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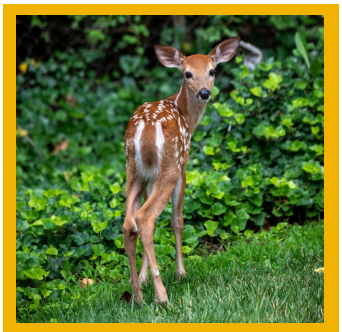
EASTERN IDAHO

PEST ALERT

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

INSIDE THE ISSUE



There have been recent rumors about Fusarium wiping out large portions of potato fields in eastern Idaho. I have not been able to verify this situation with the researchers yet, but Fusarium wilt will affect many vegetable garden plants, so it is good to be warned and prepared. Here is information about Fusarium wilt.

Fusarium Wilt: A Hidden Threat in Your Vegetable Garden

Ron Patterson, Horticulture Educator
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David B. Langston, University of Georgia, Bugwood.org

Fusarium wilt is a persistent and destructive soil-borne disease that affects a wide range of vegetable crops, including tomatoes, peppers, cucumbers, and melons. Caused by the fungus *Fusarium oxysporum*, this disease can linger in the soil for years, making management a long-term commitment for gardeners.

Recognizing the Symptoms

Early detection is key to managing Fusarium wilt. Look for a combination of these telltale symptoms (anyone of these symptoms alone may be just about anything):

- **Yellowing of leaves**, often starting with the lower foliage and progressing upward.
- **Wilting during the heat of the day**, even when soil moisture is adequate.
- **Stunted growth** and poor fruit development.
- **Brown streaks in the vascular tissue** when stems are cut open.

One-sided symptoms, where only part of the plant shows distress.

These symptoms can be confused with other issues like drought stress or nutrient deficiencies, so careful observation is essential.

Integrated Pest Management (IPM) Strategies

Howard F. Schwartz, Colorado State University, Bugwood.org

Managing Fusarium wilt requires a multi-pronged approach. Here are some effective IPM strategies:

1. Resistant Varieties

Choose vegetable cultivars labeled as resistant to Fusarium wilt (often marked with an “F” in seed catalogs). This is one of the most effective long-term solutions.

2. Crop Rotation
Avoid planting susceptible crops in the same location year after year. Rotate with non-host plants like corn or beans to reduce fungal buildup in the soil.

3. Soil Health
Improve soil drainage and organic matter. Healthy soil supports beneficial microbes that can suppress Fusarium.

4. Sanitation
Remove and destroy infected plants promptly. Clean tools and avoid moving contaminated soil to other areas of the garden.

5. Solarization
In warm climates, solarizing the soil with clear plastic during the hottest months can reduce Fusarium populations.

6. Biological Controls
Some beneficial fungi and bacteria, such as *Trichoderma* spp., can help suppress Fusarium. These are available as commercial soil amendments.

7. Avoid Overwatering
Fusarium thrives in overly moist conditions. Water deeply but infrequently, and ensure good drainage.

Final Thoughts
Fusarium wilt can be frustrating, but with vigilance and a strong IPM plan, gardeners can protect their crops and maintain healthy, productive vegetable beds. If you suspect Fusarium wilt in your garden, consider contacting your local Extension office for diagnostic support and tailored recommendations.

Fall is for Planting: Give Trees and Shrubs a Strong Start

Article and Photos: Ron Patterson, Horticulture Educator

Fall is one of the best times to plant trees and shrubs. Cooler temperatures, increased rainfall, and still-warm soil create ideal conditions for root development before winter dormancy. But successful planting goes beyond digging a hole—how you handle the roots can make all the difference.

Why Fall Planting Works

Planting in the fall allows trees and shrubs to focus on root growth rather than top growth. With less heat stress and fewer pest pressures, plants can establish themselves more effectively, leading to healthier, more resilient growth in the spring.

