WASHINGTON STATE UNIVERSITY
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# Newsletter

May 2019

## Announcements

**MAY**

**4 Master Gardeners Return to Downtown Farmers' Market,** 4th and Main. Market is open through October on Saturdays from 9 a.m.-1 p.m. Look for the Master Gardeners' booth on Saturdays to get weekly gardening tips and advice on plant problems.

**8-12 Milton-Freewater Jr. Show,** Milton- Freewater Posse Grounds. Support local 4-H & FFA members as they display their talents and efforts.

**29 Columbia County Conservation District Field Tour, Dayton.** Stops will include wheat seeded into cover crop and alfalfa seeding, hard white spring wheat seeding, and wheat residue management. Lunch will be provided after the tour. RSVP is requested. 8:30 a.m.– 1 p.m. For more information, contact Paul Carter at 509-382-4741.

**JUNE**

**6 Wheat College, Columbia County Fairgrounds building,** Dayton, WA, 8 a.m. - 5 p.m. Contact Paul Carter at 509-382-4741 for more information.

**8 Waitsburg Jr. Show,** Waitsburg Fairgrounds. Come support local youth as they have the opportunity to compete and show their talents.

**25 Walla Walla Variety Tour (cereals),** 1 p.m. For location visit: http://smallgrains.wsu.edu/variety/2019-variety-testing-data-maps/. Contact Aron Esser at 509-659-3210 for more information.

**27 WSU Variety Tours,** Columbia County Variety Field Day Tour. 8 a.m.—5 p.m.-1 p.m. For more information, contact Paul Carter, 509-382-4741 or http://variety.wsu.edu.

**JULY**

**12, 13 Northwest Junior Sheep Exposition,** Moses Lake WA, Grant County Fairgrounds**.** Participants

learn how to select fast gaining lambs that are heavily muscled and will finish properly**. Entry deadline is May 1 for market lambs and June 15 for breeding and prospect lambs.** Premium books and entry forms available at: http:/extension.wsu.edu/animalag/news/northwest-junior-sheep-exposition/. For more information, contact Sarah Smith at 509-754-2011 or smithsm@wsu.edu.

## Updates

**STRIPE RUST UPDATE**

Adapted from Xianming Chen

**Stripe rust found in the Walla Walla area.** On April 17th, wheat fields were checked in Whitman, Lincoln, Douglas, Grant, Adams, Franklin, Benton, and Walla Walla counties of Washington. Winter wheat crops ranged from Feekes 3 to 6. No rust was found in any commercial fields in these counties. Even in the field of Grant County in which stripe rust was found quite easily last November, stripe rust was not found, indicating that the cold winter has killed rust. However, stripe rust was found on susceptible varieties in our experimental field in Walla Walla. In this less than a half-acre field, five separate infection sites were found, each with 2-4 low leaves having active stripe rust pustules (**Figure 1**), indicating that the plants were infected last fall and stripe rust fungus has survived the winter in this area. Compared to the last year, the appearance of stripe rust in Walla Walla is much later and in a much lower level.

Figure 1– Wheat stripe rust found in

The current stripe rust pressure is low. To use or not use fungicides at the time of herbicide application depends *on regions. For the Walla Walla region and further south* into northeastern Oregon, fungicides may be needed for fields planted with susceptible or moderately susceptible varieties (stripe rust ratings 5 -9 in the Seed Buyer's Guide), while resistant and moderately resistant varieties with ratings 1-4 may not need fungicides. For areas further north, stripe rust may not appear for two to three weeks and fungicide application may not be needed for any varieties in the early season. As the crop season is late and soil moisture is good this year, stripe rust may develop to damaging levels in late season and fungicide application in flag-leaf to grain filling stages may be needed for moderate susceptible and susceptible varieties. It is always a good idea to check fields and apply fungicide when stripe rust is found.

