



NEWSLETTER

Russian Thistle Becomes Resistant to Glyphosate OSU Extension Weed Scientist Finds Alternatives for Wheat Farmers

Adapted from Lynn Ketchum, OSU Extension

Wheat farmers face a daunting situation – persistent weeds becoming resistant to the commonly used herbicide called glyphosate.



Judit Barroso, Oregon
State University

In the Pacific Northwest, Russian thistle infests nearly 5 million acres and costs farmers more than \$50 million annually in control measures, according to Judith Barroso, an Oregon State University Extension Service weed scientist and associate professor in the College of Agricultural Sciences. Where severe infestations occur, Russian thistle reduces wheat yield up to 50%, diminishes harvest efficiency and can prevent wheat harvest entirely.



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Farmers have used glyphosate, sold commonly as Roundup, for decades to effectively control weeds, including Russian thistle (*Salsola tragus*), the most frequent tumbleweed in the Pacific Northwest.

There's evidence that downy brome (*Bromus tectorum*) is also becoming resistant.

In 2017, Barroso began researching possible alternatives to glyphosate to help growers avoid the increasing problem of resistance and successfully thwart Russian thistle and other weeds. She studied the effects of residual herbicides that provide extended control in no-till fallow fields in collaboration with Larry Lutchter, OSU Extension faculty in Morrow County, and Drew Lyon, a scientist from Washington State University. In 2021, she started another trial on no-till and tilled fields to find alternatives to glyphosate.

The most effective Russian thistle control with residual herbicides was obtained with Spartan Charge (sulfentrazone and carfentrazone) and Fierce (flumioxazin and pyroxasulfone) applied in spring, although in some years and locations, a similar control



Announcements

January

11-12, PNDSA
Cropping Systems
Conference, Three
Rivers Convention
Center, Kennewick
[https://
www.directseed.org/
general-3](https://www.directseed.org/general-3)

19-20 NW Hay Expo,
Three Rivers
Convention Center,
Kennewick, [http://
www.wa-hay.org/
northwest-hay-
expo.html](http://www.wa-hay.org/northwest-hay-expo.html)

25-27, WA OR Potato
Conference, Three
Rivers Convention
Center, Kennewick
[https://
www.potatoes.com/
potatoconferencewin](https://www.potatoes.com/potatoconferencewin)



February

1, Deadline for the 4-H Burgess Scholarship, <https://s3.wp.wsu.edu/uploads/sites/2070/2021/02/Burgess-Scholarship-Application-Form-1.pdf>

7-10, WinVit 2022, Washington Winegrowers Association. Three Rivers Convention Center, Kennewick, <https://www.wawinegrowers.org/page/2022Convention>

9-13 NW Flower & Garden Show, Washington State Convention Center, Seattle, <https://gardenshow.com/>

23-25, Washington Farmers Market Conference, Tacoma <https://wafarmersmarkets.org/conference/2022-feb/>

24-25, USDA Agricultural Outlook Forum, Virtual

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was found by applying those herbicides in the fall as well. With alternative post-emergence herbicides, Barroso found that the tank mixes between glyphosate plus Reviton (tiafenacil), and Reviton plus Vida (pyraflufen) produced similar control in Russian thistle as glyphosate applied alone.

Russian thistle thrives in the dry climate of eastern Oregon and Washington and if left unchecked develops an extensive root system that competes with wheat for water and nutrients. When plants are large, they break off at the lower stem and roll through fields dispersing more than 40,000 seeds per plant.

Traditionally, growers in eastern Oregon relied on tillage to control weeds. And although tillage can control weeds successfully, it breaks up the soil structure, contributes to erosion and prevents water infiltration, Barroso said. No-till farming has been proven to do a better job infiltrating water in the soil, reducing soil erosion and maintaining soil structure. However, no-till farming relies only on herbicides to control weeds and is producing weeds becoming resistant to commonly used products like glyphosate.

Those conditions have caused many growers to consider returning to tilling, Barroso said. Long-term sustainability of dryland fallow-based wheat production systems depends on the development of weed management plans that are less reliant on repeated application of glyphosate.

"Using a range of herbicides is best," Barroso said. "Growers should work to diversify their weed management strategies as much as possible. Although, indirectly we're asking them to spend more money on weed control."