Root Washing: A Game-Changer for Container Plants

Many container-grown trees and shrubs come with circling or matted roots that can lead to long-term problems like girdling, poor anchorage, and limited nutrient uptake. **Root washing**—the practice of gently removing all potting media to expose the root system—can help correct these issues.

How to Root Wash:

1. **Remove the plant from its container.**
2. **Soak the root ball in a bucket of water** to loosen the potting mix.
3. **Spray the soil away from the roots.**
4. **Gently tease apart the roots**, removing all soil and untangling circling roots.
5. **Prune any dead, broken, or roots that cannot be directly correctly.**

Spread the roots out horizontally in the planting hole, like spokes on a wheel. This method allows you to inspect the root system, correct deformities, and ensure roots grow outward into native soil.

Other Tips for Root Success

1. Dig Wide, Not Deep

The planting hole should be **2–3 times wider than the root spread**, but no deeper than the root system itself. Planting too deep can suffocate roots and lead to decline.

2. Backfill with Native Soil

Avoid amending the planting hole with compost or potting mix. Roots need to adapt to native soil conditions, and amendments can create a "pot effect" that discourages outward growth.

3. Water Wisely

After planting, water deeply to settle soil around the roots. Continue watering weekly until the ground freezes, especially during dry spells.

4. Mulch Smart

Apply 2–3 inches of mulch around the base, keeping it **away from the trunk or stem** to prevent rot and pest issues. Mulch helps retain moisture and regulate soil temperature.

5. Stake Only If Necessary

Most trees don't need staking unless they're in windy areas or have weak trunks. If you do stake, remove supports after one growing season.

Final Thoughts

Fall planting gives trees and shrubs a head start, but proper root care—especially root washing—can make the difference between thriving and struggling plants. Take the time to prepare your plants well, and you'll be rewarded with strong, healthy growth for years to come.

Codling Moth

Conventional production options

- *High fruit damage* in past years:
  - ·Apply the first application for either Option A (insecticide) or Option B (oil+insecticide) 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

Unusual weather patterns this year have given us odd egg hatch data. This table will provide spray dates for codling moths at the given region. Select the region that has similar climatic conditions to determine when to begin spraying. These tables will adjust as the actual weather conditions dictate as opposed to forecast weather.

2nd Generation Spray Timing Table

As harvest nears be sure to observe the preharvest interval of the insecticide you are using.

Location	Beginning of egg hatch	Greatest Period of Egg Hatch 2nd Generation	Continue protection through Sep 15 or harvest
Burley	passed	passed – Aug 21	Sep 15
American Falls	passed	passed – Aug 20	Sep 15
Preston	passed	passed – Aug 19	Sep 15
McCammon	passed	passed – Aug 25	Sep 15
Pocatello East & South Side	passed	passed	Sep 15
Pocatello Airport/Chubbuck	passed	passed – Aug 21	Sep 15
Fort Hall	passed	passed – Aug 22	Sep 15
Blackfoot	passed	passed – Aug 22	Sep 15
South Idaho Falls, Ammon. Iona	passed	Aug 8 – Aug 29	Sep 15
Idaho Falls Airport	passed	Aug 9 – Aug 29	Sep 15
Ucon	no trap	no trap	no trap
Rigby	passed	Aug 17 – unknown	Sep 15
Ririe	Aug 11	Aug 25 – unknown	Sep 15
Rexburg	passed	Aug 10 – Sep 3	Sep 15
Sugar City	Aug 14	Sep 1 – unknown	Sep 15
St Anthony	Aug 9	Aug 25 – unknown	Sep 15
Driggs	Aug 17	Sep 6 – unknown	Sep 15
Star	passed	passed	Sep 15

Codling Moth

Backyard: The table below provides some options for backyard trees. This table is not all-inclusive, but just provides some examples. The products listed are not an endorsement. For the product you decide to use, the "active ingredients" are listed in small print on the lower right or left of the front label. Sometimes there are several ingredients, sometimes, just one. Some materials last longer than others, and the time between sprays is not always listed on the label.

