



# Country Living

Provided to you by the  
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The office will be closed Fridays from Noon to 1 p.m.  
Website: <http://extension.oregonstate.edu/columbia/>

## December 2016

### Programs for you . . .

Listen to the Gardening Spot on KOHI (1600 am) radio - Every Saturday, 8:05 to 8:15 a.m.

- Dec. 1..... Demonstration Garden and other MG Extension Projects Planning Meeting. 10 a.m., OSU Extension Classroom, St. Helens
- Dec. 1..... Master Gardener™ Board Meeting. 10:30 a.m., OSU Extension Classroom, St. Helens
- Dec. 6..... Scappoose Bay Watershed Council. 7 p.m., 57420-2 Old Portland Rd., Warren
- Dec. 13..... Lower Columbia Watershed Council. 7 p.m., SWCD office-35285 Millard Rd., St. Helens
- Dec. 21..... Soil & Water Conservation District. 7:30 p.m., SWCD office-35285 Millard Rd., St. Helens

Dec 26 & Jan 2 - OSU Columbia County Extension Service closed for Holidays.



*Chip Bubl*

Chip Bubl, OSU Extension Faculty, Agriculture

Agricultural Sciences & Natural Resources, Family and Community Health, 4-H Youth, Forestry & Natural Resources, and Extension Sea Grant programs. Oregon State University, United States Department of Agriculture, and Columbia County cooperating. The Extension Service offers its programs and materials equally to all people.

# In the garden

## Christmas gifts for gardeners

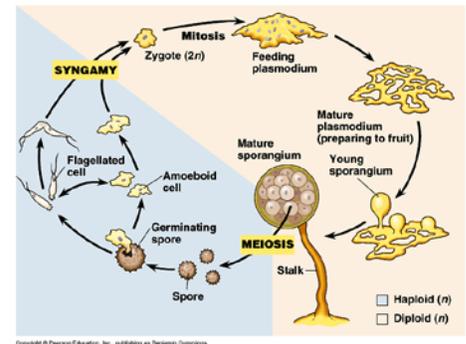
- Nice gardening gloves, especially those flexible kinds that rose thorns don't penetrate or nice-fitting leather glove.
- Knee pads or knee benches for gardeners to make close work less of a pain.
- A well made spading fork or shovel.
- Cast aluminum hand tools or specially designed "ergonomic" tools for less muscle strain.
- A greenhouse or a good cold frame (could be home-made).
- High quality loppers or hand pruners
- Gift certificates to garden centers
- A soil thermometer is always useful. So are moisture meters with ~12-inch probes.
- Easy grip hand tools for the gardener with arthritis

## Strange stuff on lawns and barkdust

I had several calls about ten days ago about stuff that was alternately called "weird, looking like vomit" or "brightly colored throw up". The patches were from several inches to about a foot wide and ranged in color from chrome yellow to browns, tans, grey, black, and white to cream colors. They were rather amorphous in shape but generally somewhat round, slimy, and knobby. They grew on grass blades or bark chunks and the thickness varied from a quarter of an inch to more than an inch. The structure could be six or more inches in diameter. If you are of an experimental bent, you could take your hand and move the stuff off the substrate. There you

would see the grass or other material completely unaffected.

So what were these things and do they need to be controlled? These organisms are the reproductive structures of slime molds. These "molds" are not fungi, despite their name, but are rather free-living "protists" (basically amoeba-like) that feed on fungi, bacteria and organic bits.



I first ran into slime molds in some biology classes in the early 1970's. Science was very interested in how organisms communicated and a great biologist, J.T. Bonner had done groundbreaking work on slime mold communication. His work led ultimately to useful approaches to insect management (pheromone traps) and other scientific discoveries.

Slime molds often appear suddenly, literally overnight. Actually they have been present for much longer, but in a dispersed, unobtrusive state in the plant litter in which they were living.

These very ancient organisms have evolved a rather complicated reproductive cycle. When they wish to reproduce, often as the food supply dries up, they chemically signal each other (amoeba to amoeba) to aggregate in an area where the wind will carry their spores. So thousands of individuals join together to create this large amorphous structure that you see in the landscape. This aggregation of individuals is formed just before the unit fruits. This unit can creep across surfaces by a process called protoplasmic streaming.

Slime molds are most prevalent in the spring and fall, but can occur any time that moisture is abundant.



