



# Country Living

Provided to you by the

**OSU Extension Service Columbia County**

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The office will be closed Fridays from Noon to 1 p.m.

Website: <http://extension.oregonstate.edu/columbia/>

## March 2016

## Programs for you . . .

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

- Mar. 1 ..... Scappoose Bay Watershed Council. 7 p.m., 57420-2 Old Portland Rd., Warren
- Mar. 3 ..... Demonstration Garden and other MG Extension Projects Planning Meeting. 10 a.m., OSU Extension Classroom, St. Helens
- Mar. 3 ..... Master Gardener™ Board Meeting. 10:30 a.m., OSU Extension Classroom, St. Helens
- Mar. 8 ..... Lower Columbia Watershed Council. 7 p.m., SWCD office-35285 Millard Rd., St. Helens
- Mar. 12 ..... Pruning Demonstration. 10 a.m. to Noon, Master Gardener Demo Garden, Columbia County Event Complex. See back cover for details. Public welcome!
- Mar. 12 ..... Tree Sale - Columbia County Small Woodlands Association. 8:30 a.m., Lawrence Oil, St. Helens - Arrive early for best selections!
- Mar. 16 ..... Soil & Water Conservation District. 7:30 p.m., SWCD office-35285 Millard Rd., St. Helens
- Mar. 24 ..... Master Gardener™ Chapter Meeting. 6:30 p.m. Speaker will be **Paul Ries**, "How to Recognize and Prevent Hazard Trees," OSU Extension Classroom, St. Helens. **The public is invited. Free.**
- Mar. 24 ..... Upper Nehalem Watershed Council. 7 p.m., Vernonia Grange, <http://nehalem.org/> 503-429-0869
- Apr 2 & 3 ..... 2016 Columbia County Home and Garden Show. Columbia County Fairgrounds, St. Helens. Educational presentations by our Master Gardeners. See back cover for details. **Free tickets available soon.** <https://www.shcu.org/home-garden-show/>
- Apr. 30 ..... 21<sup>st</sup> Annual Spring Garden Fair. Sponsored by Columbia County Master Gardeners™. 9 a.m. to 3 p.m. St. Helens High School. Over 5,000 tomato plants from 30 varieties at \$1.50 a plant.
- Apr. 30 ..... NW Regional Sheep Forum. North Willamette Research Extension Center. More info TBA



*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 Row covers available again!

The interest in row covers continues to increase. For those of you that missed the buzz, row covers are made from a



gauzy fabric. They come in six-foot widths and, when we cut the roll, in lengths of 50 or 100 feet. Row covers are used in vegetable production on farms and

home gardens.

They serve several purposes:

Covers increase temperatures around transplants and growing plants by 4-6 degrees during the day and 3-4 degrees at night.



This is valuable heat in the spring and fall.

Seeds planted

under row covers aren't seen by crows.

Soils warm with the covers but don't crust, so seed emergence is faster and more even. Covers can be left with enough slack so that broccoli-sized plants can grow tall underneath them.

Covers can keep insects out like carrot rust flies and cabbage root maggots. However, slugs prosper under covers so slug controls are needed. Weeds also like it under cover, so persistent weeding pays.

In 2015, we sold, in 50 or 100 foot pieces, about a mile (!! ) of cover. This year we are selling one ounce covers like last year. Cost is \$20 for a 6 x 100' piece or \$10 for a 50' one. The benefit of the heavier piece is that

there is a little better heat retention and the fabric is stronger and less likely to rip. You cut them down further to fit your gardening needs. Call our office (503 397-3462) if you want some. It went fast in previous years.

## Lawn renovation without tilling

Many lawns in the St. Helens area are not looking well. Other areas of the county are also have their share of poor lawns. Moss has exploded and grass is responding slowly, if at all to fall or spring rains or warmer temperatures. The emerging consensus is that lawns planted over basalt, a common practice in St. Helens, dried out so profoundly that they died in last summer's drought and heat. Drought damage can also occur on clay soils. Complicating this diagnosis is the surprise fall appearance of the winter cutworm (which feeds in armies at night) that may have contributed to lawn destruction. At this point, if there is no lawn coming back, it probably won't return on its own.