# *Updates, cont.*

## PESTICIDE DRIFT ALERT!

In early spring of last year a high number of pesticide drift incidents, affecting workers and neighbors, happened in tree fruit growing areas. To avoid a repeat, WSDA is urging all applicators to follow all pesticide label instructions carefully and in a manner that will prevent off-target drift to workers, neighbors, or sensitive sites. To ensure pesticides do not drift beyond the intended treatment area, pesticide applicators must:

- Read the label on the pesticides being applied and abide by all precautions and restrictions on safe handling, necessary protective equipment, buffers, the effect on crops and more. Be especially diligent near sensitive areas such as highways, homes, schools and other occupied dwellings.

- Properly calibrate equipment according to tree size, shape and time of year. Use proper nozzles, nozzle configuration, proper air and water volumes and pressure to keep the spray on-target. This is critical in the spring when trees have minimal foliage to intercept the spray mist.

- Turn off outward pointing nozzles at row ends and outer rows during airblast applications.

- Do not direct the spray above trees or vines during airblast applications.

- Evaluate conditions such as wind speed, wind direction, and temperature. Do not apply during a temperature inversion.

Halt the application if conditions change and create a risk of drift to off target areas, or if anyone approaches the area without proper protection. The Worker Protection Standard now requires an airblast applicator to suspend the application if anyone (other than a properly trained and equipped handler) enters a 100 foot circle around the sprayer. This is called the Application Exclusion Zone (AEZ).

This additional task has proven to be very helpful in preventing exposure incidents: Before making an application, communicate your spray plans to neighboring farms and neighboring residents, and scout the areas bordering the target site for unprotected workers or other persons.

## PROTECT HORSES FROM HERPES VIRUS

**Dr. Amber Itle**, Washington State Veterinarian

Equine Herpes Virus (EHV) is an emerging, potentially fatal animal disease in the United States. It not only has the potential to affect horse health but, because it's highly contagious and requires lengthy quarantines or cancellations of events like rodeos and fairs, the economic consequences can be equally devastating. As we enter the time of year when horses are more active and travel to public events, it's especially important to observe appropriate biosecurity measures, vaccinate, and watch for signs of the disease.

### A case in Washington

Just this month, a horse in Thurston County tested positive for equine herpes virus 1, resulting in a quarantine of the boarding facility where it was kept.

### What to watch for

Given the infectious nature of EHV-1, WSDA asks horse owners to follow these recommendations. Watch your horse for signs of possible infection including:

- Fever of 101.5 F or higher.
- Discharge from the eyes or nose.
- Respiratory symptoms.
- Swelling of the limbs.
- Spontaneous abortions.
- Neurological signs such as unsteady gait, weakness, urine dripping, lack of tail tone and recumbency.

Check your horse's temperature twice daily, ideally first thing in the morning and last thing at night. Also, check before administering medications since some can lower body temperature.

Notify your veterinarian immediately if you detect any of the symptoms above. Your veterinarian may want to take nasal swabs for virus detection or blood samples for evidence of exposure to EHV-1.

When the virus is detected, WSDA and local veterinarians work closely with affected communities to ensure the best biosecurity standards are practiced. For more tips on keeping your own horses safe through good biosecurity practices, please see our previous **blog post**.

Vaccination, close monitoring and biosecurity can help keep your horse safe from EHV.

The time between exposure and illness from EHV-1 varies from two to 10 days. By self-

quarantining animals with possible symptoms, practicing good biosecurity and contacting your veterinarian as soon as you suspect possible symptoms, you can help prevent the spread of this virus.
For more information, contact **WSDA's Animal Health Program**.

# Agriculture

**GRAIN INSPECTIONS ON THE MIGHTY COLUMBIA**
**Adapted from Chris McGann, WSDA Ag Briefs**

A few cups of wheat randomly spill into an orange plastic contractor's bucket under one of four dusty pipes extending down from the ceiling at WSDA's Longview office.

Measuring out wheat for inspection.

This small sample weighs just a few pounds, but it wields tremendous power. It could validate a multi-million dollar contract. Or it could bring a 124-million pound shipment to a standstill. Even more than that, the inspections conducted every day by the 75 commodity inspectors and technicians at the four Washington loading docks along the Columbia River carry the responsibility of protecting a large slice of the U.S. agriculture export economy.

