



## Announcements

### JULY

**25 Pressure Canning Class**, 1:30 p.m. – 4:30 p.m.  
Walla Walla County Extension Office.  
Learn the basic steps needed to safely preserve low acid foods. Please call the Extension office at 509-524-2685 by Monday, July 23<sup>rd</sup> to reserve a spot.



### AUGUST

**4-5 Walla Walla YMCA Peach Basket Classic**, Walla Walla Community College.  
YMCA Peach Basket Classic 3-on-3 basketball tournament. For more information, call 525-8863 or visit [www.peachbasketclassic.com](http://www.peachbasketclassic.com).



**5 Walla Walla Fair Entries Due** 2018 Fair entry forms are available at the Walla Walla Fairgrounds and online at <http://www.wallawallafairgrounds.com/exhibits>. The Exhibitors Handbook is available for viewing on the fair's website as well.

**23 Still-Life Exhibits Due, Walla Walla Frontier Days**, 11 a.m.– 7 p.m.



**23 - 25 Walla Walla Pre-Fair Events.** Refer to page 5 in the 4-H section for a detailed listing.

**29 - September 2 Walla Walla Fair & Frontier Days**

### SEPTEMBER

**8 Walla Walla Community Hospice Pond & Garden Tour**, 9 a.m. - 4 p.m. A self-guided tour of ten beautiful gardens in the area. Benefiting Walla Walla Community Hospice. For more information, visit [www.wwhospice.org](http://www.wwhospice.org) or call 509-525-5561.



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## Updates

### HERBICIDE COMPARISON TOOL-- WHEAT, PULSE, FALLOW LAND & CANOLA

This tool allows users to identify herbicide products commonly used by dryland crop producers in eastern Washington that contain the same active ingredient(s). Users may search by trade name or active ingredient at: <http://herbicidecomparison.cahnrs.wsu.edu/>

[Search by Trade Name](#)  
[Search by Active Ingredient](#)

- Be aware that just because two herbicides contain the same active ingredient(s) does not mean they are equally effective. Differences between formulations, possibly including the use of different carriers and surfactants, can affect efficacy and compatibility with other products.
- Product labels may differ between herbicides with the same active ingredient(s), so always be sure to read the labels before use.
- Product support may vary between manufacturers, so users may want to consider that when comparing two herbicides with the same active ingredient(s).

Contact [Drew Lyon \(Drew.Lyon@wsu.edu\)](mailto:Drew.Lyon@wsu.edu)  
509-335-2961 with questions.

### STRIPE RUST UPDATE, June 16, 2018

Adapted from Xianming Chen

**1. Wheat Stripe Rust** In the Pacific Northwest, most fields of winter wheat have passed the flowering stage, and some winter wheat fields have reached the ripening stage. In general, winter wheat crops are in good condition and stripe rust is under control. In contrast, stripe rust has developed to the highest severity level on susceptible varieties in our experimental fields in Lind (Adams County), Walla Walla (Walla Walla County), and Pullman (Whitman County), WA (Figure 1).



Figure 1 Stripe rust of natural infection in a rainfed experimental winter wheat field near Pullman, WA (June 11).

# Farming & Livestock

For spring wheat, most areas have reached the critical time for managing stripe rust, as crops have been approaching flowering. In commercial fields, stripe rust is quite low, but could develop fast. In our experimental fields in Lind and Walla Walla, stripe rust reached flag leaves and up to 60% severity on susceptible varieties (**Figure 2**). In our Pullman fields, spring wheat is at the middle jointing stage (Feekes 6) and stripe rust is heavy on low leaves of susceptible varieties.



Figure 2 Stripe rust of natural infection in an irrigated experimental spring wheat field near Lind, WA (June 14).

The weather has been favorable for stripe rust development. The widespread precipitation on June 9 and 10 and the dew-forming conditions at the subsequent nights created moist conditions for stripe rust pathogen to infect wheat leaves. From the infections during the last week, stripe rust will show up in the next two weeks. Some areas may have got showers today, which will allow new infections. Thus, in the next three weeks, stripe rust will increase in fields grown with susceptible and moderately susceptible spring wheat varieties.

