WSU Walla Walla County Extension
News
Vol. 2023: No. 4. July - August

WSU EXTENSION
Walla Walla County

Is There Something Besides Flea Beetle Eating my Spring Canola?

By Dale Whaley, WSU Extension

Earlier this season reports of flea beetle damage were coming from the Walla Walla and Ritzville area. Now, reports of Diamondback moth have been coming in and the amount of damage is alarming! (Figure 1)

This pest is not new to our area as it can be commonly found feeding on plants in the mustard family such as canola and oriental or yellow mustards, along with weed species. It typically is not a pest of concern; however, in some years like 2023, populations can reach large numbers and cause significant economic damage.

Adult moths are gray or brown (males have three yellow diamond-shaped spots when the wings are folded at rest, hence the name) (Figure 2).

Larvae (caterpillars) are a pale yellowish green to green color (Figure 3). They will feed on all parts of the plant for 10-30 days but are generally found to cause substantial leaf damage when populations reach outbreak levels.

When scouting for this pest, one may observe adult moths fluttering about from plant to plant when disturbed. Remember, the larvae feeding causes yield loss; thus, the focus needs to be on them and the damage they cause. “Window paning” is a classic form of damage where the caterpillars will eat only the green leaf material thus leaving behind the clear upper cuticle, hence the name (Figure 4).

The Canola Council of Canada states that if Diamondback moths are identified, then insecticide treatment should be considered if the following economic threshold levels are reached:

- There is 25-33 percent defoliation at the seedling stage and larvae are still present on the plant.
- Larvae populations exceed 100-150 per square meter (10-15 per square foot) on plants between the vegetative to the flowering stage.

Larvae exceed 200-300 per square meter (20-30 per square foot) on plants between the flowering to podding stage.

Several insecticide products such as Mustang Insecticide, Lamcap II Insecticide, Delta Gold, Bifen 2EC Select and others are registered for this pest. Consult the PNW Insect Management Guide for a complete list. When spraying insecticides, always be mindful of pollinators and other beneficial insects. For additional insect management information, visit our Insect Resources page.

PNW Pest Management Handbook: pnwhandbooks.org/insect
All the Bees: https://tinyurl.com/mrkedwxk
Insect resources: smallgrains.wsu.edu/insect-resources/

1. Severe Diamondback larva damage

2. Adult Diamondback Moth

3. Diamondback larvae

4. Larval feeding damage

All photos by Dale Whaley, WSU Extension

Coming up...

July

7-8 Inland Northwest Artisan Grains Experience: Moscow and Pullman. www.idahofoodworks.org/inwag-experience

13 2023 Washington Rootstock Field Day. Hosted by Inland Desert Nursery and WSU Viticulture Extension, Benton City. Pre-register by 7/7. wine.wsu.edu/event/2023-washington-rootstock-field-day/

August

5 Fair entries due. See the Exhibitor's Handbook and enter online: www.wallawallafairgrounds.com/p/fair/exhibitors

10 WSU Viticulture Field Day. Main Campus Vineyards, Prosser. $20. Pre-registration required. wine.wsu.edu/event/2023-washington-state-viticulture-field-day

30-3 Walla Walla County Fair and Frontier Days

Conservation Stewardship Program 2nd application batching– July 23

Contact Misty Seaboldt for details: 509-343-2270, misty.seaboldt@usda.gov

Read more: https://tinyurl.com/vdfwaedh

Herbicide Damage to Plants

Adapted from Missouri Botanical Gardens

Herbicide damage can be hard to diagnose. A trained individual can generally tell when damage from an herbicide is a possible cause, but validation requires a laboratory test of the plant tissue and/or the soil while the chemical is still present. Such tests can cost between $65 and $150 per sample or more. Individual tests need to be made for each suspected herbicide. Testing may not be available for some herbicides. More commonly, a circumstantial case is made after a thorough examination of the damaged plant(s), surrounding plants, the pattern of damage, the likelihood of damage occurring given the suspected point of herbicide application, and the history of the symptoms.

Symptoms and Diagnosis

General symptoms can include one or more of the following symptoms: curling or cupped leaves, stunted growth, discolored leaves, or leaves with dead spots. The same herbicide may cause different symptoms on different plant species.

Since herbicides do not leave a "calling card" like mites, insects, and diseases (but the damage they cause can be mistaken for herbicide damage), it is advised to rule these out first. Other disorders that produce symptoms that can resemble herbicide damage include virus diseases, adverse weather, salt damage, drought, soil compaction, misapplied fertilizers, root stress, and nutrient deficiencies. Excluding these as causes requires close examination of the site and attention to patterns. Is the pattern of damaged plants consistent with drifting spray? Is more than just one kind of plant affected? Did the symptoms appear within one or two days (in most cases) of the suspected application of an herbicide? Were any lawn weed control products used in the area, including weed and feed products containing an herbicide? The answer to these and other questions can help make a circumstantial case of herbicide damage.

