MAY 5, 2023 | VOL. 4 ISS. 1

EASTERN IDAHO

PEST ALERT

BANNOCK, BINGHAM, BONNEVILLE, CASSIA, FREMONT, JEFFERSON, AND MADISON COUNTIES

INSIDE THE ISSUE

BAD PG 5

BAD PG 1

PHOTO OF THE WEEK

UPCOMING

BAD INSECT:

Apple Codling Moth

By Ron Patterson, Extension Educator, Horticulture

Apples are the most common fruit tree in eastern Idaho. They are hardy to our climate and produce a nutritious treat in late summer and early fall. It's fun to pick a ripe apple and take a bite of the sweet, juicy fruit. Until you look down and see a wormhole in it—hopefully not half a worm.

University of Idaho Extension

Codling Moth cont.

The most common apple and pear flesh feeding insect in Idaho is the codling moth. Apple is the preferred host, but pears, large hawthorns and quince can also be affected.

Codling moths tunnel through the flesh and feed primarily on the seeds. The entry tunnels are small. Large tunnels are an indication of an exit tunnel—they are often the same tunnel.

Development and Activity

The development and activity of the codling moth is temperature related. They overwinter in leaf litter, bark crevices, and other protected locations as mature larvae in a cocoon. The larvae pupate in early spring. The first adults typically emerge about the time red delicious apples are in full bloom. This is when we try to catch them in our traps. We have traps from Burley to St Anthony and Driggs.

Scott Bauer, USDA Agricultural Research Service, Bugwood.org

First-generation adult activity is limited by cooler evening temperatures. When evening and night temperatures fall below 50F moths are inactive. As evening and night temperatures rise above 60F egg laying activity increases.

Egg development is also temperature related. Once we trap moths in an area, we watch the temperatures and apply them to the codling moth development model to time control activities for the best effect.

This temperature dependence is why you can't just time your sprays on blossom development or petal drop. Different cultivars have different bloom schedules. Besides, every year is different. Spray dates are determined by forecast temperatures, but as we get closer the date may shift a little based on actual temperatures.

In eastern Idaho codling moths have two generations, warmer areas may have part of a third generation.

Control Options

There are several things you can do to improve your codling moth control efforts. Best results are obtained when you combine these practices.

Sanitation

Clean up leaf litter and aborted fruit around your trees. If you are doing it right now, put the litter into a compost pile and let it heat up. That will help reduce the number of developing pupae.

Thin Fruit

Apples and pears should be thinned when they are about the size of a nickel. The blossoms come in clusters. Once fruit has set, reduce the numbers of fruit to one in a cluster, and thin further by removing all fruit from some clusters until the remaining fruits are about six inches apart. While doing the thinning, be sure to remove and destroy those that have stings or entry holes. Not only will this greatly reduce the number of larvae, it will also result in larger fruit. Bear in mind that the early-season entry holes are often found in the calyx, or blossom end, of the fruit.

Whitney Cranshaw, Colorado State University, Bugwood.org

Bag Fruit

Early-season eggs are mostly laid on the leaves rather than the fruit. When the fruit gets about ½ - 1" in diameter they can be bagged. This can be a special paper bag (Japanese apple bag), designed for this purpose, or just nylon footies, like you find in the shoe store.

Codling Moth cont.

The paper bags have a tie to attach them to the fruit. For the nylon footies you can use tiny hair bands to hold them in place. The nylon footies dipped in a kaolin clay solution are more effective against codling moth than just the nylon. This will eliminate much of the codling moth damage and can be combined with one initial coverage with horticultural oil or insecticide before putting them in place. These can be found online by searching for "apple footies" or "apple maggot barriers".

It takes a fair amount of time to put the bags in place and should be done after fruit thinning. But it only needs to be done once and eliminates the chance that later insecticide applications will harm the beneficial predatory and pollinator insects.

