

July 2015

Announcements

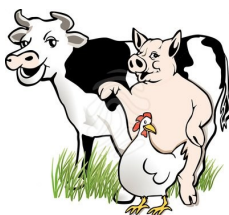
AUGUST

1-2 Walla Walla YMCA Peach Basket Classic, downtown Walla Walla, Main Street. YMCA Peach Basket Classic 3-on-3 basketball tournament. For more information, call 525-8863 or visit www.peachbasketclassic.com.



5 Walla Walla Fair Entries Due

Visit <http://www.wallawallafairgrounds.com/exhibits>. 2015 Fair Exhibitor's Handbooks and entry forms are available at the Walla Walla Fairgrounds, WSU Extension office and online at the website above.



27-30 Walla Walla Pre-Fair Events

Refer to page 6 in the 4-H section for a detailed listing.

27 Still-Life Exhibits Due Walla Walla Fair

SEPTEMBER

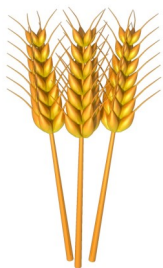
1-6 Walla Walla Fair & Frontier Days.

12 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 or call 509-525-5561.

Updates

STRIPE RUST IN WASHINGTON

Based on field observations in this week, winter wheat ranged from milk to ready to harvest and spring wheat from heading to soft dough



stage depending upon locations. We have pretty much finished stripe rust note-taking in winter wheat nurseries across the state. In western Washington, stripe rust developed to 100% severity on susceptible varieties in our spring wheat experimental field near Mount Vernon (Skagit County). In eastern Washington, stripe rust varied in levels. At Lind (Adams County), susceptible entries of spring wheat had up to 5% severity, similar to the level of last report on June 11. At Walla Walla, spring wheat susceptible varieties had up to 80% severity near Walla Walla (Walla Walla County). Around Pullman (Whitman County), susceptible varieties of winter wheat had 80-100% severity and susceptible spring wheat varieties had up to 50% in our experimental nurseries. In the Syngenta breeding nurseries about five miles southwest of Colfax (Whitman County), up to 100% incidence and 80% severity occurred in some susceptible winter plots, and in the spring wheat field susceptible varieties had up to 100% incidence and 60% severity.



No significant stripe rust was observed in commercial fields of winter wheat and spring wheat due to resistance, early application of fungicides, and the drought since the second week of June in the spring wheat production regions.

Based on the weather forecast, the hot (upper 90s and three-digit temperatures of day time high) and dry weather conditions over this weekend and the next two weeks should stop stripe rust development.

Stripe rust in the country

Severe stripe rust continues damaging crops in Colorado, Nebraska, South Dakota, North Dakota, and Wisconsin, making 2015 another big epidemic year.

Farming & Livestock

GET DROUGHT READY: NEW EXTENSION SITE OFFERS UPDATES & TIPS



Let's face it. Washington is in a drought. And there is a lot that we can do about it - with help from the just-launched WSU Extension Drought Website.

The new website (<http://drought.wsu.edu>), developed by WSU Agricultural Weather Network Program (AgWeatherNet) and WSU Extension, shares timely updates and a wealth of water conservation information to help state residents and farmers handle a dry year - and perhaps beyond.

We are all dependent on our waters," said Gerrit Hoogenboom, AgWeatherNet director. "The long range weather outlook continues to suggest enhanced odds of warmer and perhaps drier than normal conditions for Washington through early 2016."

That's why the drought website was developed: To provide farmers, ranchers, homeowners, foresters and the general public with research-based publications, drought updates, useful links, as well as news on drought-related issues. Topics covered include conservation tips for the home and garden, irrigation management, forestry, crops and livestock.

A Drought Basics page helps residents understand what happens in a drought. There's also a Washington Drought Twitter feed, where you can sign up to follow updates, and a link to AgWeatherNet, which operates 160 automated weather stations in Washington and Oregon and helps farmers plan and react to weather.



Drought begins

The current drought began last winter. Although Washington had average to above-average precipitation this year, there has been significantly less snowpack due to higher-than-normal temperatures. This in turn affects water supplies for irrigation and stream flows that depend on melting snowpack throughout the summer and

early fall. According to AgWeatherNet, Washington may not only be facing a low water-supply situation, but also higher demand, since water may evaporate more in warmer, drier conditions.

Link to more information

- Learn more and sign up for WSU Extension Drought Website updates at <http://drought.wsu.edu>.
- Learn more about AgWeatherNet and follow weather updates at <http://www.weather.wsu.edu>.

