WASHINGTON STATE UNIVERSITY
WALLA WALLA COUNTY EXTENSION
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http://ext100.wsu.edu/wallawalla

Newsletter

September 2017

Announcements

SEPTEMBER

9 Walla Walla Community Hospice Pond & Garden Tour, 9 a.m.—4 p.m., $25 per person. A self-guided tour of ten beautiful gardens in the area that incorporate water features in their design. Tickets are limited, and must be purchased in advance at Bright's Candies & Gifts, 11 E Main Street; at the Walla Walla Community Hospice Office at 1067 Isaacs Avenue; or online at www.wwhospice.org. For more information, call 509-525-5561.

All proceeds from the Pond and Garden Tour will be used toward providing quality hospice care in Walla Walla, Columbia, and Northeast Umatilla Counties.

OCTOBER

7 Experience 4-H! Learn about local 4-H Clubs at the Downtown Farmer's Market from 9 a.m. until 1 p.m. Information on current projects; how to join a 4-H Club; as well as fun, hands-on activities.

12 Governor's Summit, Walla Walla Community College. Contact the Extension Office at 509-524-2685 for more information.

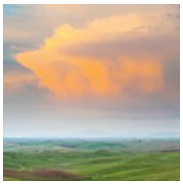
Updates

WSU VARIETY TESTING RESULTS FOR WALLA WALLA COUNTY

For current data on wheat and small grains, go to the following link: http://smallgrains.wsu.edu/variety/variety-2017-data/.

NEW FROM EXTENSION: "ADVANCES IN DRYLAND FARMING BOOK"

Researchers from across the region sum up years of study in "Advances in Dryland Farming in the Inland Pacific Northwest," a new book from WSU Extension Publications.



Learn about scientific, economic and practical considerations that help farmers address productivity, resilience, and their bottom lines.

POST-HARVEST HARD WHEAT PERFORMANCE EVALUATION

A post-harvest assessment of grain yield, protein and test weight by field or zone within the field can help you evaluate what went wrong (or right) during the crop year and inform your plans for next year. Post-harvest evaluations can also give you important insights into field conditions such as residual soil nitrogen that may impact the crop next year. Refer to the matrix below of grain yield-grain protein outcomes. Click on a cell to learn more about the outcome and what it means in terms of environmental conditions and/or management practices. http://smallgrains.wsu.edu/soil-and-water-resources/soil-calculators/post-harvest-hard-wheat-performance-evaluation/ .

		Grain yield	
		High	**Low**
Grain protein	**High**	Optimum	Stress
	Low	Low fertility	Very low fertility

STATE ASKS PEOPLE TO CHECK TREES FOR INVASIVE PESTS

The Washington Invasive Species Council and a consortium of agencies and universities are asking residents to check trees and swimming pools in their yards for harmful bugs.

"Invasive insects can destroy Washington's forests and have a large economic impact," said Justin Bush, executive coordinator of the Washington Invasive Species Council. "A few minutes of your time could save the state millions of dollars and protect more than 22 million acres of forests that are at risk from invasive insects and diseases."

If you find an invasive species, you can report it at: www.invasivespecies.wa.gov/report.shtml.

Emerald Ash Borer

Asian Longhorn Beetle

Farming & Livestock

DROUGHT AND SMALL REVENUES – DO THEY ALWAYS GO HAND IN HAND?

Adapted from Sonia A. Hall

The conditions the Northwest experienced in 2015 have received a lot of attention, because we saw drought even though precipitation was close to normal. So the drought was due to higher temperatures, which meant snow didn't accumulate anywhere near as much as it does on average. With less water available for irrigation in summer (see our earlier articles on the 2015 drought here and here), we'd expected irrigated crops to suffer, and we'd also expect growers' bottom line to suffer.

