



EASTERN IDAHO

PEST ALERT

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

INSIDE THE ISSUE



GOOD

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BAD

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PHOTO OF THE WEEK

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FIREBLIGHT

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Good Bugs

By Ron Patterson, Horticulture Educator
University of Idaho Extension, Bonneville County
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Now that the temperatures are trying to increase, we see a lot of bugs showing up. There is a tendency to get out the spray as soon as we see the little critters. I encourage you to pause and look a little closer. When we spray insecticides to control pest insects, we run the risk of throwing nature out of balance.

Aphids, spider mites, thrips and leaf hoppers are at the bottom of the insect world food chain. There are lots of things that eat them. Look for the good guys when you are scouting your yards and gardens.

If you have these good bugs in your yard and garden, then you can take a little siesta once in a while as they go to work for you:

Description	Nymph or larva	Adult
<p>Syrphid or Hover Fly—the larvae are voracious eaters of aphids. The adults need pollen and nectar to reproduce. They look like bees. They lay their eggs in the middle of aphid colonies. You will often find adults hovering around flowers. Avoid broad-spectrum insecticides</p>	 <p>Clemson University – USDA Cooperative Extension Slide Series, Bugwood.org</p>	
<p>Minute Pirate Bug—Adults and nymphs do a great job on spider mites and small, soft-bodied insects. This is one of the first predators to come out in the spring. Avoid broad-spectrum insecticides. They are very susceptible to pyrethroid insecticides. Commercially available.</p>		
<p>Damsel Bug—Adults and nymphs feed on aphids, beetle larvae, leaf hoppers, caterpillars, moth eggs and other small insects. Commonly associated with meadows and pastures, but I find a lot of them in my vegetable garden. Avoid broad-spectrum insecticides. Reduce tillage.</p>	 <p>Phil Sloderbeck, Kansas State University, Bugwood.org</p>	

Description	Nymph or larva	Adult
<p>Aphid Predatory Midge—Larvae eat a lot of aphids. Often overlooked because they are so small. Adults need nectar as a food source and they lay their eggs in aphid colonies. Avoid broad-spectrum insecticides. Commercially available.</p>		 <p>© Stephen P.L. Luk</p>
<p>Lacewings—There are several—green, brown and dusty. The larvae do a great number on aphids (primarily), leafhoppers, spider mites, scales and thrips. Adults need flowers. Avoid broad-spectrum insecticides. Commercially available.</p>	 <p>UGA2158012</p> <p>David Cappaert, Bugwood.org</p>	
<p>Earwigs—I know, you think earwigs are creepy. But early in the year they do a great job on aphids and spider mites. If there are not enough bugs to eat, they will feed on plants. Later in the season they can become a pest of soft fruits. Reduce or eliminate tillage. Interesting facts: they can fly and they guard their young in the nest.</p>	 <p>Joseph Berger, Bugwood.org</p>	 <p>Joseph Berger, Bugwood.org</p>
<p>Ground Beetle—many different species. Adults and larvae are predatory, mostly on the ground. They eat their weight in prey each day. The larvae will often kill more than they can eat. Reduce or eliminate tillage.</p>	 <p>5368133</p> <p>Merle Shepard, Gerald R. Carner, and P.A.C Ooi, Insects and their Natural Enemies Associated with Vegetables and Soybean in Southeast Asia, Bugwood.org</p>	
<p>Praying Mantis—Nymphs and adults are generalist predators—they eat whatever they can grab. These are especially helpful with some of the larger pests such as grasshoppers. Avoid broad-spectrum insecticides. Commercially available.</p>		

Be aware of the beneficial insects out there and recruit them to help with your pest control program.

Raspberry Horntail Wasp

By Ron Patterson, Horticulture Educator
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The most common raspberry cane-boring insect in eastern Idaho is the raspberry horntail. Raspberry horntails are a sawfly, which are actually in the wasp order. To understand how this insect causes problems, you need to understand a little bit about raspberry biology. In part it depends on the type of raspberry you have.

