-21-239
- ~ Safer Brand Insect Killing Soap Conc II [Organic]
 - active ingredient: potassium laurate
 - EPA reg no: 42697-60
- ~ Surround At Home Crop Protectant
 - active ingredient: kaolin clay
 - EPA reg no: 61842-18-56872
- ~ This list may not include all products registered for this use.

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Images



~ Caption: Codling moth feeding inside apple core
~ Photo by: J.F. Brunner



~ Caption: Adult codling moth on crabapple leaf
~ Photo by: M. Bush



~ Caption: Cardboard strips secured to trunk of apple tree for IPM
~ Photo by: M. Bush