Product Name	Efficacy	Residual Length (days)	Comments
CONVENTIONAL			
Spectracide Triazicide (gamma-cyhalothrin)	Good to Excellent	14-17	wait 21 days to harvest
Monterey Bug Buster 11 (esfenvalerate)	Good to Excellent	14-17	wait 21 days to harvest
Bonide Fruit Tree & Plant Guard (lambda-cyhalothrin)	Good to Excellent	14-17	wait 21 days to harvest
Bonide Malathion; Hi Yield Malathion	Good	5-7	max 2 applications; some products are pears only
GardenTech Sevin (zeta-cypermethrin)	Good to Excellent	14-17	wait 14 days to harvest
ORGANIC			
AzaSol, EcoGarden (azadirachtin)	Good	7-10	
Cyd-X (codling moth virus)	Good (if populations are low)	7	works best when used at beginning of generation; expensive and purchase online
oil such as All Seasons Oil, EcoSmart, Neem oil	Good on eggs only	3	recommended for first application of the generation only
Ortho Fruit Spray; Fertilome Fruit Tree Spray; Safer End All; Bonide Orchard Spray (all contain pyrethrin)	Good	3-5	
Monterey / Fertilome Spinosad; Captain Jack's Deadbug Brew; Natural Guard (all contain spinosad)	Good	10	max 6 applications per season; if applying to peach or cherry, can re-apply after 7 days

Fireblight

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 you do still have open blossoms on your apples and pears you only need to worry about spraying just before or after a wetting event like rain or heavy dew.

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. Resistance inducers can be applied before bloom. Protectants can also be applied during blooming. Protectants should be applied with the onset of wetting events (heavy rain or moisture). Sometimes post-bloom applications to blossoms give continued protection to shoots.

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	*Aureobasidium pullulans* strains DSM14940 & 14941	competitive with pathogen
Bloomtime Biological	*Pantoea agglomerans* strain E325	competitive with pathogen
BlightBan	*Pseudomonas fluorescens* strain A506	competitive with pathogen
Serenade Optimum	*Bacillus amyloliquefaciens* strain QST713	antibiotic metabolites
Double Nickel	*Bacillus amyloliquefaciens* strain D747	antibiotic metabolites
Serifel	*Bacillus amyloliquefaciens* strain MBI600	antibiotic metabolites
Regalia	extract of *Reynoutria* (giant knotweed)	resistance inducer
LifeGard	*Bacillus mycoides* isolate J	resistance inducer

EASTERN IDAHO

PEST ALERT

UPCOMING EVENTS

AUGUST 12 IDAHO HOME GARDEN TIPS

DEER PROOFING YOUR YARD

SARA MAHDAVI, CLINICAL ASSISTANT PROFESSOR

August 12 | 7:00pm MT

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

PLANT TALK Q&A

RON PATTERSON & REED FINDLAY

August 12 | 7:30pm MT

AUGUST 19 IDAHO HOME GARDEN TIPS

LATE SEASON FLOWERS

ANDY WEST, EXTENSION EDUCATOR

August 19 | 7:00pm MT

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

PLANT TALK Q&A

RON PATTERSON & REED FINDLAY

August 19 | 7:30pm MT

AUGUST 26 IDAHO HOME GARDEN TIPS

DEHYDRATING YOUR HARVEST

SEPTEMBER 9 IDAHO HOME GARDEN TIPS

OTHER SPECIES FECES– UNDERSTANTING MANURES

SEPTEMBER 23 IDAHO HOME GARDEN TIPS

FREEZE DRYING YOUR HARVEST

PHOTO OF THE WEEK: Photo credit: Robert Woeger

PHOTO OF THE WEEK:

White tail deer are a fun and majestic animal we see in Idaho often. Some people want to attract more deer to their yard. Most of you are trying to figure out how to keep the deer from eating your plants! Join us on August 12 for our class on deer proofing your yard!

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