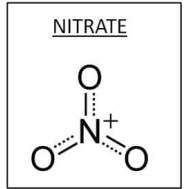
The general recommendations are the same as those made previously. Only fields grown with susceptible and moderately susceptible varieties (ratings 5-9) or fields with easily found rust pustules (5-10% incidence) need fungicide application. For winter wheat crops that are grown in high elevations and have not reached the flowering stage, stripe rust can still be a concern, and fungicide application may be needed if active rust pustules can be easily found. Most fungicides are labeled for use before the flowering time (Feekes 10.5). Do not use fungicides after the labeled stage. For spring wheat, if fungicide was not used at the herbicide application, fungicide application may be needed for the fields grown with susceptible and moderately susceptible varieties when active rust is found. For fields that have been applied with a fungicide, check the fields three to four weeks after the fungicide application for active rust pustules and consider second application of fungicides before flowering.

## 2. Barley Stripe Rust

Barley stripe rust has occurred in Mount Vernon (Skagit County), WA and Corvallis (Benton County), OR in the western Pacific Northwest. In the eastern Pacific Northwest, barley stripe rust was observed in the past week in Lind, Walla Walla, and Pullman, WA. So far, barley stripe rust has been found only in experimental fields. In general, fungicide application is not necessary unless active rust is easily found (5-10% incidence) in the field.

## NITRATE POISONING: WHEN TO BE CONCERNED

Adapted from John Fouts, Retired WSU Extension Educator

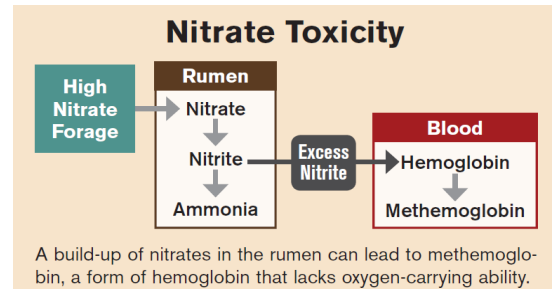


Nitrate poisoning is a noninfectious disease condition that can affect all species consuming forages or drinking water containing toxic levels of nitrate. Range livestock are most commonly poisoned by nitrates in forages, rather than in water. Cattle are the most susceptible, while sheep are less affected, possibly because of their ability to break down nitrate more quickly than cattle. Non-ruminants are less susceptible to nitrate poisoning, but it can still be a problem in horses because of the fermentation in the cecum. The nitrite converted from nitrate by the bacteria is the real toxic culprit.

So, when is there a problem of too much nitrate in a forage? Both growing and harvested forages can have problems with nitrate accumulation.

There are species of plants that have a propensity to accumulate higher levels of nitrates. All plants take nitrogen from the soil and convert it to amino acids, the building blocks of protein. Nitrate is one of the intermediary compounds in the process. Some species of plants have a tendency to accumulate higher levels of nitrate during this process. These are the species that we need to be the most concerned with.

Table 1 lists common plants known to accumulate nitrates. Most problems in the PNW occur with grain hays and weedy hays.



**Table 1. Common plants known to accumulate nitrate.**

Crops	Weeds
Barley	Canada Thistle
Corn	Dock
Flax	Jimsonweed
Millet	Johnson Grass
Oats	Kochia
Rape	Lambsquarter
Rye	Nightshade
Soybean	Pigweed
Sorghum	Russian Thistle
Sudangrass	Smartweed
Sugar Beets	Wild sunflower
Sweetclover	
Wheat	

The next situation that can cause higher levels of nitrate accumulation is what I group as plant stress. This can include drought, frost, hail, and/or herbicide treatment. Not all drought conditions cause high nitrate levels in plants. In plants that survive drought conditions, nitrates are often high for several days following the first rain. If there is a nitrate problem at the time of cutting, the resulting hay will have a nitrate problem. The ensiling process decreases the nitrate level in the silage.

Frost, hail, and low temperatures may damage, reduce or completely destroy the leaf area of the plant. A decrease in leaf area limits the photosynthetic activity of the plant, so nitrates absorbed by the roots are not converted to plant proteins, but are accumulated in the stem or stalk instead.

Herbicide treatment with phenoxyacetic herbicides (2,4,D, Banvel, MCPA, etc.) promotes rapid plant growth. Nitrate concentrations tend to be highest 3 to 5 days after herbicide application.

Fertilization with nitrogen fertilizer can be a cause of nitrate poisoning. Acute nitrate poisoning may occur if livestock consume nitrate fertilizer. Avoid grazing immediately after spreading fertilizer. Crops grown on soils that have received high applications of manure or nitrogen fertilizer may accumulate high levels of nitrate.



Any one of the above mentioned conditions can cause nitrate accumulation, but usually the problem is a result of a combination of more than one condition.