Paper bags will affect the mature fruit color and should be removed a couple of weeks before harvest. Depending on how early in the season this is, there may be some late-season codling moth damage. The nylon footies do not adversely affect mature fruit color.

Insecticides

Timing is critical for good control without wasting resources. The Eastern Idaho Pest Alert will provide spray timing information throughout the season for areas from Burley to St Anthony and Driggs. Once we have captured moths in our traps, we watch the temperatures to determine the best spray dates for the given location.

You will notice the charts have Option A and Option B. The following information is obtained from the Utah State University Fruit Pest Advisory. The procedure indicated will reduced, but not eliminate, codling moth damage. (But then, nothing will eliminate it.)

Conventional production options

High fruit damage in past years:

Apply the first application for either Option A (insecticide) or Option B (oil) at the listed date.

For Option A, repeat the insecticide spray 14 days later, for a total of 2 applications in the first generation.

For Option B, apply the insecticide spray at the listed date once.

When the "start date" for the 2nd generation is provided, spray every 10-18 days until Sept. 15.

Pick a different product to use for each generation.

Low fruit damage in past years:

Apply the first application for either Option A (insecticide) or Option B (oil) at the listed date.

For Option A, do not spray again.

For Option B, apply insecticide at the listed date.

Wait until the "start date" for the 2nd generation is provided, and spray on that date, and repeat 14 days later, for a total of 2 sprays.

Do the same for the 3rd generation.

Pick a different product to use for each generation.

Organic production options (other than bagging)

High fruit damage in past years:

Apply the first application for either Option A (insecticide) or Option B (oil).

For Option A, repeat twice, spaced 7-10 apart, for a total of 3 applications in the first generation.

For Option B, apply insecticide at the listed date and re-apply 7-10 days later.

When the "start date" for the 2nd generation is provided, spray every 7-10 days until Sept. 15.

Pick a different product to use for each generation.

Low fruit damage in past years:

Apply the first application for either Option A (insecticide) or Option B (oil).

When the "start date" for the 2nd generation is provided, spray every 10-14 days until Sept. 15.

Pick a different product to use for each generation.

Eugene E. Nelson, Bugwood.org

Ingredient	Efficacy	Residual length (days)	Comments
Conventional			
Carbaryl (old Sevin products)	Good	14	
Gamma-cyhalothrin (Spectracide Triazicide)	Good to Excellent	14 – 17	Last application at least 21 days prior to harvest
Malathion (Bonide Malathion, Hi Yield Malathion)	Good	5 – 7	Max 2 applications; some products are pears only
Zeta cypermethrin (Garden Tech Sevin)	Good to Excellent	14 – 17	Last application at least 14 days prior to harvest
Organic			
Azadirachtin (Safer BioNeem)	Fair to Good	7 – 10	
Codling moth virus (Cyd-X)	Good (if populations low)	7	Works best when used at beginning of generation
Kaolin clay (Surround)	Fair	7	Produces protective barrier
Oil (All Seasons Oil, EcoSmart, Neem)	Fair	3	Recommended for the first application of the generation only
Pyrethrin (Ortho Fruit Spray, Fertilome Fruit Tree Spray, Safer End All	Good	3 – 5	
Spinosad Monterey/Fertilome Spinosad	Good	7 – 10	Max 6 applications

Codling moth spray schedule

It's still early for codling moths, but the traps are out. As we get into the pest alert season, this table will provide spray dates for codling moth at the given region. Select the region that has similar climatic conditions to determine when to begin spraying.