Home & Garden

IS YOUR DECK DESIGNED TO HOLD A LOAD?
Researchers found that the loads from people can exceed those of the most severe earthquakes and hurricanes. By DON BENDER, WSU

Outdoor decks are a great way to extend living and entertaining spaces, but they can also be the most dangerous part of a building if not properly designed, constructed and maintained.

Building codes exist to protect public safety, and they require decks to be designed to resist both vertical and lateral loads.

Vertical loads such as from people, furniture and the weights of building materials are well understood and the design is straightforward. However, I teach short courses to engineers and building officials across the nation, and it's rare to hear of anyone conducting a lateral design of decks.

When structural engineers conduct a lateral design, they check for earthquake and wind loads. The American Society of Civil Engineers publishes a standard, ASCE-7, that gives detailed procedures on how to calculate these loads. Using ASCE-7, it turns out that lateral loads on decks are not significant unless you are in an extremely high-risk region for earthquake or hurricane. For most of the country, these lateral loads would not control the design of a deck.



Photo courtesy of Don Bender
This deck failed in 2013 with Don Bender's youngest son on it. No injuries were involved.

Then we began to wonder about lateral loads that might be caused by people. It turns out that the building codes and ASCE-7 are silent on lateral loads from people, except for stadium bleachers. So we decided to construct our own decks in our laboratory and it was “all hands on deck.”

We loaded our decks with varying numbers of people representing small gatherings, all the way up to a very crowded condition (full design load of 40 pounds per square foot). At full design load, people are literally shoulder-to-shoulder.

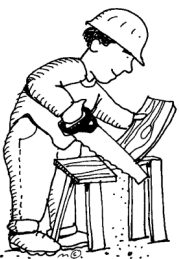
We put the deck on rollers to simulate minimal substructure stiffness (as with posts that are pinned at each end), and then we fixed two corners of the deck to simulate attachment to a building (with sensors to measure the loads). We instructed our volunteers to move in unison side-to-side, simulating dancing or perhaps aerobics. Then we had them run across the deck, jump, and stop suddenly to simulate “horse play.” The results were startling.

For our most flexible decks studied, we found that the loads from people exceeded the most severe earthquakes and hurricanes. And people-induced lateral loads can happen anywhere, unlike other loads that are restricted to a few high-risk regions. This means that every deck in the country should be checked for people-induced lateral loads.

That got our attention and we dug deeper to understand what was causing the problem. The answer is found in a concept called load amplification caused by dynamic movement of the decks. The more flexible the deck with regard to sideways, the greater the load amplification.

Using computer-based models we found that the amplification can be as great as fourfold. When the deck is stiffened with diagonal deckboard placement or a very stiff substructure, the load drops to lower levels that can be easily resisted.

The most common deck construction has deckboards running parallel to the primary building with the supporting joists running perpendicular to the building. The parallel deckboard orientation does not result in a very stiff deck platform.



When we simulated dancing on a 12-by-12-foot deck with parallel deckboards in our laboratory, it moved 16 inches side-to-side.



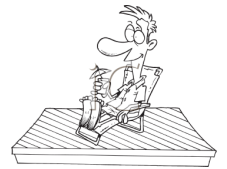
Many residential decks are built by low-bid contractors that don't know what they're doing. This deck is in Lewiston, Idaho.

Again, this sideways movement can result in very large dynamic forces. On the other hand, when you fasten the boards at a 45-degree angle, the deck diaphragm is four times stiffer and six times stronger.

Engineers have known for a long time that if you want to stabilize a structure, you make lots of triangles. Just look at a roof truss and you will see what I mean. Many years ago before plywood was invented, walls on buildings typically had diagonal board sheathing. The triangles helped the walls resist sideways, or lateral loads.

So, we need decks that are stiff to minimize dynamic amplification of loads. A deck is a structural system consisting of a “structural diaphragm” (the platform made up of joists and deckboards), substructure (post-and-beam framing that supports the deck), and guardrail to keep people from falling over the edge. The lateral stiffness comes from the diaphragm and/or the substructure.

For example, if the deckboards are placed at a 45-degree angle, and are nailed or screwed to the joists, then the structural diaphragm will be stiff and strong, and the substructure's job is to primarily resist vertical loads. However, if the deckboards are placed parallel to the building, the diaphragm is not very stiff, and the substructure must be reinforced to resist lateral loads, such as with embedded posts, knee-braces or other bracing.



New deck products are constantly evolving, such as wood-plastic composites. These products can be beautiful and low maintenance. Let's face it, who wants to go out and sand and re-finish their deck each year?

One fairly recent development in wood and WPC deckboards is “hidden fasteners” that fit in a slot on the side of each board. Great idea right? You don't see the fastener, and the slot allows the board to slip so that thermal expansion and shrinkage won't cause the boards to buckle.