Drought (and other stresses) can have a significant impact on crop production—see this comparison of the size of an ear of corn in Missouri during the 2012 drought to its "normal" size (space between hands). The expectation is that decreases in production will lead to drops in revenue, but is that always the case? Photo: Malory Ensor/

But when the National Agricultural Statistics Service's Annual Statistical Bulletin for Washington State came out in October 2016, it was followed by an article in Capital Press discussing the apparent paradox that agricultural production values hit record highs in 2015, even though the region was under that newsworthy "snow drought." Though I did not personally fact-check the Capital Press article, it's an intriguing paradox. A presentation I heard at the recent (January 2017) Climate Impacts to Water Conference provided some insights. Ballav Aryal, a graduate student in the School of Economic Sciences at Washington State University, presented research that highlighted two factors that might explain this apparent paradox.

Factor number one: price elasticities. What's that? Say, for example, that wheat production is very low this year. If there's nothing consumers can really replace it with, the wheat that's available becomes very valuable, and its price will likely go up significantly. That's what economists call an inelastic demand. If, on the other hand, consumers could just shift to eating oats or corn instead, then that wheat would not be as critically valuable, and its price might not increase much at all. That's an elastic demand.

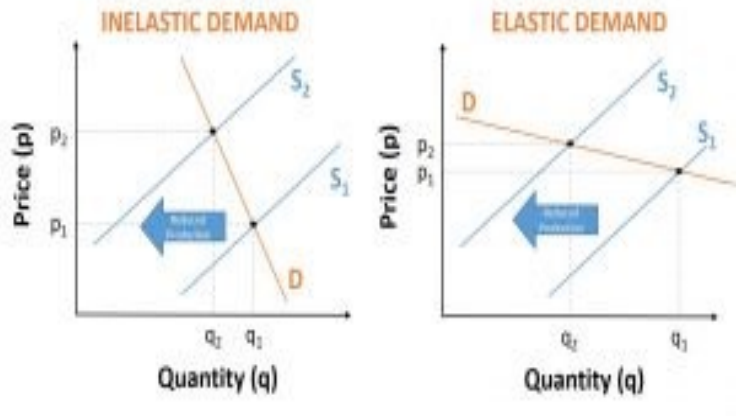


Figure 1. The price is set where demand (D line) meets the supply line (S1 and S2 show two different production situations). If wheat production is low this year (S2 line, rather than the normal S1 line), prices will rise more if demand is inelastic (left panel – compare P2 to P1) than if demand is inelastic (right panel –

Price elasticity is a factor that growers have little control over. But if the crops that are impacted by drought (and so have lower production) also happen to have inelastic demands, then their prices might increase significantly when production is slow. Those increases in the price might more than make up for the decreased production. That is, total agricultural revenue could increase even if the amount produced decreases.

Factor number two: water allocation. In contrast to the price factor, water allocation may be a factor that growers can control, at least to some extent. This of course is focused on irrigated crops. If in any given year growers apply their available water to an array of different crops, when their water availability is curtailed due to drought they will make decisions on what crops to favor with the water they do have. If they are able to direct their water to those crops of highest value, then their revenue will suffer less (maybe much less) than if they can't and irrigation water to all of their crops is reduced about equally. Water leasing or otherwise trading water among producers—or even irrigation districts—can have the same effect on the overall collective value of a region's production in a drought year (see the 2016 Columbia River Forecast for more on this). This factor also argues for a diversity of crops across the region, as having a variety of crops acts as a hedge against drought risk.

FALL PASTURE MANAGEMENT

Debbie Williams WSU Extension Director

Fall is an important time of the year to check the condition of your pasture, fertilize, mow, harrow, and get rid of winter annual/perennial weeds. A little work this fall can provide big returns next spring and summer.

Inventory Pasture

It is a good idea to take a detailed look at your pasture in early fall to assess condition such as the percent of ground cover by desired species, grass/ legume mix, and weed problems.

Fertilizing

Fall is a good time to apply fertilizer. It is wise to have a soil test done to get the correct amounts applied. Early fall is the best time to apply phosphorus and potassium because this is when root regrowth and replacement is taking place. Fertilizing can also help grass species increase when being mildly pressured by some clover species, instead of using herbicides to decrease the percent of clover.

Grazing and Mowing

Intensely grazing and then mowing the longer forage to a minimum of 4 inches will knock the weeds down and keep longer grasses from lying over. This also removes habitat for some vertebrate pests. This will help expose winter annual/perennial weed rosettes so you can spray them with herbicide more effectively.