These organisms entranced a Japanese scientist in the early 20<sup>th</sup> century who collected them and studied them. He hated the slugs that devoured his subjects and

woke up every two hours at night to dispatch the slugs. Then he trained cats to do the job.

Slime molds do no harm and disappear usually in a couple of days. Sometimes, they will leave a brief dusting of colored spores. Other times, they leave nothing. For an interesting article go to <http://www.nytimes.com/2011/10/04/science/04slime.html?pagewanted=all>

*Photo credit: Melodie Putnam, Oregon State University*

## **Why are millipedes or centipedes (those legs are hard to count) trying to get into my house?**

To start off, let's look at the difference between centipedes and millipedes. First, centipedes have a series body segments with one strong, jointed leg on each segment side that points outwards. With 30 segments you would have 60 legs plus two longer legs coming off the end of a centipede that look like antennae but aren't. There are true antennae on the front end. Centipedes are built for speed. They are predators of insects and other small invertebrates. They kill by injecting poison through their fangs. There is no evidence that our species have mouths

wide enough to bite humans but that isn't true for tropical centipedes. When you go looking for centipedes, you might start by turning up decaying logs. Often there is good insect hunting for them there. But you need to look fast because they have a high escape velocity. There are rarely large numbers of them in one place. Every once in a while, you might see one of the woodland centipedes in your house. Usually you bring them in with firewood stored outside. Centipedes can live and reproduce in damp basements and/or crawl spaces but need a supply of insects to stay alive. The solution: fix the moisture problem.

The only centipede found regularly in houses is the house centipede, *Scutigera*. It moves across floor with incredible speed.

The house centipede is flattened with very long and jointed legs that make it look almost spider-like. They live on insects and



*Photo credit: House Centipede. Bruce Martin - Wikimedia Commons 3.0*

small spiders. What useful creatures! I used to see them a lot when our offices were in the Courthouse. Apparently, we didn't bring any to our new office when we moved in 2001.

Millipedes feed on organic matter, decayed or fresh. They also like bacteria and fungi that are part of the decomposition process. They may eat produce like lettuce, tomatoes, cucumbers and strawberries in direct contact to the soil (they can't climb). Rarely, they will eat very young seedlings. Often you find them curled up feeding and or digesting. But generally, they cause an insignificant amount of damage compared to the slugs that like the same environment (and can climb). Millipedes are very important for nutrient recycling in forests.

Millipedes get their name because they have lots more legs than centipedes. They have two legs per side per segment and usually lots of segments. Their numerous (leg counts are usually between 200 and 400) softer legs hang straight down and are not jointed. Compared to a centipede, they are plodders. They wander slowly over the landscape looking for juicy bits to eat. Their numbers can be amazingly high during extended rainy periods like this fall. The most common species is mocha brown with lots and lots of segments and legs. Since it goes through a series of molts, you can find many sizes of the same millipede species in one location. Millipedes breed mainly in the spring with the female capable of laying up to 300 eggs and they can breed several times while the weather is favorable.

Millipedes may wander into your house or, more commonly, your garage in large quantities. They can wriggle their way through sliding door frames or under regular doors. This is not a good life choice for them. They dry out amazingly fast inside houses and die curled up into a circle. They leave their calcium rich exoskeleton behind for you to sweep up.

We have a spectacular woodland species known as the yellow spotted millipede. It is large and mostly black colored with bright yellow spots where the legs join the segments. Yellow is a warning to predators that this millipede is not to be fooled with. It will emit hydrogen cyanide, which smells like almond extract and is toxic to some of its predators. They have been very active this fall but are mostly found in forests rather than gardens or garages.



Photo credit: Yellow spotted millipede.  
wikimedia.org/wikipedia/common 2.0/ Walter Seigmund

For more information on millipedes and centipedes go to

<http://extension.uidaho.edu/clearwater/files/2014/11/Homeowner-Guide-to-Centipedes-and-Millipedes3.pdf>

## How to speed winter compost

Decomposition slows in cold, wet weather. Moisture fills pore spaces within the compost pile, reducing the oxygen available the rotting fungi, bacteria and small invertebrates. Rain also reduces the pile temperature. The pile of vegetation will continue to decompose, but at a much slower rate.