The problem is that since the fasteners allow slip, the deck diaphragm has almost no stiffness from side-to-side. This means that the deck substructure must provide nearly all of the resistance to lateral loads.

This can result in a complicated design that should be performed by a registered design professional.

Two other parts of a deck that require careful design are the attachment to the building and the guardrail posts/infill. One of the best investments you can make for the safety of your customer, family and friends is to employ the services of a registered design professional and regular inspection and maintenance of your deck.

A free and prescriptive design guide for decks was developed by a large team that included professor Don Bender. It can be found at <http://www.awc.org/publications/dca/dca6/dca6-12.pdf>

Family Living

BERRIES PACK A HEALTHFUL PUNCH



Tammy Roberts, MS, RD, LD,
Nutrition and Health Education
Specialist, Bates County,
University of Missouri
Extension

It's no secret that berries are a healthy choice. They may become even more appealing as new research indicates that eating berries could stave off the cognitive decline and memory loss that comes with aging.

Data from the long-running [Nurses' Health Study](#) shows that the women who ate blueberries and/or strawberries delayed memory decline (from aging) up to 2½ years compared to those who did not eat berries. The participants gained this benefit from consuming just two or more servings of blueberries and strawberries per week.

Even if you are not worried about memory loss, berries still pack a healthful punch for just a few calories.

Strawberries and blueberries are rich in anthocyanins. Anthocyanins are the pigment in plants that give them their dark red or blue coloring. One of their functions is to help move blood into the brain. Anthocyanins have been related to a broad range of health benefits such as vision and heart health.

- **Strawberries** have only 22 calories and five grams of carbohydrate and provide two grams of fiber for every half-cup serving. To enjoy them at their best, strawberries must be

handled with care. To wash strawberries, hold them under gently running cool water just long enough to remove the dirt. Don't soak strawberries as they will absorb water and lose flavor. For the best flavor, wash strawberries just before you are going to use them. Strawberries can be stored in the refrigerator for two to three days.

- **Blackberries** have 37 calories, nine grams of carbohydrate and four grams of fiber for every half cup. Be sure to use or freeze your blackberries soon after picking because they spoil quickly.
- **Blueberries** have 41 calories, 10 grams of carbohydrate and two grams of fiber in a half cup. Like other berries, blueberries are a good source of vitamin C.
- **Raspberries** have 30 calories, seven grams of carbohydrate and four grams of fiber for every half cup. Raspberries are very fragile and easily damaged. If you buy them fresh, eat them within one to two days. Wash raspberries just before you are going to eat them because they can absorb the water diluting the taste.

June is the season for berries. But if you want to enjoy fresh fruit year-round, berries can be frozen for later use. Here are a few freezing tips:

One way to freeze strawberries is to add ¾ cup sugar to one quart of whole strawberries and mix thoroughly. Let stand 15 minutes and then pack into containers leaving headspace for expansion. Seal and freeze. (from [National Center for Home Food Preservation](#))

- Blueberries, raspberries and blackberries can be frozen whole.
- It is not recommended that you wash blueberries before you freeze them as that will make for a tougher skin when you are ready to use them. Wash them just before you are going to use them.

There are many ways to add berries to a healthful diet: sprinkle them on cereal, add them to yogurt, use them in salads or enjoy berry toppings on pancakes. You could also just enjoy sweet, delicious berries on their own. However you choose to eat them, you can savor the flavor now and reap the benefits later.



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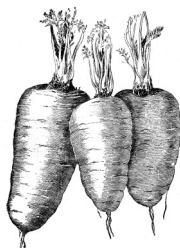
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Master Gardeners

Drought: Gardening Tips

Adapted from University of California The California Garden Web

Water dedicated to landscape can often be reduced by 20 to 40 percent because over irrigation is very common. Gradually reduce the amount of water applied over a few weeks - giving lawns, trees and plants time to adjust.



Edible Gardens

Water restrictions and conservation should be taken into consideration when deciding on starting an edible home garden. If local water allocation allows for an edible garden, homeowners can grow fruits and vegetables in their backyard using water-wise practices.

Water-saving Edible Garden Tips:

- Plant an appropriate size garden for your household
- Plant shorter season crops and drought resistant varieties
- Know critical watering periods, for example transplanting and fruit development
- Apply a 3" to 4" layer of mulch
- Compost adds nutrients to soil and can produce higher yields
- Remove weeds, which compete for water resources
- Install a water efficient drip irrigation system

Lawn Care

A lawn is almost always the single largest user of water in the home landscape. Many gardens have large expanses of turf that are never used but require considerable time, effort and resources to maintain. Use turf only when it serves a purpose, such as play or entertainment areas.