Weed Removal

Fall is a great time to spray biennial weeds when they are in rosette stage. Most biennials will be translocating sugars and starches to their roots to get ready for winter. This helps the herbicide reach the roots and give better results.

Broadleaf herbicides will damage or kill legumes such as alfalfa and clovers. Spot spraying weeds in legume/grass mixed pastures may be your best course of action. Sometimes a wick or applicator can effectively apply a concentrated herbicide to tall weeds in a legume/grass pasture.

Remove weeds along fence rows that may seed into your pasture by pulling and disposing or burning.

Remember to wait at least three days after mowing to spray herbicides. A clean, healthy, actively growing weed is the most susceptible to herbicides.

Harrow/Dragging

Harrowing or dragging breaks up manure clumps and flattens small mounds of dirt. More severe harrowing can increase oxygen and water penetration and open up the soil for overseeding. Breaking up manure piles can expose parasite eggs and larva, helping to decrease their numbers.

Overseeding/ Reseeding

Most grass species will decrease over time leaving more undesirable species and spaces for weeds to grow. Until your pasture reaches the desired health, quality forage seed should be overseeded every year, usually in the fall. Fall usually provides moisture and less weed pressure. Overseeding works best after opening up the soil by harrowing if possible.

Overseeding will also be more effective if you can remove the animals for at least 6 weeks but you will have even better results if you wait a few months for seedlings to build a better root system.

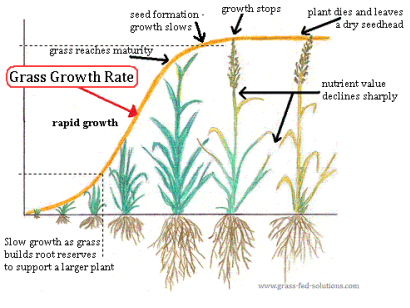
If early fall moisture is low, consider overseeding using fall dormant timing. Prepare the soil early but wait until the soil temperature is below 45 degrees before seeding. The seeds will lay dormant and soak in moisture until the soil warms enough for the seeds to germinate in the spring.

If there are areas that have a relative low percentage of desired species then you may want to consider reseeding. If biennial and perennial weeds are bad, spraying with a weed/grass killer first may be beneficial. Prepare the seedbed and reseed the area with quality, certified seed. Fencing off these areas is beneficial so that the roots can become established and the ground can become firm so that the animals do not pull the young seedlings up when they begin to graze in the spring.

Recovery Time

At least 6 weeks is needed for forages to store the necessary reserves before a hard freeze, so don't graze or mow too late in the season or too short. The survival of your desired species may depend on it. If you have the ability to put animals on a sacrifice area it helps provide recovery time for the plants as well as giving your new seeds a chance to root deeper. Damage during wet weather and compaction also decreases the success of pasture forages.

Time spent on fall pasture management is time well spent for a more productive spring and summer pasture.



Home & Garden

FALL GARDEN CHORES (SEPTEMBER – NOVEMBER)

Flower and Vegetable Gardens

- Pull emerging weeds in beds when ground is moist and before they develop deep roots.
- Harvest any vegetables left on the plants. Green tomatoes can be put into brown paper bags and stored in a cool, dry place and will ripen slowly. Pull out all of your crops and clean up any fruit and vegetables that have fallen and also any leaves and stems. Debris that is left in the garden over the winter can cause diseases to enter the soil and re-appear the following spring.
- Mulch garden beds with leaves or compost to reduce winter weeds and feed the soil. Or plant winter cover crops in open beds.
- Prepare new planting areas by digging in compost.
- Plant bulbs such as tulips and daffodils in fall for spring and summer color.

Tree and Shrub Beds

- Deep water trees and shrubs before heavy frost arrives to provide moisture for the winter months. Frequently, plants die in the spring because they have not been adequately watered during fall and winter.
- Mulch tree and shrub beds with leaves, wood chips, or bark.
- Plant trees, shrubs, and many perennials in early fall to give them a good start.

Lawns

- Improve thin areas of lawns in late September or early October by aerating, overseeding, and top-dressing with compost.
- Fertilize lawns with “natural organic” or “slow release” fertilizer in September to develop healthy roots and crowd out weeds. If you only fertilize your lawn once a year, this is the best time.
- Plant new lawns in early fall, or mid-spring (when soil is warm).