Grain Inspection Supervisor, Colleen Butcher, oversees operations at the Columbia River field offices. She's there to make sure the quality of the grain going onto the ship matches the specifications listed on each load order. Her teams inspect the grain for impurities, moisture content, and overall quality or grade, comparing those findings with the specifications on the load order. They also inspect the facilities for sanitation and proper handling. It's all about quality control and consumer confidence, she says. "There have been issues in the past of selling product and what they are receiving on the other end is not what they thought they were going to be getting," Butcher said. "This is the United States' way of guaranteeing that the grain that is being requested is the grain that they will receive."

Washington is one of only a few states delegated to conduct export grain inspections by the U.S. Department of Agriculture (USDA). WSDA staff inspects, logs and sets aside portions of the samples in case of a future dispute at the same time the trainload of grain floats down sealed, air-cushioned conveyor belts onto a giant Panamax freighter at the dock. "This whole operation is functioning on receiving that grain, that way they can export it," Butcher said. Mountains of wheat from Eastern Washington arrive by river barge and train each year, but the grain, mainly wheat, corn, soybeans and sorghum, comes from all over the West including Idaho, Oregon, the Dakotas, Montana, Colorado and beyond. For Midwest grain, Longview and the other grain facilities along the lower Columbia River are the gateway to Asia.

A series of vibrating trays separate wheat from other seeds, stems and other impurities.

The Columbia River has multiple elevators and loading operations. "We receive grain twenty- four hours a day, seven days a week, all year long," Butcher said. "In most cases, the grain's final destination will determine which part of the United States it's exported from."

**A different kind of continental divide**
Flowing much like water on divergent paths from the Continental Divide, grain heads in one of two directions from western grain country.

In most cases the grain goes east to the Mississippi River and the Gulf of Mexico, bound for Europe and Africa, or West to the Columbia and the Pacific Ocean, with Asia and the Middle East as its likely destination. For grain headed for Asia, "It will come through the Columbia River," Butcher said.

A Panamax vessel bound for Asia is loaded at a Longview, Washington grain elevator.

**Linchpin for the industry**
"We are quality assurance. We are making sure that the grain that is being loaded onto that export vessel is meeting contract specifications," Butcher said.

Butcher says the inspections protect the buyers, but also, perhaps even more so, they protect the producers. If a producer can't assure the buyer that what they send is actually going to be up to the specification that the buyer wants and has agreed to, the whole market could be damaged, Butcher said.

# Gardening

## WATERING HOME GARDENS AND LANDSCAPE PLANTS
### Adapted from EB1090

**Vegetables, bedding plants, and perennials** are usually small when planted and have comparatively shallow roots. These plants may have to be watered more often to ensure a consistent water supply. Check the soil with a trowel or spade to the depth of the expected root zone. Moisten the entire root zone before the plants show signs of wilting. If the plants are allowed to wilt a few times, growth will be stunted and crop yields reduced. Be careful not to overwater. Porous-wall hose and drip irrigation systems can provide adequate water more efficiently to the vegetable garden than sprinkler systems can.

**Trees, shrubs, and landscape plants** should be watered just inside and outside the dripline, or outer edge of the plant. In foundation or border plantings, it may be more convenient to water the entire area. A hose, soaker hose, or various kinds of sprinklers are commonly used. For deep-rooted trees, a root needle or fertilizer feeding needle (minus the fertilizer) may be used for deep watering. This is a tedious process, but it works. Penetration is important.

For recently planted trees and shrubs, a dished- or berm-enclosed area constructed around the base of a tree or shrub may be filled with water. This allows for slow percolation into the root zone. However, on heavier soils during the rainy season or in the winter, these basin rims are best removed to avoid concentrating too much water.

Shrubs and trees near house foundations, under eaves, or in southern, southwestern, or western exposures have to be watered more frequently. They may get little water from precipitation, and reflected heat from walls leads to increased water and heat stress.