You can speed up composting by covering the moist pile. Some gardeners use clear plastic to get some heat gain from the sun. Shredding materials you add to the pile hastens decomposition. So will the addition of nitrogen sources such as manure, synthetic fertilizer that contains nitrogen, or bloodmeal. The nitrogen “feeds” the microbes and their population blooms, speeding the compost process.

## Some things to do

- Check stored potatoes, onions, garlic, winter squash and apples for rot or sprouting. Pull off potato sprouts and discard anything diseased.
- Water plants outside under eaves.
- Spray fruit trees, roses and berries with copper.
- You can still lime your garden (10 pounds/100 square feet) and then cover it with manure and bedding or leaves to be worked in next spring.

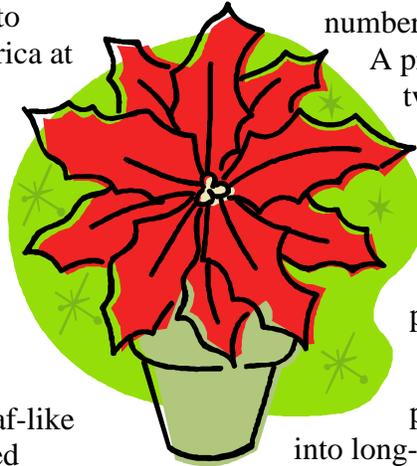
## Poinsettia history and biology

Poinsettias are a Euphorbia native to southern Mexico and Central America at low to mid-level elevations. There, they are woody 10-foot trees. Like many Euphorbias, poinsettias contain white latex in their stems. Poinsettias flower when the length of the day decreases to 12 hours or less, November to December in their native range. Poinsettia flowers evolved large scarlet red bracts (leaf-like structures) which most likely alerted hummingbirds or insects to the insignificant but reproductively critical petals, stamens and pistils located in the yellow center of the array of bracts.

While there is no evidence for Aztec cultivation of poinsettias, there is information on their use. The stunning scarlet flower played a decorative and almost certainly, symbolic, role in Aztec social life. In addition, the red bracts were harvested to extract a dye and the latex found in the stems throughout the plant was used medicinally. With the conquest of the Aztecs by the Spaniards, the stunning red flower that bloomed around Christmas was incorporated into Mexican Catholic ritual.

Joel Robert Poinsett (so know you know!), an U.S. ambassador to Mexico and an avid botanist, brought poinsettias to the United States in the late 1800s. They were grown as landscape plants in the sub-tropical Southeast and as greenhouse plants further north. Pinching new growth stimulated more shoots which could then produce more flowers. These were harvested as cut flowers. A Southern California family, the Eckes, developed (and guarded) the secret of making very compact, bushy plants that could, with the right manipulation of day length, make attractive flowering potted plants for Christmas holiday sale.

Many plants measure change in the length of night over the year. That cue is used to initiate a number of important biological processes



including leaf fall and dormancy in temperate deciduous woody plants and flowering in a number of woody and herbaceous species.

A protein in the leaf (phytochrome) has two forms. Red spectrum light in the day rolls it into one form which then reverts over the course of the night to the original form. The relative ratio of the two forms set in motion flowering or other physiological responses.

Plants that have a strong photoperiodic trigger are grouped into long-day (really short night) or short day (really long night) categories. Poinsettias are a classic short-day plant. As the nights lengthen past 12 hours and the days shorten below 12 hours, the phytochrome ratio in the leaves induces a compound that changes the latent stem buds from shoot to flower buds. Seven to ten weeks later, depending on cultivar, the flowers are fully formed and the plants ready to market.

When most poinsettias were sold right around Christmas, a grower could take rooted cuttings, grow them out for awhile, do some judicious pinching, and let the natural changes in day length initiate flowering. But modern marketing has decreed that Christmas starts after Thanksgiving. This requires that at least the early marketed plants be artificially darkened for 12 plus total hours, usually with black cloth covering. The rest of the day, poinsettias get high intensity lighting. During the critical dark period, almost any light exposure can disrupt the flowering response and ruin or seriously delay a crop. How many poinsettias do you buy after Christmas?

Finally, it turns out that the bushy, floriferous habit of modern poinsettias that the Eckes pioneered is due to a virus like organism called phytoplasma that infects all modern cultivars. Who knew?

# DECEMBER

## Garden hints from your OSU Extension Agent

Oregon State University Extension Service encourages sustainable gardening practices. Always identify and monitor problems before acting. First consider cultural controls; then physical, biological, and chemical controls (which include insecticidal soaps, horticultural oils, botanical insecticides, organic and synthetic pesticides). Always consider the least toxic approach first.