So, how do you know if you have a nitrate problem in your hay? The only real way is to have your hay tested for nitrates. This can be done at the same time and with the same sample submitted for nutrient analysis. If you suspect any problem with nitrate accumulation, it is very cheap insurance to have the hay tested for nitrates. Remember a representative sample is the most important thing to get an accurate analysis.

Once you get your analysis report back, you can tell whether you have a problem with nitrates and how serious the problem is. Different labs test for and report nitrate content differently. There are many opinions on the toxicity levels. Once you get your report back, consult with your veterinarian or County Extension Agent on the safety of your hay.

There are many good Extension bulletins on nitrate poisoning. Just do a web search using any search engine for “nitrate poisoning” or “nitrate toxicity”.

## CDC RECOMMENDATIONS FOR KEEPING LIVE POULTRY

- Always [wash your hands](#) thoroughly with soap and water:
  - ◆ After handling poultry food and water dishes or other equipment
  - ◆ After cleaning poultry coops, or anything in enclosures such as perches or other equipment
  - ◆ After being in areas near poultry even if you did not touch the birds
  - ◆ Before you eat, drink, or smoke
- Adults should supervise hand washing for children under 5 years of age.
- Use hand sanitizer if soap and water are not readily available. Be sure to have an alcohol-based hand sanitizer that contains at least 60% alcohol near the poultry enclosure to encourage guests and children to clean their hands after handling poultry.
- Do not let children younger than 5 years of age handle or touch chicks, ducklings, or other live poultry without supervision. Children younger than 5 years of age are more likely to get sick from exposure to germs like *Salmonella*.
- Don't give live baby chicks and ducklings to young children as gifts or Easter presents. Because their immune systems are still developing, children are more likely to get sick from germs commonly associated with live baby poultry, such as [Salmonella](#), [Campylobacter](#), and [E. coli](#).
- Make sure that your children and anyone who is visiting your home follow these rules as well.
- Do not let live poultry inside the house, in bathrooms, or especially in areas where food or drink is prepared, served, or stored, such as kitchens or outdoor patios.
- Do not eat or drink in the area where the live poultry live or roam.
- Don't snuggle, kiss, or touch your mouth to live baby poultry.
- Set aside a pair of shoes to wear while taking care of poultry and keep those shoes outside of the house.
- Stay outdoors when cleaning any equipment or materials used to raise or care for live poultry, such as cages, feeds, or water containers.



## Safe egg handling

- Always wash your hands with soap and water after handling eggs, chickens, or anything in their environment.
- Collect eggs often. Eggs that spend a significant amount of time in the nest can become dirty or break. Cracked eggs should be thrown away because bacteria on the shell can more easily enter the egg through a cracked shell.
- Refrigerate eggs after collection both to maintain freshness and to slow bacterial growth.
- Eggs with dirt and debris can be cleaned with fine sandpaper, a brush or cloth. Don't wash warm, fresh eggs because colder water can pull bacteria into the egg.

Cook eggs until both the yolk and white are firm. Egg dishes should be cooked to an internal temperature of 160°F (71°C) or hotter. Raw and undercooked eggs may contain [Salmonella](#) bacteria that can make you sick.

## Bird bites and scratches

Backyard poultry and waterfowl do not have teeth, but their bills and beaks can still cause a lot of damage if they bite you. Germs can spread from poultry bites or pecking and scratches, even when the wound does not seem deep or serious.

- Avoid bites and scratches from your backyard poultry or waterfowl. This will prevent injury and reduce the risk of your poultry spreading germs to you.
- If you are bitten or scratched by poultry, you should:
  - ◆ Wash wounds thoroughly with soap and water immediately — hand sanitizer is not as effective at removing germs as washing your hands with soap and water.
- Seek medical attention and tell your doctor you were bitten or scratched by a bird, especially if:
  - ◆ The poultry appears sick.
  - ◆ The wound is serious (uncontrolled bleeding, loss of function, extreme pain, or deep wound with the muscle or bone exposed).
  - ◆ The wound becomes red, painful, warm, or swollen.
  - ◆ It has been more than 5 years since your last tetanus shot.