Mounds or berms in which landscape plants have been installed have much more soil surface exposed to evaporation than the natural soil profile. Therefore, these areas will have to be checked and watered more frequently.

Container soils, in particular, have a bad habit of drying out much faster than the surrounding or backfill soils. Both media should be adequately moistened to prevent newly installed plants from being injured or dying of drought. But be careful not to overwater.

Mulching newly established shrubs and trees helps prevent moisture loss. Moisture-demanding plants, such as rhododendrons, azaleas, and ferns, have to be irrigated more often during warm, sunny weather.

**Lawns** are best watered by overhead sprinklers. The deeper the wetting, the deeper the roots will grow. Deep-rooted grass plants are much healthier and better able to withstand drought stress. Water grass when the soil begins to dry out, but before the plants actually begin to wilt, and certainly before they begin to desiccate. Grass requires irrigation when it begins to be less resilient and springy and does not bounce back up after being walked on. The amount of water to wet the root zone is determined by soil type, amount of thatch accumulation, and several other variables. To determine when a sprinkler has put out an inch of water, or any specific quantity, simply use several coffee cans or jars spaced at intervals from the sprinkler itself to the edge of the watering pattern.

**Organic matter.** Deep incorporation of some sort of organic matter such as well-rotted compost or peat moss, will help reduce downward drainage (percolation) if done before planting. This may not be feasible for shade and ornamental trees, but can be done for vegetable gardens, flower beds, and foundation plantings. Organic matter absorbs many times its own weight in water, which is then available for plant growth.

**Mulching materials** placed over the soil reduce evaporation from the soil surface, may also reduce some of the water run-off, allow better water penetration into the root mass, and limit weed growth. Mulches may be organic (shredded leaves, bark, sawdust) or inorganic (gravel, etc.).

**Spraying.** Little can be done to stop plants from transpiring. However, newly planted plants (woody, bedding, vegetable) will benefit by occasional spraying of the foliage during the day, and by shading.

**Trickle or drip irrigation** systems allow slow water penetration into the root zone with minimum surface wetting. Such installations may be worthwhile, particularly if large areas are to be irrigated. A variety of kits and parts to make up such a system are readily available. Plastic tubing, emitters, filters, and pressure reducers are included in

these systems. They are easily attached to an existing outdoor water supply. Drip or trickle irrigation allows a steady supply of water to be delivered slowly to the soil around the plant roots. Often a 60% or more savings in water usage may be realized using such a system. When using drip irrigation for watering trees and shrubs, consider the use of the newer mini-sprinkler emitters that wet the soil in a larger area and provide more even watering for plants. Simple drip emitters restrict the soil wetting patterns and are primarily suitable for establishing young trees and shrubs, but do not meet the needs of plant root systems as they grow larger.

**Important Facts to Remember**

- Most plants in most areas in Washington need water in the summer.
- Frequent, shallow waterings lead to shallow roots. Shallow roots lead to more rapid stress under drought or hot conditions.
- Theoretically, outside watering can be accomplished any time of day, but it is more efficient to water at night or in the very early morning, when evaporation is low. During a drought, watering may be restricted to specific times on scheduled days.
- Too much water is as bad as, if not worse than, too little. Rate of water application should be no more rapid than the rate at which the soil can absorb it.
- Fertilizer spread around plants (including lawns) does absolutely no good at all unless it is dissolved in water. Therefore, fertilizers have to be watered in, and soils have to be moist to get the full effect of the fertilizer application.
- Conserve water where possible. It is a valuable resource that is becoming scarce.

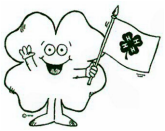
# Master Gardeners


**PLANT CLINICS & FARMER'S MARKET**

Visit the Walla Walla Extension office on Tuesdays and Thursdays from 9:00 to11:00 a.m. and 2:00 to 4:00 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 beginning May 4th. Visit with our Master Gardeners and pick up free tip sheets on a variety of gardening topics.

# 4-H



The annual 4-H Super Saturday was held on March 23rd in Blue Mountain Community Church. Many local volunteers presented workshops on a variety of topics.