Soil Health Initiative and WSDA looking for samples, participants

Adapted from Dani Gelardi, WSDA Ag Briefs

If you're a grower, an agricultural professional, a graduate student, or a conservation district staff member who wants to soil sample, WSDA wants to hear from you.

Beginning in March of 2022, WSDA will pay for a laboratory soil health analysis for eligible projects, in exchange for support in collecting soil samples and grower management surveys. WSDA will also provide training and



individualized soil health reports for participating growers.

Soils data will be used to measure soil health across different regions and crops in Washington. This information will help WSDA protect grower livelihoods, environmental sustainability, and food security in Washington.

The deadline to apply to participate is 5 p.m., Tuesday, Jan. 25, 2022. For more information or to apply, visit the NRAS Partnerships in Soil Health webpage at <https://tinyurl.com/sryuwwcs>

HOME AND GARDEN



Learn Terms on Seed Packets to Make Right Selection

Adapted from story by Kym Pokorny, Nichole Sanchez, OSU Extension

Beautiful seed catalogs hit mailboxes every January, tempting gardeners with full-color photos and glowing descriptions. Before you buy, though, read those enticing seed packets..

Understanding terms associated with seeds will help you pinpoint which selections best serve specific gardens and practices.

Cultivar. This horticultural contraction means “cultivated variety,” and could represent a plant that is hybrid, heirloom, organic, pelleted, or have any other number of descriptors. The term designates a variety with specific, identifiable, consistent and reliable traits. We know that ‘Merlot’ and ‘Two Star’ are both loose-leaf lettuces, but ‘Merlot’ has deep red, mildly frilly leaves and downy mildew resistance. ‘Two Star’ has bright green, super frilly leaves, makes a much larger plant and has no listed disease resistance.

Heirloom. This term and “open-pollinated” (below) are often used hand in hand, and include the seeds best suited to saving. Heirloom cultivars are just older – 50 or 100 years old (sources differ). Heirloom seeds are often associated with a specific geographic region where they perform especially well, or are cherished. An example is the yellow cabbage collards of the Carolinas. They are preferred by collard connoisseurs for thinner, finer leaves than other collards; seeds for yellow collards are always in short supply.

Open pollinated. Seeds with this designation perform true to type through pollination. True to type means the fruit from the saved seeds – second, third generation and so on – will have the same characteristics as the original seed. Open-pollinated seeds are the best choice for those interested in seed saving. Many open-pollinated seeds are also heirlooms, but not all.

Hybrid. The majority of vegetable seeds available to the home grower are hybrids, which is not equivalent to GMO. Through breeding methods, traits from different varieties are combined. This is how cultivars are developed with specific characteristics for size, color and disease resistance. Hybrids are often high yielders, and confer benefits to the gardener, but they are not reliable for seed saving. Because they are the result of a cross between two parent plants, seeds from the fruit of a hybrid plant contain a mix of genetic traits. Sometimes, the seeds don’t sprout at all, or don’t progress past the seedling stage. Others may produce fruit, but it will look or taste different than expected. Hybrids are not suggested for seed saving.



Food Safety for Winter Storms

Adapted from Eileen Haraminac, MSU Extension

Keep a thermometer in the freezer and refrigerator. In case of a power outage this will show if the food is safe to keep and eat. The thermometer in a refrigerator should be between 38 and 40 degrees Fahrenheit. Temperature in a freezer should be zero degree and below.

Keep containers of water and gel packs frozen to keep the appliance cold in case of an outage.

If the power is out for less than four hours, then the food in your refrigerator and freezer will be safe to consume. While the power is out, keep the refrigerator and freezer doors closed as much as possible to keep food cold for longer. If the power is out for longer than four hours, follow the guidelines below:

Freezer section: A freezer that is half full will hold food safely for up to 24 hours. A full freezer will hold food safely for 48 hours. Do not open the freezer door if you can avoid it.

Refrigerated section: Pack milk, other dairy products, meat, fish, eggs, gravy and spoilable leftovers into a cooler surrounded by ice.