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## Home & Garden

### IDENTIFYING COMMON GRASS FOES

**Bermudagrass** Bermudagrass is a warm season perennial grass that typically is prostrate and spreads to form dense patches. Spread occurs by both above ground stems which root at the nodes and by rhizomes. The leaves are narrow (to about 1/5" wide) and pointed, generally with smooth surfaces. Leaf length ranges from one to eight inches. Foliage is often gray-green in color. The ligule, found at the junction between the leaf blade and leaf sheath, consists of a ring of white hairs. The hairy ligule is a distinguishing characteristic of this species. Leaf blades are frequently oriented at almost right angles to the stem. Seeds occur on upright flowering stems, which typically bear a terminal whorl of three or more spikes. Each spike is up to two inches long and is attached at the base directly to the stem.



Apply products to weeds when actively growing. Spot treatments with certain post-emergent herbicides will control weedy grasses, but will also kill the turf. Glyphosate products should be applied as spot treatments only!

Apply glyphosate to actively growing Bermudagrass with seed heads. Re-treatment may be necessary. Rain within 6 hours after application may reduce effectiveness. Allow 7 days or more after application before tillage.

Caution: Glyphosate is nonselective; spray will injure or kill vegetation contacted including turfgrass.

**Crabgrass** Large crabgrass (*D. sanguinalis*) may reach up to two feet tall but is often prostrate. Stems lying along the ground may root, forming mats. The flat leaf blades are relatively broad (1/4 to 1/2 inch wide), two to five inches long, and sometimes hairy. Leaf sheaths are hairy and often purplish, and auricles are absent. Ligules are membranous, tall, and have jagged edges. Slender crabgrass (*D. ischaemum*) is similar to large crabgrass in habit, but leaves are more slender and are not as hairy. This species is prostrate and may form mats. Seeds of both species are borne on slender, finger-like whorls of spikes two to six inches in length. They resemble Bermudagrass (*Cynodon dactylon*) seed heads, but crabgrass seed spikes do not all arise from one junction at the top of the stem.



In lawns, keeping the grass dense to crowd out crabgrass is the best defense. Cultivation in lawns is not a practical option but effectively eliminates crabgrass between ornamentals. Preemergent herbicides are very effective in controlling crabgrass in eastern Washington; apply in spring when soil temperatures reach 50 to 55 degrees F. (usually about the time forsythia bloom). Glyphosate and glufosinate products should be applied as spot treatments only!

Caution: Glyphosate is nonselective; spray will injure or kill vegetation contacted including turfgrass.

**Always read and carefully follow instructions and precautions on all pesticide products.**

Source: *WSU Hortsense; 2008 PNW Weed Management Handbook*

## Master Gardeners

### PLANT CLINICS & FARMER'S MARKET

Visit the Walla Walla Extension office on Tuesdays and Thursdays from 9 a.m. to 11 a.m. and 2 to 4 p.m. Bring in your home garden or lawn questions or problems and speak to a Master Gardener. Problem plant samples may be left at any time during office hours and a Master Gardener will look at the specimen during clinic hours and contact the home owner with recommendations.



Master Gardeners will also have a booth at the Downtown Farmer's Market on Saturdays through September. Visit with our Master Gardeners and pick up free tip sheets on a variety of gardening topics.

## 4-H

Challenger Horse Camp was a success this year with 20 participants and numerous volunteers. Youth with disabilities were able to ride horses in various patterns for two nights and the third night youth were treated with miniature horse cart rides and a petting zoo.

### Schedule of Pre-Fair Events:

August 23rd

- 5 p.m. 4-H/FFA Pre-Fair Horse Fitting and Showmanship (Rodeo Arena)
- 6:30 p.m. 4-H/FFA Pre-Fair Horse Western Games (Rodeo Arena)

August 24th

- 5 p.m. 4-H/FFA Pre-Fair Colt Fitting and Showmanship
- 5 p.m. 4-H and Open Cat Show

August 25th

- 9 a.m. 4-H Dog Agility Trial Classes
- 7 p.m. 4-H Public Fashion Revue

## Food Safety

### It's Grilling Season! Don't Get Burned

It is that time of year when we start cleaning up our outdoor grills and preparing for summer fun with friends and family. But before you break out the brats and buns, be sure not to invite unwanted bacteria to the cookout.



Bacteria contribute to a major uptick in foodborne illnesses that peak during the summer months, according to the Centers for Disease Control and Prevention. Bacteria multiply rapidly with warm temperatures and need food and water to survive just like we do, so our food is an ideal environment for bacterial growth. Bacteria that cause foodborne illness, grow the fastest at temperatures between 90 to 110 °F, so those warm summer days allow bacteria to flourish.