All recommendations in this calendar are not necessarily applicable to all areas of Oregon. For more information, contact your local office of the OSU Extension Service.

### **Maintenance and Clean Up**

- Spread wood ashes evenly on vegetable garden. Use no more than 1.5 lb/100 sq ft/year. Don't use if the soil pH is greater than 7.0 or if potassium levels are excessive.
- Protect new landscape plants from wind. Use stakes, guy wires and/or windbreaks as needed.
- Yard sanitation: rake leaves, cut and remove withered stalks of perennial flowers, mulch flowerbeds, hoe or pull winter weeds.
- Turn the compost pile and protect from heavy rains, if necessary.
- During heavy rains, watch for drainage problems in the yard. Tilling, ditching, and French drains are possible short-term solutions. Consider rain gardens and bioswales as a longer-term solution.
- Check stored flower bulbs, fresh vegetables, fruits for rot and fungus problems. Discard any showing signs of rot.
- Tie limbs of columnar evergreens to prevent snow or ice breakage.
- Do not walk on lawns until frost has melted.
- Make sure that landscape plants in protected sites receive water regularly during the winter.

### **Planting/Propagation**

- Good time of year to plant trees, landscape shrubs.

### **Pest Monitoring and Management**

- Monitor landscape plants for problems. Don't treat unless a problem is identified.
- Check for rodent damage around bases of trees and large shrubs. Remove weeds to prevent rodents from using them as hiding places. Use traps and approved baits as necessary.
- Avoid mounding mulching materials around the bases of trees and shrubs. The mulch might provide cover for rodents.
- Monitor spruce trees for spruce aphids. Treat if present in large numbers. Read and follow pesticide label directions.

### **Houseplants and Indoor Gardening**

- Protect poinsettias from cold, place in sunlight, don't let leaves touch cold windows; fertilize with houseplant fertilizer to maintain leaf color.

Monitor houseplants for adequate water and fertilizer. Water and fertilizer requirements generally are less in winter



## Native plant of the month: Beaked hazelnut (*Corylus cornuta* var *californica*)

California hazelnut is a very common deciduous shrub or small tree found in much of Columbia County, especially at lower elevations. It is multi-stemmed and typically grows from 3-15 feet tall. It is found as an understory plant with vine maple, Oregon grape, salal, sword ferns and mature Douglas fir. Because it throws lots of suckers from its roots, you can end up with quite a hazelnut thicket especially on dry, sunnier sites where it is found with oceanspray, snowberry, and Garry oak.

California hazelnut does not like wet feet but can grow on the upland edges of wetlands.

*C. cornuta* leaves are alternate, oval and saw-toothed. They look a bit like red alder leaves. But they are hairy (alder leaves are not) and often leathery.

They turn yellow in the fall. *C. cornuta* twigs are hairy when they first emerge but lose their hairiness as they grow older. The shoots branch extensively as they mature.

California hazelnuts are monoecious, which means they have separated male and female flowers on the same plant. The male flowers are catkins which shed pollen. The female flowers are tiny urn-like structures that sit on the ends of tiny shoots. They are the first flowers of the year. The catkins are formed but not shedding yet. The female flowers are swelling and about to produce flame red stigmas that would make them very showy if the flowers weren't so tiny.

After wind-assisted pollination, nuts begin to form as singles, doubles, or sometimes four in a cluster. The nut kernels are covered by a brown shell which in turn is covered by a green, tubular, and leathery calyx which sort of flares at the end. The nuts mature in September-October. They are tasty fresh or roasted. But you will have to compete with Scrub and Stellar's jays, crows, chipmunks, voles, and Douglas' squirrels for them. Chipmunks cache

the nuts underground and are thought to play a role in natural propagation from seed. Native populations coveted the nuts fresh or roasted. They would burn *C. cornuta* stands once every eight years or so to renew the stand and if done in the fall, also roast the nuts and get rid of the shell. The nuts were stored for the winter and some ground into flour. They were also traded to other tribes.

*C. cornuta* is often found on newly logged or sites that have been burned in a forest fire. The roots survive burning and existing shrubs survive cutting to the ground. They sucker from their root systems creating an instant thicket.

Cached nuts also sprout after a disturbance.

