KPOV – *The Point*

Gardening: Get Good at It

“Project Happy Apples”

April 20, 2021

Apples and pears are popular fruit trees for home gardens in Central Oregon but the codling moth (*Cydia pomonella*), the most devastating and serious of pests for these fruits in our region, can quickly dampen enthusiasm. The larval stage of the codling moth feeds inside apples and pears and makes the fruit unsuitable for eating.

Project Happy Apples is a program offered by OSU Extension Service in Central Oregon to assist local residents with control of codling moth and to help manage wormy apples or pears in backyard fruit trees. The goals of the program are:

* to increase knowledge of when to monitor and manage for codling moth;
* to increase confidence in purchasing tools and using integrated pest management (IPM) strategies; and
* to help participants reduce codling moth populations in their fruit.

Apples and pears are the primary host of the codling moth. It can also affect large-fruited Hawthorn, quince, prune and walnut and even peaches, apricot and cherry if they are located near a heavy infestations of apple or pear.

Adult moths are 0.5 inch wide, with alternating gray and white bands on the wings and a copper band on the wing tips. Larvae are whitish with a black head when immature, and pinkish with brown head when mature. The eggs are very tiny and rarely seen.

The codling moth overwinters as mature larvae in silken cocoons spun under loose bark, in the soil, or in litter at the base of the tree. Pupation takes place in the spring around the time the first blossoms are showing pink, and adults emerge around bloom. Adults are active only at dusk and dawn and lay eggs on leaves, or occasionally on fruit.

The larvae emerge, begin feeding on fruit, and may bore to the center of developing fruit to feed on the flesh and seeds. As they mature, they push frass out of the entry hole. After 3 to 4 weeks, the larvae leave the fruit to seek a sheltered spot on the tree to spin cocoons. The larvae may overwinter in the cocoon, or they may emerge in 2 to 3 weeks as a new flight of adults.

The codling moth can be managed with a combination of cultural control, exclusion, physical barriers, and chemical control.

Keeping your garden/orchard clean is essential: Throughout the growing season, check fruits on trees for signs of damage, remove and destroy any infested fruit showing the frass-filled holes before the larvae are old enough to crawl out and begin the next generation. Clean up dropped fruit as soon as possible after they fall, because dropped fruit can have larvae in them. Codling moth adults can fly as far as a mile to find mating sites on apple trees so sanitation / maintaining cleanliness in your own garden will not be enough.

Excellent nonchemical control can be achieved by enclosing the entire tree in insect/mosquito netting or by enclosing young fruit in bags right on the tree to protect them from the codling moth. However, individual bagging is quite time consuming, so this method is most manageable on smaller trees with fewer fruit.

Trunk banding is a traditional, nonchemical method to trap mature larvae in a cardboard band as they climb the trunk seeking a place to pupate. Banding works best on smooth-barked varieties and when bands are removed and destroyed in a timely fashion.

You can install traps to monitor moth flight and help time when to use organic insecticides Neem Oil, Spinosad (a soil bacterium) or Madex or CYD-X (a granulosis virus) as it is important to apply only when it is necessary and most effective. The dates for managing codling moth vary from year to year as their life cycle is dependent on weather.

Project Happy Apples helps take the guesswork out of knowing when to manage for codling moth in Central Oregon. Informative timely emails are sent out to interested residents with advice on when and how to treat fruit trees to reduce or prevent infestation. Participants sign up to get email notifications or go to the Project Happy Apples website to access the latest newsletter. Links to the website and how to get added to the contact list are provided on our website.

For answers to all your gardening questions, and to sign up for COMGA’s Spring Seminar Series, please visit our website: gocomga.com and click on the KPOV tab on the orange bar. This has been Gardening: Get Good At It on KPOV’s The Point.

Resources:

* Project Happy Apples: <https://extension.oregonstate.edu/newsletter/project-happy-apples>
* If you would like to be added to the contact list to get this information, please [contact Carrie Sether](https://extension.oregonstate.edu/people/carrie-smith)
* PNW Pest Management Handbook: <https://pnwhandbooks.org/insect/tree-fruit/apple/apple-codling-moth>
* OSU Statewide Impact: <https://ourimpact.oregonstate.edu/story/project-happy-apples-helps-gardeners-fight-devastating-codling-moth>
* Washington State University Tree Fruits: [http://treefruit.wsu.edu/crop-protection/opm/codling-moth/](https://na01.safelinks.protection.outlook.com/?url=http%3A%2F%2Ftreefruit.wsu.edu%2Fcrop-protection%2Fopm%2Fcodling-moth%2F&data=04%7C01%7C%7C184c4ae83b3c4e4b24b508d8dcf8838e%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637502307226764738%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=YYGVZgUmKckiUthPHEIYj8k%2FtzSoKrYZVpuwtbbNGJE%3D&reserved=0)
* University of California IPM: <https://www2.ipm.ucanr.edu/agriculture/apple/Codling-moth/>