When to Prune Landscape Trees

Trees may be pruned any time of the year, but pruning at different seasons will cause different plant responses. Late winter and early spring after a general warming trend are good times to prune because callus tissue forms rapidly. These are the periods of fastest redevelopment and readjustment to pruned limbs. Also, disease and insect activity is usually minimal. Prune trees that “bleed” from wounds (sap flow), such as birches, walnuts, and some maples, in late summer or early fall. Bleeding is normally not harmful to the plant.

Removing large quantities of foliage after (not during) a flush of growth, usually in late spring or early summer, tends to retard or dwarf a tree. If dwarfing is desired, this is a good time to prune. If you want more rapid development, pruning prior to leaf emergence in the spring is better.

Pruning in late summer or early fall can cause vigorous regrowth, which in some species may not harden off by winter. During this period, more disease pressure exists, and wounds close more slowly. Pruning during cold periods in winter may cause some dieback around the cut.

-Excerpted from WSU Extension Publication EB1619 “Pruning Landscape Trees”

Resistance. Resistance and tolerance to plant diseases are tools gardeners use to combat disease with minimal chemical inputs. Finding seeds with disease resistance is especially helpful if a particular disease has surfaced in the garden multiple times, or for any disease that is carried in soil. Not every cultivar has disease resistance, and some are resistance to multiple diseases. Most seed catalogs and websites have charts for each vegetable type that list relevant diseases and the abbreviations to look for in the plant descriptions. For example, seed descriptions with “BLS” at the end would be resistant to bacterial leaf spot, a disease that occurs in numerous vegetables.



Garden Resolutions for 2022

Adapted from Christy Bredenkamp, NCSU Macon County Extension

If you're making a list of resolutions for 2022, don't leave off your garden! Here's a short list of resolutions you can make to improve your garden this year.

Resolution #1 Healthy Soil—Think about adding compost, manure or fertilizer to enrich your soil. Get a baseline of nutrients by having your soil tested.

Resolution #2: Plan—Plan the layout of your garden. Avoid planting crops from the same family in the same spot 2 years in a row. Consider the path of the sun, so tall crops don't shade shorter ones. Space plants a healthy distance apart. If space is an issue, consider square-foot gardening, or find out if community garden space is available.

Resolution #3 Reduce Pest Incidence—here exists multiple ways to reduce your weeds, insects and diseases. Pick one or more of the following and try it. If you like to weed then don't change this practice but if you hate weeding like me, then try landscape cloth, mulch, newspaper, boxes, or straw. For insect control you might research the various “weeds” or wildflowers that attract beneficial insects that keep the bad guys at bay. For diseases consider varieties that are tolerant to the culprit bacteria, viruses or fungi you had in 2019. Finally, row covers and low and high tunnels are additional tools to think about in the war against pests.

Resolution #4: Compost—Convert your yard clippings, leaves and fruit/vegetable waste into a wonderful soil amendment filled with beneficial microbes for your garden. Compost piles can be as simple as a 4ft by 4ft pile to as fancy as a 3 binned set-up made of pressure treated wood or concrete block. Composters can be built at home or found at your local garden centers.

Resolution #5 Sanitation—Maintain good garden cleanliness. Remove diseased leaves, fruits and vines, keep your tools clean; and of course control your weeds. Consider mulch!





Don't Let Bacteria Score a Touchdown at Your Super Bowl Party

Adapted from Jason Waggoner, Food Safety Education Staff, Food Safety and Inspection Service, USDA Feb 21, 2017

Here are some important game day tips to ensure that the party remains free of the following food safety penalties.

Illegal Use of Hands

Unclean hands are a major infraction for hosts and guests alike. Before and after preparing, handling, or eating food, always wash your hands with soap and warm water for 20 seconds. Use clean plates, dishes, and utensils to serve and restock food, and keep surfaces clean.

Offsides

To avoid this penalty, make sure raw meat and poultry do not come into contact with other foods. If they do, they can spread bacteria that cause food poisoning. Use separate plates and utensils for these items, and never place cooked food back on the same plate that previously held raw food unless the plate has first been washed in soap and warm water.

Personal Foul

Don't risk the health of your guests by cooking meat and poultry improperly. Always use a food thermometer to make sure meat and poultry are cooked to a safe minimum internal temperature. Color is never a reliable indicator of safety and doneness. For reasons of personal preference, consumers may choose to cook meat to higher temperatures. The thermometer should be placed in the thickest part of the food and read after the manufacturer designated time.