Young hazel shoots and leaves are browsed by elk and to a lesser extent, deer. Goats will eat leaves and shoots readily (personal experience) but sheep and cattle aren't fond of them.



Well-dried hazel logs (usually about three inches thick) make excellent, if small, firewood since there are oils in the logs that make them burn quite hot. Gardeners use straight, 1-3 inch hazel shoots for bean and pea poles, support stakes for peppers, dahlias and many other plants, and exotic wattle-style fencing. Native populations made a blue dye from the inner bark, and fish traps, baskets, baby carriers, and rope from the shoots.

Native medicinal uses are not clear but there are some indications the plants were used as a wormer and an emetic.

In a woodland garden, *C. cornuta* can be quite attractive with some thoughtful pruning and thinning. The national champion *C. cornuta* var. *californica* is from Oregon. It stands 27 feet tall, with a canopy 21 feet wide, and a trunk 21 inches thick.

*Photo credit: PCC Environmental Studies Program*

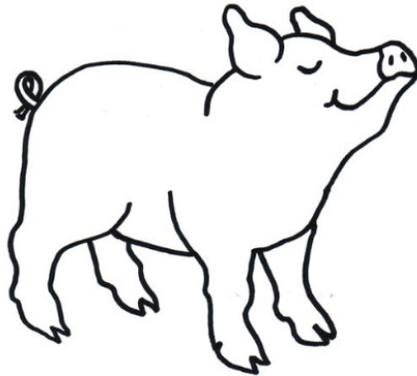
## Farm and livestock notes

### Will hogs (or beef) fed wheat or barley have gluten in their meat?

That was the question that a hog farmer in the community got. It was a new one for me, but I was able to find the answer fairly quickly. Here is the response to the same question from Dr. Ruth MacDonald, Chair and Professor of the Department of Food Science and Human Nutrition at Iowa State University, where they know a thing or two about pork and beef:

*The simple answer is no. The animal converts food*

*proteins into animal proteins by breaking down their structure during digestion (amino acids are separated and then repackaged during metabolism). Therefore, the meat will never contain any consumed proteins in their intact form. Meat, regardless of what the animal is fed, will not contain any gluten. The only way gluten could be in the meat is if the meat has been processed using fillers or if breeding or some other type of preparation is done that adds a product containing gluten. But meat, by itself, is always gluten-free.*



### Hazards from manure gasses

Gases produced during manure decomposition can build up in confined spaces and be released in deadly concentrations removal of bedded-pack manure. Recent deaths of cattle in the Midwest have been attributed to lethal concentrations of hydrogen sulfide gas released during slurry manure agitation. Even more devastating are the losses of human lives resulting from manure gases.

Bedded-pack (“deep-bedded”) barns can be a source of hydrogen sulfide release during clean-out due to the minimal oxygen present in the bedded pack. The use of gypsum for cow bedding in these systems may contribute to greater hydrogen sulfide generation. When cleaning out these types of barns: use large fans or blowers to mix air; open all available doors, windows, and other air inlets/outlets; and consider testing gas concentrations during manure removal to ensure that you or your workers are not exposed to hazardous gas levels. Also ensure your livestock have adequate ventilation when they are in barns for extended periods of time. Ammonia build-up can lead to serious respiratory issues.

### How to Approach Cattle

“Driving” refers to the active process of initiating and maintaining movement in livestock.

Just about everything we do with our cows comes down to driving—whether to summer pasture or back, into the corral, up the alley, onto the scale, through the crowd pen and up the chute, or onto a truck.

First, we need to talk about “approaching” and “starting.” Bud Williams, the originator of the Low-stress Livestock Handling method, said the first point of contact is critical. “Most mistakes are made here,” he said. “Mistakes made here are the worst; they can negatively influence the whole day.”

When most cowboys go out to move cattle they don’t give any thought to how to properly approach them. Usually we rush right out there and approach them head on, often with arm waiving and yelling, or sic the dogs on them. But that’s a mistake. According to Bud: “You need to approach properly so you’re not a threat. Animals can’t handle the emotional part of something coming directly at them to start them.” Why? Because that’s what predators naturally do; they attack straight on. “If we start directly toward an animal, as soon as it starts to feel pressure and we keep coming with that pressure, we get that animal very uneasy, upset, even mad; emotions we don’t want.”