Preparing food outdoors adds another level of complexity to safe food handling. At home, our kitchens provide thermostat-controlled cooking, refrigeration, and washing facilities, things that are not often available when cooking outdoors. This increases the likelihood that bacteria will grow rapidly on food, food may cook unevenly, and cross-contamination between food is more likely to occur.

Meats are especially vulnerable to bacterial growth, and are a major culprit in foodborne illness. Many foodborne pathogens are part of the natural flora of animals. For example, *E. coli* is commonly found in beef, elk, and deer products, while *Campylobacter* and *Salmonella* are prevalent in poultry products.



Although this news is not pleasant, there are plenty of steps you can take to keep your summer gathering from being memorable for all the wrong reasons.

### Shopping

- Separate raw meat and poultry from other items in the grocery cart to prevent the meat from contaminating ready to eat food.

- Promptly refrigerate meat, poultry, and other perishable foods after shopping.
- Freeze meat and poultry that will not be used within the next 48 hours
- Make sure your refrigerator is at the proper temperature (<40° F)
- Store meat in a pan with sides, on the bottom shelf of the refrigerator to keep drippings from contaminating other food.

### Preparing Meat

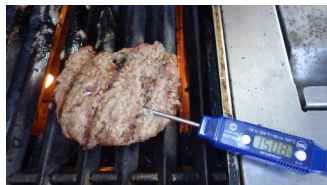
- Thaw frozen meat in the refrigerator, or in sealed packages under cold water.
- Meat defrosted in the microwave needs to be cooked immediately.
- If marinating meat, do it in the refrigerator and never on the counter. Discard marinades that have been in contact with raw meat.

### Keep Food Cold

- Always transport meat in a separate cooler filled with ice and away from ready to eat food, when brining food from your home to the event.
- Never leave meat or poultry (cooked or uncooked) or other perishable foods at temperatures between 40-140°F for longer than 2 hours; 1 hour if the temperature is above 90°F.
- Place side dishes, such as potato salad, on ice and discard if exposed to temperatures between 40-140°F for longer than 2 hours; 1 hour if the temperature is above 90°F

### Don't Cross-Contaminate

- Wash hands thoroughly, before and after handling food, with warm water and soap for 20 seconds.
- Do not use cutting boards, knives, or utensils on ready to eat foods after being in contact with raw foods unless they have been thoroughly washed in hot soapy water first.
- Never use the same dish or utensils to transport both raw and cooked meats unless thoroughly washed in hot soapy water in-between.



### Cook to the Right Temperature

- Always check for doneness by using a meat thermometer. It is the only way to know if the meat is cooked enough to kill the bacteria that may be lurking inside. Meat color is not an indicator of doneness.

- 145°F – whole cuts of beef, pork, lamb, and veal (must have a resting time of 3 minutes at this temperature)
- 145°F – fish
- 160°F – hamburgers and other ground meat
- 165°F – all poultry and pre-cooked meats (e.g. hot dogs)
- Keep meat above 140° F until served

By following these tips, you can ensure your grilling season is a success, and no one gets burned by a foodborne illness.

Dr. Stephanie Smith is an Assistant Professor and Statewide Consumer Food Safety Specialist for Washington State University Extension. She can be reached at [food.safety@wsu.edu](mailto:food.safety@wsu.edu) or at (855) 335-0575. Visit our website at <http://extension.wsu.edu/foodsafety/>. Follow us on Facebook at <https://www.facebook.com/wsuentfs/> or on Twitter at [https://twitter.com/WSU\\_foodsafety](https://twitter.com/WSU_foodsafety).

### HAVE YOUR PRESSURE GAUGE CHECKED ANNUALLY



A pressure canner is essential for canning low-acid vegetables, meats, fish, and poultry. Two basic types are available. One has a dial gauge to indicate the pressure inside the canner; the other has a metal weighted gauge. Dial gauges must be tested for accuracy before each canning season.

The Extension Office offers free testing of your canning pressure gauge. Bring your gauge into our office at 328 W Poplar during office hours for your free test. If you have a new gauge, it is recommended to have it tested as well for accuracy.

Check the rubber gasket if your canner has one; it should be flexible and soft, not brittle, sticky or cracked. Also make sure any small pipes or ventports with openings are clean and open all the way through.

**WASHINGTON STATE UNIVERSITY**  
WALLA WALLA COUNTY EXTENSION

Celebrating 100 Years of Extending  
Knowledge and Changing Lives.

*Debbie M. Williams*  
Debbie M. Williams  
County Extension Director

Extension programs and employment are available to all without discrimination. Evidence of noncompliance may be reported through your local Extension office.