Watering

- Reduce watering for cooler weather in September.
- When rains come, shut off and drain watering systems.
- Put away exposed soaker hoses, or re-cover with mulch if left out.

Composting

- Clear out annual garden growth and compost it for spring. Keep pile as moist as a wrung-out sponge.

Tools

- Clean up all of your gardening tools. Have pruners, mower blades and shears sharpened now so they will be ready first thing come spring and you will beat the rush of those who waited.

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 through September. Visit with our Master Gardeners and pick up free tip sheets on a variety of gardening topics.

Family Living

WHAT YOU NEED TO KNOW ABOUT BOTULISM AND CANNED FOODS– FS250E

Adapted from **Stephanie A. Smith** & **Rachel Beck**, Youth and Families Program Unit, Washington State University

Botulinum toxin is produced by a bacteria called Clostridium botulinum. C. botulinum is unable to grow in foods that have a high acid content, such as most fruits, or when exposed to oxygen. Therefore, the bacteria and toxin are most often associated with home-canned foods with low acid content, such as vegetables and meats, that have not been properly processed (Figure 1). In recent years, botulism outbreaks have

occurred due to mishandling of other foods such as unrefrigerated homemade foods including salsa, garlic and herbs in oil, and foil-wrapped potatoes. Botulism is also associated with traditionally prepared salted or fermented seafood. Consuming very small amounts, even a small taste, can result in severe illness or death. Illness can occur within a period of a few hours or up to 10 days after eating food containing the botulism toxin.

Symptoms may include double or blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth, and increasing muscle weakness usually affecting the upper part of the body initially, with subsequent progression down to the legs. Ingestion of the toxin can lead to paralysis of respiratory muscles resulting in death. If you have any of these symptoms, especially after eating home-canned food, go to a hospital immediately and inform the medical staff of the botulism concern.

Protect Yourself!

- **Use ONLY current, researched, and approved published recipes**. Follow the guidelines for home canning provided in the USDA's Complete Guide to Home Canning. For more information, on approved recipes and guidelines, contact your local Extension office. Use the appropriate canner for the recipe and follow all specified home canning processing times and recipes exactly (CDC 2016).
- **NEVER fill hot food into the jar in order to let the seal form without processing. You MUST use the appropriate canner/canning method to process the food safely**. Canned foods at risk for botulism must be processed in a pressure canner at a specific temperature and for a specific length of time to ensure safety.
- **Do NOT open, smell, touch, or eat any food from jars that are damaged, cracked, leaking, swollen, squirt liquid or foam when opened, or look or smell bad**. If you are ever unsure whether food is safe or not, ALWAYS throw it away.
- **Boil home-processed, low acid foods like tomato sauces, meats, soups and vegetables for 10 minutes in a saucepan before serving even if there is no sign of spoilage.** Botulism toxin can be present in canned foods even if there are no signs, such as a leaking or swollen lid. If there are signs of spoilage, DO NOT eat the food. Throw it away.
- **Keep infused oils refrigerated.** Do not store infused oils at room temperature.
- **Keep baked potatoes that are wrapped in foil hot (above 140°F) until serving**. Do not keep foil -wrapped potatoes at room temperature.
- **Safely dispose of contaminated home-canned food AND the container.** It is important to put on gloves before handling containers of food that you think may be contaminated (CDC 2016a). Place the food or jar in a sealable bag and wrap another plastic bag around the sealable bag (Figure 1). Tape the bags shut tightly and place bags in a trash receptacle for non-recyclable trash outside the home and out of reach of humans and pets. Don't discard the food in a sink, garbage disposal, toilet, or compost pile. Wash your hands with soap and warm running water for at least two minutes after handling food or containers that may be contaminated (CDC 2016a).

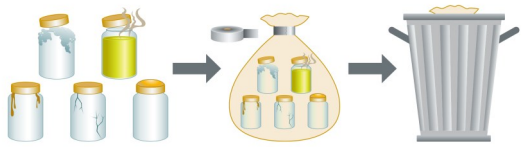


Figure 1. Throw away any suspect jars.