Something else that makes prey animals uncomfortable is when a predator circles them. Bud asks us to imagine a car curving toward us at a high rate of speed. How does that make us feel? Now, compare that to how we feel if that same car is coming in a straight line, but is clearly going to miss us. Obviously, in the first instance, we feel unsettled, even threatened, and it might bother us the rest of the day, whereas in the second instance, we can calculate the car's trajectory and see that it is going to miss us, so we relax.

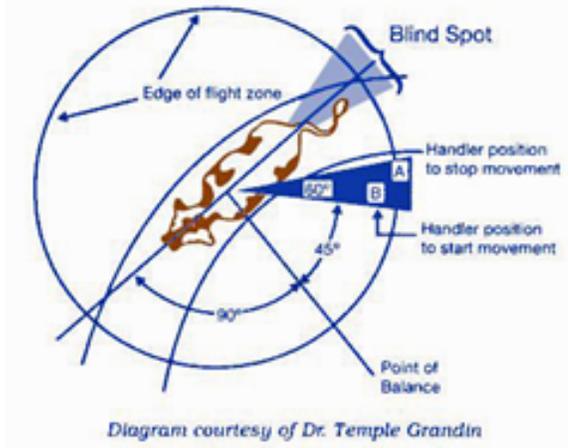
“So it wasn't the car that was bothering you,” Bud observed, “it was its angle of approach, whether it was headed directly at you or whether it would just go past you. So when you approach animals to start them, you want to make sure that the animal does not feel that you are coming directly at it.”

Consequently, it's important not to march straight toward our cattle. Rather, once we get close enough that we might be about to intersect their pressure zone, we need to change our approach to a straight-line oblique angle so the animals think we are going to go on by, as illustrated in the photo on page 26. You can see the person on the right is not going directly toward these cows and calves; rather, he is approaching at a straight-line oblique angle which allows the animals to remain comfortable and not feel threatened. This is important, even with domestic older cows.

This approach is especially important for very sensitive animals or ones that don't know us, like newly acquired cattle or custom-grazed stockers. These animals first need to discover it is okay for us to be around them. Bud advised us to stay quietly outside of their pressure zone

to give them time to size us up, gauge our intentions and show them we aren't aggressive and won't do anything that bothers them. We just wait and let them get used to us being there and relax before progressing.

When the stock are comfortable with us being around—which might only take a few minutes—we can then approach in the straight-lined oblique angle until we intersect their pressure zone.



How do we know we are in their pressure zone? We know it when they first take notice of us and are concerned about our presence. At that point it's important to release pressure by stopping or veering away a little (i.e., changing our angle) before they move off.

If the stock get nervous—even one animal—we need to release pressure so they learn that every pressure has a release and they don't have to bolt to get that release.

So, we approach only to where we feel the animals will move (a signal might be as simple as a head raising up) and then release pressure. This lets them know that we only want to get that close and won't keep coming if it bothers them. Then, we watch for a relaxed look and posture before approaching closer. If we don't do this, wilder cattle might run off to get the release, or cows might feel over-pressured and leave their calves. We need to read the signs the cattle are exhibiting and adjust accordingly before that happens.

Once we've made our approach, found the animals' pressure zone, and they are comfortable with our presence, we can start them.

*Edited from a piece by Whit Hibbard in Drovers online magazine*

## 2017 OSU Master Gardener™ class will be held in Vernonia

The Columbia County/OSU Master Gardener™ training will be held in Vernonia on ten consecutive Tuesdays from about 9:30 am to 3:30 pm starting on **February 21, 2017**.

Do you want to learn more about plants, growing things and gardening? Are you eager to participate in a practical and intensive training program? Do you look forward to sharing your knowledge with people in your area? Do you have time to attend training and to complete volunteer work? If you have answered yes to these questions, check out the Oregon Master Gardener program! **THE CLASS WILL FILL UP FAST - HURRY!**



Registration will be [online](#) this year and the class will be limited to 20 trainees. If you don't have access to a computer or need help registering, please contact the OSU Extension Office in St. Helens at 503 397-3462 or email either Chip Bubl ([chip.bubl@oregonstate.edu](mailto:chip.bubl@oregonstate.edu)) or Vicki Krenz at ([vicki.krenz@oregonstate.edu](mailto:vicki.krenz@oregonstate.edu)). **Please enroll ASAP!**

Cost of the class is \$80; there are a few scholarships available.

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