Spray Timing Table				
Location	Option A Apply First Spray	Option B		Greatest Period of Egg Hatch
		Apply Oil	Apply First Insecticide	
Burley	unknown	unknown	unknown	unknown
Pocatello Airport	unknown	unknown	unknown	unknown
Pocatello East Side	unknown	unknown	unknown	unknown
Fort Hall	unknown	unknown	unknown	unknown
Blackfoot	unknown	unknown	unknown	unknown
Idaho Falls Airport	unknown	unknown	unknown	unknown
South Idaho Falls	unknown	unknown	unknown	unknown
Ucon	unknown	unknown	unknown	unknown
Rigby	unknown	unknown	unknown	unknown
Ririe	unknown	unknown	unknown	unknown
Rexburg	unknown	unknown	unknown	unknown
Sugar City	unknown	unknown	unknown	unknown
St Anthony	unknown	unknown	unknown	unknown
Driggs	unknown	unknown	unknown	unknown

GOOD INSECTS:

Vole winter damage

story by Lena Allen

If you happen to be like me, you may have been shocked and disgusted to find many vole holes and runs in your yard when the snow melted this spring. Don't worry! You are not alone! This seems to have been a particularly bad winter for vole damage. Even our demonstration garden at the Extension Office took quite a hit!

But what do you do about this vole damage now that spring has sprung?

One of the first things that need to be considered is managing the voles. Monitor your yard and garden for signs that there may still be voles around. If you are finding signs of voles, you will need to start management approaches. This include placing traps in their runways, using rodenticides in a safe manner, and animal control (such as cats) as well as other methods.

Many sources suggest using a homemade pvc pipe system to hold rodenticides in the vole runs. This keeps the poison away from pets and children, but provides a safe cozy environment where the voles will partake. Instructions for such a device are included in the USU article linked at the end of this article.

Next you will need to address the damage done to your lawn. You may have only a little damage or

you may have very extensive damage. Start by raking the damaged area to remove any dead grass bits and to better see what you are dealing with. It is a good idea if you have deep holes or trenches to fill them in with topsoil. This will help level out your lawn again and hopefully discourage the voles.

If there are extensive holes and trails, once you've filled them in, you may need to overseed with grass seed in the bare areas. Make sure to get a high quality seed with no weed seed content and one that will match your existing lawn.

Once your grass has started growing back and the new grass seed has sprouted, fertilize your lawn, while it's still cool, to encourage healthy growth. If your lawn is very bumpy from the trenches, holes, and runs, you many need to consider using a roller or doing some aeration to help smooth out your lawn.

Further information:

USU Voles (pdf)

Meadow Voles and Pocket Gophers, Oregon State

Managing Voles in Idaho Lawns and Landscapes (pdf)

EASTERN IDAHO

PEST ALERT

UPCOMING EVENTS

HAPPY MOTHER'S DAY!!!

IDAHO HOME GARDEN TIPS

ALL ABOUT TRANSPLANTS

IRIS MAYES

May 9 | 7:00pm MT

Another FREE gardening class in our series. We will learn all about how to treat and manage your transplants. How to care for them til planting time, how to harden them off and plant out when the time comes. Join us if you've started your own plants or plan to buy starts from a nursery!

Join us on zoom:

https://uidaho.zoom.us/j/92616335377

PLANT TALK

RON PATTERSON & JARED GIBBONS

May 9 | 7:30pm MT

Following our class on transplants, we will have our Plant Talk question and answer session. Feel free to join us on zoom to ask any of your gardening questions!

PLANT PROMOTION FUNDRAISER

May 13 | 9:00-noon MT

Don't miss out on our annual plant promotion! Come learn about new plant varieties to put in your yard and garden and obtain these plants for a fraction of their usual cost, all while supporting our Master Gardeners in their programming with your donations!

IDAHO HOME GARDEN TIPS

FRUIT THINNING

RON PATTERSON

May 23| 7:00pm MT

This class will cover why it is important to thin fruit in your home orchard. Ron will cover timing and methods of fruit thinning. Come ready to learn and ask your home orchard questions!

PHOTO OF THE WEEK: Photo credit: Kimber Jensen

PHOTO OF THE WEEK:

If you weren't up late watching the night sky on April 23, you certainly missed out! We had a phenomenon not common in Idaho– visible Northern Lights or Aurora Borealis. For those who did catch this event, it was well worth the late night!

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