Raspberries have a biennial cane on a perennial



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Adult horntail. Whitney Cranshaw, Colorado State University

primocanes in late winter, there will be no adults emerging from your canes. Of course, this will only work if you have primocane cultivars. Summer-bearing raspberries need that primocane to go through the second year in order to produce fruit.

Here's a fact sheet from Utah State University extension about raspberry horntail wasps. https://digitalcommons.usu.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1668&context=extension_c_ural



Horntail wasp symptoms

root. The old traditional raspberries that do well in eastern Idaho are called summer-bearing raspberries. A new cane will come up the first year, overwinter and produce fruit the second year in the middle of the summer. The first-year cane is called a primocane. The second-year cane is called a florican. Summer-bearing raspberries do not produce fruit on the first-year cane.

The other type of raspberry is called by several names—primocane, fall-bearing, or ever-bearing. This type of raspberry will produce fruit on the primocane if the season is long enough.

The raspberry horntail will only lay its eggs in primocanes. If you prune out and destroy your



Larva in the cane.

Fireblight

By Ron Patterson, Horticulture Educator
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Fruit trees are hitting their full-bloom stride in most areas.

Most backyard growers will not need to apply an antibiotic if they are diligent. Fire blight symptoms begin to show up two weeks after full bloom. New infections can be pruned out on a dry day as soon as they show up. Pruning tools need to be disinfected between each pruning cut. Rubbing alcohol, 10% bleach solution or disinfectant wipes work. If spray is warranted, it should be applied just before or after a wetting event and is effective for four or five days. Most garden centers carry streptomycin (don't use too often or resistance may develop).

Fire blight risk based on weather forecast—remember that in addition, **blossoms must be open, and a wetting event must occur.** This is a description of the key words and suggested actions in the chart.

Burley and Pocatello may have open apple blossoms soon.



Exceptional—Outbreak may occur if blossoms are wetted, no matter the blight history of your orchard. Apply antibiotic within 24 hours before or after the wetting event. Biological products should already be present on flowers and may not work as well if only applied at this risk period.



Extreme— Outbreak may occur if blossoms are wetted, no matter the blight history of your orchard. Apply antibiotic within 24 hours before or after the wetting event. Biological products should already be present on flowers and may not work as well if only applied at this risk period.

High—If unprotected flowers are wetted, infection is possible. If flowers are numerous, you may choose to protect every 2 - 3 days with biological product during the high-risk period. Or, apply antibiotic within 24 hours before or after the infection (wetting) event.

Caution—Wetting at this point is not likely to lead to infection, except within a few yards of an actively oozing canker. Continue to closely monitor the fire blight forecast, and consider applying biological sprays to reduce the potential build-up of blight bacteria if High risk is forecast in three or four days.

Burley	May 26 May 27 – 28 May 29 May 30 – June 1 June 2 June 3 – 8	Caution High Extreme Exceptional Extreme High
Pocatello Eastside	May 26 May 27 – 28 May 29 May 30 – June 1 June 2 June 3 – 4 June 5 – 8	Extreme High Extreme Exceptional Extreme High Extreme
Pocatello Airport	May 26 May 27 – 28 May 29 May 30 – June 1 June 2 June 3 – 8	Extreme High Extreme Exceptional Extreme High
Fort Hall	May 26 - 28 May 29 – June 2 June 3 – 8	High Extreme High
Blackfoot	May 26 - 28 May 29 – June 2 June 3 – 8	High Extreme High
Idaho Falls/Ammon/Shelley	May 26 – June 8	High
Idaho Falls Airport	May 26 May 27 – 29 May 30 – June 2 June 3 – 8	Caution High Extreme High
Ucon	May 26 May 27 May 28 – June 8	High Caution High
Rigby	May 26 May 27 May 28 – June 8	High Caution High
Rexburg	May 26 May 27 May 28 – June 8	High Caution High
Sugar City	May 26 May 27 May 28 – June 2 June 3 June 4 – 8	High Caution High Caution High
St Anthony	May 26 – 27 May 28 – 31 June 1 – June 2 June 3 June 4 – 8	Low Caution High Caution High
Driggs	May 26 – 29 May 30 – June 1 June 2 – 8	Low Caution High