Water-saving Lawn Tips:

- Select water efficient varieties suited for your local climate
- Replace nonessential turf with ground covers, mulches, decks and walkways
- Adjust irrigation schedule monthly - to reflect seasonal changes
- Water at night, ideally between 9:00 p.m. and 6:00 a.m., this reduces evaporation and wind will not be strong enough to interfere with sprinkler patterns
- Mow lawns higher during very warm weather



- Helps reduce growth rate
- Protects lawn from sunburn
- Promotes deeper root growth
- Shades soil, reduces weeds

Plant Care

Do not introduce new plants to your landscape during a severe drought. Even native plants aren't drought-resistant until they become well established. When water restrictions allow for new plants to be introduced into your landscape, select drought tolerant varieties appropriate for your climate zone. Introduce new plants during the fall, allowing them to become established by winter rain.

Water-saving Plant Tips:

- Remove plants in crowded beds or low-priority plants competing for soil moisture
- Mulch, mulch, mulch!
- 3 to 4" layer reduces water evaporation and weeds
- Protects roots from heat
- Reduces weeds who compete for water
- Avoid heavy pruning
- Do not overuse fertilizers, which increase growth and water demands
- Infrequent deep watering encourages deeper root growth, and results in plants with greater drought tolerance
- Use a drip irrigation system, grouping plants with similar water needs together on one drip irrigation line

Tree Care

When water is limited, most people choose to water fruit trees, landscape trees, and shrubs. Lawns, groundcovers, and bedding plants can be reestablished over a relatively short time, but trees and shrubs need years to mature and are less easily replaced.

Ornamental Trees:

- One or two deep irrigations with a garden hose several weeks apart in spring and summer will often keep trees alive through summer, especially if roots are relatively deep
- Will drop leaves or wilt under severe water shortage, but with appropriate care will survive

Fruit and Nut Trees:

- Early-season water applications will keep trees alive, but reduces fruit production
 - To produce a good harvest, deciduous fruit and nut trees need adequate water in their root zones continuously from bloom until harvest.

4-H



Challenger Horse Camp was a success this year with 12 participants and numerous volunteers. Youth with disabilities were able to ride horses in various patterns for two nights and the third night were treated with miniature horse cart rides and a petting zoo.

Schedule of Pre-Fair Events:

August 27th

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

August 28th

- 4 p.m. 4-H/FFA Pre-Fair Colt Fitting and Showmanship

August 29th

- 4 p.m. 4-H Dog Agility Trial Classes
- 7:30 p.m. 4-H Public Fashion Revue

August 30th

- 4 p.m. 4-H & Open Cat Show



Financial Fitness

CHILDREN & ALLOWANCES

Are you trying to decide if you should give your child an allowance? Consumers' behaviors change depending on who is paying, and children are no different than adults. Children may be willing to spend your money with unbridled abandon, but you may see their spending habits change when it comes to spending their own money.

Giving an allowance to a child can provide many benefits besides an income. With some direction from adults, children can learn about saving, delayed gratification, spending motives, and money management.

If you are wondering when to begin giving your child an allowance, how much money is appropriate for your child, or if they should be paid for chores, here are some guidelines to consider when making these decisions.

First of all, if possible, do not tie a child's allowance to his or her required chores. Children should do chores as part of their responsibility to

help with the family's needs, not because they are being paid for them.

So how much is a good amount to give to a child? Depending on the family income, one to four dollars per week for children ages 6 to 8 and four to eight dollars per week for children ages 9 to 12 would be a good starting amount. You may want to give the allowance in a variety of denominations (including both coins and bills). This may make it easier for young children to divide their allowance into various categories.

Sit down with your children and help them draw up a spending plan for their allowance. Explain to them what you will pay for (school supplies, clothes, etc.) and what they will need to use their allowance for (video games, going to the movies, etc.). Encourage them to save a certain percentage, such as 10 percent, of their allowance each time. Try opening a savings account at a local bank. Many banks will open savings accounts with little or no initial investment, and this will give your child the opportunity to understand how an account works. Provide a place for the child to keep the rest of his or her money (a special envelope, box, or a piggy bank).



Helping children learn to live with their spending decisions is another benefit of them having an allowance. Children need to learn to think through their purchasing decisions and then assess whether it was a good decision or not. Allowances can also provide a sense of ownership and responsibility.

Most importantly, discuss all of these issues with your children. Children will not automatically learn good saving and spending patterns by simply receiving an allowance. Have regular meetings with your children to discuss sound financial behaviors.

Adapted from material written by Mary Anne B. Pettit, Center for Economic Education, Southern Illinois University-Edwardsville

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.