Homeowners have several options:

- Clean up the existing lawn area of weeds and moss and plan to over-seed the area, without tilling, in April or May;
- Rework the lawn area completely with a roto-tiller, adding lime in the process, and then seed;
- Convert all or a portion of the lawn area to a non-grass use, vegetable and/or fruit gardens, ornamental shrubs, trees, and flowers, or a combination of all.

This article will focus on lawn renovation without tillage. First, it is too early to plant lawn seed and too wet to do much to the area you intend to over-seed. But a stretch of dry days and an optimistic forecast over the next 2-3 months should give you the opportunity to renew your lawn. Early May is often the best time to seed in the spring.

Here are the steps that need to be taken:

- Use a non-selective herbicide like glyphosate (Roundup and other trade names) to kill any perennial grass or broadleaf weeds growing. This may need to be repeated several times.

Use a moss control material to eliminate the moss.

This technique will not eliminate all grass that you didn't plant from returning by seed nor will it keep broadleaf weed seed from germinating but it will reduce

established perennial species.

- If the soil was already compressed by activity on the lawn when it was wet, rent a soil coring tool and pull cores from your lawn to improve aeration. You can do this before dethatching but don't do it when the soil is too wet. You don't want to make compaction worse.
- Mow the lawn or what is left of it as short as possible and remove the clippings. Rent a thatcher and dethatch the dead material down to the dirt. Remove all the material. Do this when the soil has dried enough that you won't compress it with the weight of your feet and the dethatcher. If you compress wet soil, you will lower your chance of success. Dethatching is best done shortly before you plan to re-seed.
- Apply lime to the surface at the rate of about 75 pounds per 1000 square feet.
- Scratch the soil surface.
- Over-seed at the recommended rate.



Seed your new lawn twice for the best results, applying half the seed each time in different directions.

You can cover the seed with a thin covering (1/8-1/4 inch at most) of fine peat moss or other fine textured mulch with a mulch roller (available to rent). If you apply mulch too thickly, you might keep the grass from germinating.

- Keep the newly seed lawn watered as it is getting established.
  - Fertilize the lawn at about 4 weeks with a half rate of lawn fertilizer.
  - Manage broadleaf weeds by hand and/or with a lawn herbicide once the grass is well established.

For more detailed information, see the excellent OSU publication entitled *Practical Lawn Establishment and Renovation* EC 1550 on line.

## Starting potatoes

Potatoes are one of the more productive garden crops. They prefer sandy or sandy loam soils in full sun but will do well in somewhat heavier clay soils if the ground has decent organic matter content and has been well spaded. Potato plots can be lightly limed. The potatoes like some lime but so does potato scab so lime with a light hand – no more than 50 pounds per 1000 square feet.

If field mice (voles) have been a problem, roto-tilling both the plot and the perimeter adjacent to the plot will reduce vole access to your spuds.



There are some good scab resistant potatoes available including the russet types, Red Norland, some of the fingerlings, and others. The OSU list of recommended varieties beyond the ones mentioned above include: Yellow flesh

types: Yellow Finn, Yukon Gold, Bintje, Carola, Desiree and Red Gold (yellow flesh); Red-skin types: Red Pontiac, Red La Soda, Cranberry Red and Red Gold; and recommended white potatoes are Russet Burbank, Superior, Gold Rush, Butte and Kennebec.

Dusting the seed pieces with sulfur dust and putting some more in the row around the potatoes at planting will further reduce scab. So will rotation of where you plant potatoes from year to year.