April's presentation contest was a great success. More than 60 youth participated in the April 4-H contest. 4-H members will have the opportunity to return for a contest in May to improve their presentations.

Come support the accomplishments of our 4-H youth! On May 8th-12th, 4-H members will be participating in the Milton-Freewater Junior Show, along with the Waitsburg Junior Show is on June 8th.

# Food Safety

**FRUIT AND VEGETABLE SAFETY**

Centers for Disease Control and Prevention

**Eating a diet with plenty of fruits and vegetables provides important health benefits, but it's important that you select and prepare them safely.**

Fruits and vegetables add nutrients to your diet that help protect you from heart disease, stroke, and some cancers. In addition, choosing vegetables, fruits, nuts, and other produce over high-calorie foods can help you manage your weight.

But sometimes raw fruits and vegetables contain harmful germs, such as *Salmonella*, *E. coli*, and *Listeria*, that can make you and your family sick. In the United States, nearly half of foodborne illnesses are caused by germs on fresh produce.

The safest produce is cooked; the next safest is washed. Enjoy uncooked fruits and vegetables while taking steps to avoid foodborne illness, also known as food poisoning.

**At the store or market:**

- **Choose produce** that isn't bruised or damaged.
- **Keep pre-cut fruits and vegetables cold** by choosing produce that is refrigerated or kept on ice.
- **Separate fruits and vegetables** from raw meat, poultry, and seafood in your shopping cart and in your grocery bags.

**Cook sprouts thoroughly to reduce the risk of illness.** Sprouts are of particular concern because the warm, humid conditions needed to grow sprouts also are ideal for germs to multiply. Therefore, eating raw or lightly cooked sprouts may lead to food poisoning. It's especially important to avoid raw sprouts if you are in a group more likely to get seriously sick from food poisoning: pregnant women, young children, older adults, and people with weakened immune systems.

**At home:**

- **Wash** your hands, kitchen utensils, and food preparation surfaces, including chopping boards and countertops, before and after preparing fruits and vegetables.
- **Clean** fruits and vegetables before eating, cutting, or cooking, unless the package says the contents have been washed.
    - Wash or scrub fruits and vegetables under running water—even if you do not plan to eat the peel—so dirt and germs on the surface do not get inside when you cut.

    - Cut away any damaged or bruised areas before preparing or eating.
    - Dry fruit or vegetables with a clean paper towel.
- **Keep fruits and vegetables separate** from raw foods from animals, such as meat, poultry, and seafood.
- **Refrigerate** fruits and vegetables you have cut, peeled, or cooked within 2 hours (or 1 hour if the outside temperature is 90°or warmer). Chill them at 40°F or colder in a clean container.

**Groups With a Higher Chance of Food Poisoning**

Anyone can get a foodborne illness, but people in certain groups are more likely to get sick and to have a more serious illness. These groups are:

- Children younger than age 5
- Pregnant women
- Adults aged 65 and older
- People with weakened immune systems

If you or someone you care for has a greater chance of foodborne illness, it's especially important to take steps to prevent it.

# *Announcements*

The **Walla Walla Valley Food Systems Coalition** is working to grow a more vibrant local food community. If you are a food producer or a value-added food business in the Walla Walla Valley area, they are looking for participants to take part in a survey. A value-added business processes raw ingredients into a finished product for sale (for example, washed and cut produce, pesto, flour, bread, cider, soup mix, jam, or sauces).

This survey is short and should only take about 10 minutes to complete. Your participation in this survey is voluntary and your responses will be anonymous. To participate, please visit:

https://www.surveymonkey.com/r/WWFoodHubSupplierSurvey

**HELP NEEDED**! Budget constraints are pushing us to cut postage costs. We can accomplish this if you furnish us with your e-mail address! If you are currently receiving our newsletter by postal mail,


please email your current email address to: becki.green@wsu.edu or call the Extension Office at 509-524-2685.

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Celebrating 100 Years of Extending Knowledge

Debbie M. Williams
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