Recovery Prognosis

Recovery of plants damaged by herbicides is dependent upon many factors including amount of initial damage incurred as well as what herbicide caused the damage. Trees and shrubs that receive minor damage from a broadleaf herbicide such as 2,4-D are likely to recover or have only minor damage. Trees and shrubs that have been damaged by dicamba which was applied to a lawn area and then was washed down into the root system of trees and shrubs can show damage for several years as they gradually recover. Plants damaged by soil sterilant herbicides are the least likely to recover.

Plants that show signs of growing out of the problem will likely recover. Plants that appear to lose vigor may not. The survival of damaged plants can be increased by reducing other stresses. Water during dry periods, fertilize according to a soil test report to increase vigor, and watch for and control any insect or disease problems.

Organic Strategies

Organic strategies that help plants recover from herbicide damage are those that aid in maintaining plant vigor: water during dry periods; fertilize with organic fertilizer according to a soil test report; and watch for and control any insect or disease problems using organic approaches.

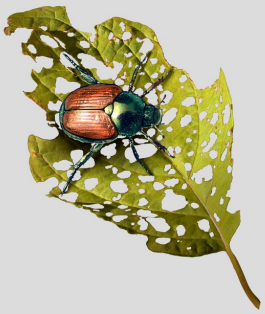
2, 4-D Herbicide injury to tomato plants

2,4-D damage to white Redbud tree

Herbicide damage to apple tree

Distorted leaves and new growth on Japanese Maple

Photos courtesy of Missouri Botanical Gardens



Scout for Japanese Beetle this Summer

Adapted from WSDA

June and July marks the emergence of Japanese beetles from soil. Please keep your eyes on your lawns, gardens, and horticulture crops for these metallic green and brown beetles.

How you can help:

You can help protect Washington's agricultural and natural resources and your back yard by being on the lookout for Japanese beetle. Look for adult beetles from June through October. If you see the pest please take a picture, and report it. (Link: https://agr.wa.gov/beetles)

Japanese beetles feed on over 300 different types of plants, including roses, grapes, apples, hops, and turf grass. The adults feed on leaves, buds, flowers, and fruit of plants. Their larvae are found in soil. They can be moved in field or yard waste, purchased plants, infested turf/sod, gardening soil, and more.

In 2020, WSDA detected two Japanese beetles near Grandview and one near Sunnyside. In 2021 and 2022, WSDA trapped over 24,000 and 23,000 beetles within the same area. Beetles were also trapped in Wapato in 2022. WSDA is working on a multi-year plan to remove the beetles. If they become established in Washington, it will have serious impacts to gardens, parks, lawns, and agriculture.

Report a Japanese Beetle sighting

PNW Problem Weeds Survey Results

Adapted from Doug Finkelburg, Area Extension Educator—Dryland Cropping Systems, University of Idaho

This winter we asked small grains producers across the PNW to provide feedback on their most problematic weeds to control and a few details about their cropping systems and practices. This initial stakeholder input activity will help inform research and outreach efforts of the Pacific Northwest Herbicide Resistance Initiative moving forward.

100 full responses were received, representing producers in all the major grain producing areas in the PNW. Respondents represent over 364,000 acres of farmland.

A wide range of cropping systems and tillage practices were represented.

Top problem weeds by state:

Rank	Oregon	Washington	Idaho
1	Russian thistle	Downy brome	Italian ryegrass
2	Downy brome	Russian thistle	Kochia
3	Prickly lettuce	Italian ryegrass	Wild oats
4	Italian ryegrass	Prickly lettuce	Mayweed chamomile

Of the 16 surveys from Oregon, Russian thistle was hands down the top weed with multiple respondents commenting on the inability to control with glyphosate. Italian ryegrass popped up but only as an issue in the Willamette Valley. In Washington, downy brome and prickly lettuce were spread across the grain producing region with Russian thistle a leading issue in drier areas and Italian ryegrass in wetter areas.

In Idaho, Italian ryegrass is a huge issue in the north as is jointed goatgrass to a lesser extent. Down south, kochia is the top issue in irrigated systems. Interestingly, wild oats are listed as a top problem in each of Idaho's distinct grain producing regions (N. Idaho rainfed, S. Idaho irrigated, and S. Idaho dryland).

Read the report in the Weeders of the West blog here: https://tinyurl.com/3r7ekfpy

Cultivating Success Whole Farm Planning Course.

Adapted from WSU Food Systems

This course covers a broad overview of production and marketing options for today's small farm! Whether you are just exploring the opportunities available or already have an existing operation, you'll learn what it takes to create, sustain, and grow a viable small farm.

- $200 for a 12 week course September through December 2023
- Class meets weekly on Mondays from 6:00pm to 8:30pm
- Online course classroom through Zoom with in person field trips
- Scholarships are available for Military Veterans and anyone for whom the course fee is a barrier

For more information or to register: *www.cultivatingsuccesswa.org/whole-farm-planning*

Summer Grilling Safety

Adapted from USDA

Grilling and eating outdoors is a fun way to spend time with family and friends. When eating outdoors, take precautions to make sure your food stays safe. Here are some simple food safety guidelines for preparing, transporting, and serving food safely:

- Use separate utensils, plates, and containers for raw/uncooked protein foods and foods that are ready to eat. This is important to remember when serving food fresh off the grill.
- Thaw and marinate food in the refrigerator and never on the counter or outside. Do not use leftover marinade on top of cooked foods.
- Always wash your hands with soap and water before cooking or eating. If you don't have access to running water, use a water jug, soap, and paper towels.
- Store any coolers in the shade and limit the number of times they are opened. This will help the foods and drinks to stay colder longer.
- Do not leave food out for longer than 2 hours. On a very hot day (90 degrees and above), food should not be left outside for longer than an hour.