Chemical Controls For Fire Blight	Brand Name	Chemical Name	Application Timing
	Bonide	Fixed-copper	Pre-bloom
	Drexel	Copper Sulfate	When wet weather coincides with flowering
	Kocide	Copper Hydroxide	Note: copper can damage foliage and fruit
	Miller	Lime Sulfur oil	Early bloom, Dormant
	FireLine	Oxytetracycline	Early bloom to petal fall
		Kasugamycin	Early bloom to petal fall
	Actigard	Acibenzolar-S-methyl	Early bloom to petal fall

Table and information from Cornell University Extension

Read and follow pesticide labels with any product

To manage fire blight, it is important to remove diseased wood during the dormant time (before buds form in spring). A general antimicrobial can be put on green tips to lessen chance of disease. Defense inducers can be applied before bloom. Protectants can also be applied during blooming. Protectants should be applied with the on-

For more information: <https://blogs.cornell.edu/biocontrolbytes/2019/04/26/battling-fire-blight-with-biologicals/>

Biological products for Fire Blight: Cornell University Extension

Product	Active Ingredient	Mode of Action
Firewall	Streptomycin	antibiotic – kills pathogen
Blossom Protect	<i>Aureobasidium pullulans</i> strains DSM14940 & 14941	competitive with pathogen
Bloomtime Biological	<i>Pantoea agglomerans</i> strain E325	competitive with pathogen
BlightBan	<i>Pseudomonas fluorescens</i> strain A506	competitive with pathogen
Serenade Optimum	<i>Bacillus amyloliquefaciens</i> strain QST713	antibiotic metabolites
Double Nickel	<i>Bacillus amyloliquefaciens</i> strain D747	antibiotic metabolites
Serifel	<i>Bacillus amyloliquefaciens</i> strain MBI600	antibiotic metabolites
Regalia	extract of <i>Reynoutria</i> (giant knotweed)	resistance inducer
LifeGard	<i>Bacillus mycoides</i> isolate J	resistance inducer

Codling Moth

By Ron Patterson, Horticulture Educator
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As spring progresses, consider the following guidelines.

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.

Codling moth spray schedule

We have now trapped moths in many areas in Idaho. The following 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 1 st Generation
		Apply Oil	Apply First Insec- ticide	
Burley	June 8	June 7	June 19	June 18 – unknown
Pocatello Airport/Chubbuck	June 11	June 9	June 22	June 21 – unknown
Pocatello East Side	June 3	June 1	June 13	June 12 – unknown
Fort Hall	unknown	unknown	unknown	unknown
Blackfoot	unknown	unknown	unknown	unknown
Idaho Falls Airport	unknown	unknown	unknown	unknown
South Idaho Falls	June 7	June 5	June 19	June 18 – 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



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

EASTERN IDAHO

PEST ALERT

UPCOMING EVENTS

JUNE 27 IDAHO HOME GARDEN TIPS

SUMMER WEED CONTROL

TOM JACOBSEN, EXTENSION EDUCATOR

June 27 | 7:00pm MT

Make sure you get on top of those stubborn weeds this summer! Learn how to identify weeds and the best ways to manage them.

PLANT TALK

RON PATTERSON & REED FINDLAY

June 27 | 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!

JULY 11 IDAHO HOME GARDEN TIPS

SUCCESSION PLANTING

RON PATTERSON, EXTENSION EDUCATOR

July 11 | 7:00pm MT

If you've ever wanted to start a second crop of cool season vegetables, such as radishes, peas, lettuce and other cool season plants for a fall harvest, this class is for you! Ron will discuss which plants you can do this with, and when to start.

PLANT TALK

RON PATTERSON & JARED GIBBONS

July 11 | 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!



PHOTO OF THE WEEK: Photo credit: Sethink

PHOTO OF THE WEEK:

Hopefully your garden and yard (and basement) survived all the storms we've had this week. However, it's great for our dry state to receive all this rain and hopefully you've enjoyed the storms in the meantime.

You never know what you're going to get with spring in Idaho! Be prepared to protect plants from frosty temperatures that could still happen!

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