- Cook raw beef, pork, lamb and veal steaks, chops, and roasts to 145 °F. For safety and quality, allow meat to rest for at least three minutes before carving or consuming.
- Cook raw ground beef, pork, lamb, and veal to 160 °F.
- Cook raw poultry to 165 °F.

Holding

Avoid this penalty by keeping hot food hot and cold food cold. Hot foods must have a heat source, and cold foods should be kept on ice to remain at a safe temperature and out of the [Danger Zone](#). The Danger Zone is the temperature range between 40 °F and 140 °F where bacteria multiply rapidly.

Delay of Game

Practice effective clock management with your food. Perishable foods should not be kept at room temperature for more than two hours. Switch out these items during half time to prevent the same foods from sitting out the whole game. Perishable foods left out longer than two hours should be discarded and replenished with fresh servings.

Food safety is the winning game plan for your Super Bowl Party. By following these tips, you can defend against foodborne illness.



Healthy and Thrifty Superbowl Party Snack

By USDA Snap-Ed

Orange Glazed Skinless Chicken Wings

Makes 5 servings.

Ingredients

- 10 chicken wings (skin removed)
- 3 tablespoons butter
- 1 teaspoon seasoned salt
- 1/2c orange marmalade

Directions

1. Wash hands with soap and water.
2. Tuck the wing tip under the larger joint to form a triangle.
3. Heat butter in skillet (200°F on temperature controlled gas burner).
4. Sprinkle wings with seasoned salt and place in heated butter. Sauté on temperature controlled gas burner (325°F) until evenly brown on both sides, about 20 minutes.
5. Spread with orange marmalade, continuing to sauté while basting frequently for another 20 minutes.
6. Remove from skillet. Serve hot.
7. Hold at serving temperature on automatic burner or in 'Keep-Warm' oven set at 170°F. They will be glazed and "sticky" good.

Insect Photos Needed

Cereal Pest AID is a University of Idaho project that uses smart phones and artificial intelligence to automate identification of insect pests that cost cereal crop growers millions of dollars each year. These pests threaten wheat and common rotation crops including peas, chickpeas, barley, oilseeds including rapeseed, canola and mustard, among others.

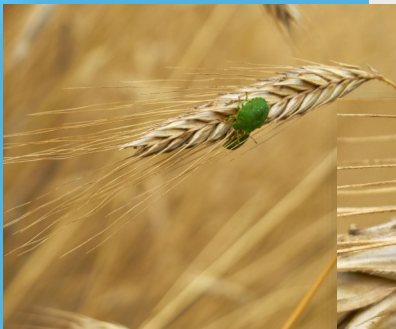
For instructions on submitting photos see: <https://cerealpestaaid.net/>

Tips for Taking a Good Insect Photo:

On your cell phone, enable Location Services. This will automatically geolocate your images

Zoom in and center the bug in the frame

In general, the higher the photo quality and the closer, the better.



Poor image



Better image

4-H NEWS

Achievement Night

On November 22, 4-H youth and adult volunteers were honored at the 2021 annual 4-H Achievement Night. Approximately 85 awards were presented to 4-H members, clubs, and volunteers in recognition of their 4-H accomplishments during the past year.

Outstanding 4-H Members from Walla Walla County were selected in each age division based on the quality and growth of their 4-H project, leadership skills, and their active involvement in the county 4-H program. The junior division outstanding members were Caleb Kreger and Phoebe Friarson; the intermediate division recipients were Carly Newton and Maggie Phelps; and the senior division winners were Koby Harris and Hunter Pope.

Robin German was awarded Outstanding County Leader in recognition for her club involvement, community service, leadership, and support of the 4-H program.

The Inspirational Leader Award was given to Alanna Jacob for leadership that inspires not only 4-H leaders and members, but all people.

Walla Walla Cattlemen were honored for their many years of support with an Appreciation Award.

Many leaders were presented with pins for their years of service, but a special recognition goes to Connie Vinti, who received her Ruby Pin for 50 years of service.

Thank you to all of the awardees and sponsors for making our 2nd virtual Achievement Night a success.



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WALLA WALLA COUNTY EXTENSION

Celebrating 100 Years of Extending
Knowledge and Changing Lives.

Debbie M. Williams

Debbie M. Williams
County Extension Director