For additional food safety resources, tips for safe food pantries, and food safety during emergencies and disasters, check out our Food Safety page.

Links

National Fire Protection Association: https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Seasonal-fire-causes/Grilling

USDA Grilling and Food Safety: https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/grilling-and-

Red, White and Blueberry Popsicles

From National Blueberry Council

July is National Watermelon, Ice Cream, and Watermelon month. Celebrate all three with this recipe :

1 cup diced watermelon

1 scant cup vanilla yogurt

1 cup blueberries

1. In a blender, add blueberries and 5 tablespoons yogurt; puree until smooth.
2. Divide blueberry mixture among the ice pop molds, filling them about a third of the way.
3. Freeze 1 to 2 hours. Add a layer of 2 tablespoons yogurt on top of frozen blueberry layer to each ice pop mold.
4. Freeze 1 hour until almost completely frozen. In the meantime, in a blender, puree watermelon and 1 tablespoon yogurt.
5. When the yogurt layer is almost completely frozen, add watermelon mixture to form top layer of the ice pops. Push in the pop handles. Freeze another 1 to 2 hours.

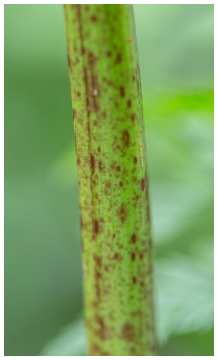
Noxious Weed Profile: Poison Hemlock: *Conium maculatum*

Adapted from Washington Noxious Weed Control Board

Poison Hemlock is a class B noxious weed. The entire plant is toxic to animals and humans, containing the poisonous alkaloid coniine an other alkaloids. Poison hemlock can quickly infest large areas of pasture as well as open waste places.

Identification:

- Very tall biennial plant that can grow up to 12 feet in height. It grows into a rosette the first year—a cluster of leaves growing on the ground and then flowering stems the next year. It reproduces by seed.
- Flowers are small and white and occur in 4 to 8 inch umbrella—shaped clusters.
- Leaves are fern-like, toothed, finely divided and have a strong odor when crushed.
- Stems are hollow, hairless and have noticeable purple blotches.
- Seeds are hairless and egg-shaped, about .09 inches (2mm) long with prominent ridges
- May be confused with other plants in the Apiaceae (carrot/parsley) family when young. From a distance, wild carrot (Daucus carota), a Class C noxious weed, may be confused with poison hemlock, although wild carrot is smaller, hairy, and doesn't have purple blotches on the stems.
- Prefers, rich, moist soil, but is highly adaptable to other conditions.



Control Strategy:

Always wear gloves and protective clothing if working with poison hemlock as all parts of this plant are toxic. Do not burn plants due to the toxins within plant parts. Also, due to the plant's toxicity, do not allow animals to graze live or dead plants.

Mechanical control:

Digging up small infestations and rmoving the entire taproot is effective. Mowing is ineffective as plants will re-sprout, sending up new stalks in the same season. Toxins will remain potent in dried plant material. Bag and trash pulled plants. Never put them in the compost or leave them where children or livestock might eat them. Monitor sites for resprouts.

Herbicide control:

Always read and follow the label instructions before applying any herbicide product. The best time to spray poison hemlock is in the spring, when leaves are just a basal rosette, before it forms a stem and flowers.

For more information see the Washington State Noxious Weed Control Board: https://www.nwcb.wa.gov/weeds/poison-hemlock

WASHINGTON STATE UNIVERSITY EXTENSION Walla Walla County

4-H Happenings

Public Presentations

Our annual April and May Public Presentation contests were hugely successful. We had 32 4-H'ers participate in 10 different project areas, including Sheep, Goats, Beef, Outdoor Science, Cooking, and Flower Arranging! Participants that earned a blue ribbon are eligible to participate in the Washington State fair this September

Quilt Camp

Walla Walla 4-H held it's Beginning Quilt Camp for the first time in 3 years. Thank you to the Walla Walla Valley Quilt Guild and all the volunteers who made the camp happen for a full class of 10 novice quilters.

POSTMASTER send address changes to:
WSU EXTENSION
328 WEST POPLAR
WALLA WALLA, WA 99362

WSU EXTENSTION NEWSLETTER
PUBLISHED 4-6 TIMES ANNUALLY
VOLUME 2023 NO. 4
WSU EXTENSION
WALLA WALLA COUNTY
328 WEST POPLAR
WALL WALLA, WA 99362

WSU EXTENSION Walla Walla County

Celebrating 100 Years of Extending Knowledge and Changing Lives.

Debbie M. Williams
County Extension Director