- **Wipe up spills of potentially contaminated food using a bleach solution.** A fresh solution of one part unscented liquid household chlorine bleach (5% to 6% sodium hypochlorite) to five parts clean water should be used. Completely cover the spill with the bleach solution, place a layer of paper towels on top of the bleach, and let it sit for at least 15 minutes. Wipe up any remaining liquid with new paper towels (Figure 2). Clean the area with liquid soap and water to remove the bleach and discard any items that may have come into contact with the contaminated food or containers. Wash your hands with soap and running water for at least two minutes (CDC 2016).

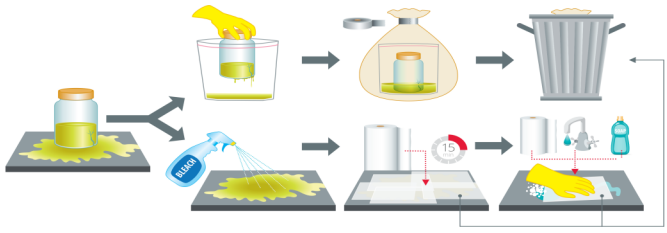


Figure 2. Wipe up spills using a bleach solution.

If you are experiencing any symptoms associated with botulism, such as double or blurred vision, drooping eyelids, slurred speech, difficulty swallowing, dry mouth, or increased muscle weakness, seek medical treatment immediately.

4-H

Fair was a tremendous success and we want to thank the many volunteers that gave countless hours of their time to help make it all happen!

October marks the beginning of the new 4-H year. Join us October 7th to explore the opportunities that 4-H has to offer. Experience 4-H takes place at the Downtown Farmer's Market from 9 a.m.—1 p.m. It is a wonderful opportunity to learn more about the opportunities that 4-H has to offer and also join in some fun activities.

Take the opportunity to explore the possibility of becoming a 4-H leader. They are the foundation of 4-H, and play a key role in helping young people grow and become active members of their communities. Consider becoming a 4-H leader!

Financial Fitness

BACK-TO-SCHOOL SHOPPING GOOD TIME TO TEACH CHILDREN ABOUT MONEY

Adapted from Janet LaFon, University of Missouri Extension

Many families are busy preparing for the school year and buying new clothes, shoes, book bags and school supplies. And there will be many more expenses once school starts, such as school lunches, after-school snacks, fees for extracurricular activities — the list goes on and on.

It's obviously a very expensive time of year. "Since these expenses are related to children, this is a great time to begin helping them learn to handle money," said Janet LaFon, family financial education specialist with University of Missouri Extension. "From a very early age, children start using money, so why not help them learn to use it wisely?"

Start by taking a look at where children get their money. Usually this is from one of three general sources: cash gifts, earnings and allowances. Each of these can be used to teach children money management skills.

Monetary gifts: Cash gifts, often received on birthdays and holidays, are "surprise" money and shouldn't be included as a part of day-to-day expense money.

"Children should be given leeway to spend it as they wish. However, parents can discuss ideas with children for how the money can be used," said LaFon.

Earnings: Earnings may be from in-home jobs or jobs outside the home. Many children are paid money for extra work they do around the house. The amount received for various tasks should be agreed upon by the parents and the child.

"When children are old enough to work outside the home, they still need guidance in money management. Teens should begin developing longer-term financial plans and an adult awareness of money, work, time and their own needs," said LaFon.

Allowance money: An allowance is a child's share of family income and should be used as the child chooses on certain defined expenses. With an allowance, children can have some hands-on experience with managing money.

"They can plan their spending and learn to set some money aside for future use. Allowances can help children learn that money is limited, that income must first cover needs and that the family's financial situation affects the amount of money each member can use," said LaFon.

An allowance should be enough to cover necessary expenses, leaving some money for the child to spend as he or she chooses.

When starting an allowance, parents should teach children how to set up a budget or spending plan, keep records and set money aside for savings. Be sure and gear the information to the age and ability of each child.

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Celebrating 100 Years of Extending Knowledge and Changing Lives.

Debbie M. Williams
County Extension Director