Potato “seed” are generally golf-ball sized cut pieces of a potato with at least two eyes. Some people plant them right away; others hold the cut pieces in a dry, warm place for a few days to heal over the cut surface (this is called suberization) to reduce rotting when they are planted. Some gardeners and farmers prefer smaller seed potatoes that are already golf-ball size and don’t need to be cut. Use certified seed potatoes for your planting stock if possible.

Potatoes should be planted four to six inches deep, about 12 inches apart, in rows about three feet apart. Fifty to 100 feet of row should feed a family of four with some for winter storage.

There is a technique called “green-sprouting” that is being picked up by both gardeners and farmers alike. It is a



process that gets the potatoes off to a head start and generally produces more potatoes per plant. It has been especially useful in short season locations like Maine but will be valuable to any home gardener.

Green-sprouting starts by warming the seed potatoes in a room that is warm (70-75 degrees) and dark. Layer the potatoes on a tray or bin only two potatoes thick. This treatment helps break dormancy and will generally cause more eyes to “break”. Once the eyes are 1/8<sup>th</sup> to 1/4<sup>th</sup> inch tall, bring the potatoes into a cool space (50-55 degrees) with natural light or plant light. The shoots will strengthen and thicken and turn a purplish green.

At this point, they can be planted at the same spacing noted above. Care in planting to maintain the sprouts is important though growers report that broken sprouts will come back to produce a good canopy of leaves anyway. For more information on this technique, go to <http://www.highmowingseeds.com/blog/jumpstarting-spring-how-to-greensprout-potatoes/> or <http://www.mofga.org/Publications/MaineOrganicFarmerGardener/Spring2007/GreensproutingPotatoes/tabid/706/Default.aspx>



Hill the canopy to keep the potatoes from greening up as they form. Water your crop consistently for best results. Potatoes use quite a bit of water. Harvest when the tops start to die back. Some “new” potatoes can be harvested as the crop is progressing. Most potatoes are ready 60-80 days after emergence depending on variety.



## *That's the Way it Grows*

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### **Fungus Amongus**

It's pretty muddy out there. All the rain has made a mess of the soil everywhere. I am very glad that I covered my garden. I don't foresee uncovering it anytime soon, at least until there is a heck of a lot more sunshine in the forecast. Turning or working the soil in wet conditions would make a mess of the soil structure. Tilling at all while it's this wet would absolutely destroy the soil.

So I've been concentrating on pruning my dozen fruit trees. My Valentine's Day present was a pole saw/pruner. I asked for one, so that's what he gave me. So far, it's been a really useful gift. It has a shark-toothed saw and a beefy bypass pruning blade with a chain-pully. It makes short work of the sucker growth.

I've been using the pole saw to top the fast-growing cherries and my semi-dwarf peach. It's gotten difficult to climb up into the trees, especially the cherries. And with mud boots on, it's even harder.

While working on the peach tree recently, I found what I think is damage due to the fungal disease anthracnose.

Anthracnose is caused by multiple strains of fungi that thrive in warm, wet weather. Sounds like fall here in the Pacific Northwest. The fungus can affect many kinds of trees, including apple and stone fruit, oak and ash. Other plants it infects include euonymus, strawberry, ivy, lettuce, tomatoes, peppers and eggplant. Rotating crops in the vegetable garden can help, since the fungus can live in the soil.

Overhead watering can make the problem worse, as fungal spores can splash onto leaves.

In fruit trees, anthracnose appears as circular cankers on branches and even limbs and trunks. Infection occurs in the fall, when rains carry the fungal spores to branches and

maturing fruit. Cankers develop. Fruit can be affected. On apples, for example, darkened circles appear, surrounding a center containing the fungal fruiting body. Hence the nickname, "Bull's Eye Rot."

The fungus can penetrate uninjured bark. It leaves a darkened circular sunken area, with the bark stringy or missing. It is best to prune the damage out, and burn it or haul it away. Do not put the cuttings in your compost.

The best time to prune out the cankers is in the fall, before the wet weather begins, when the fungal spores will release and cause more infection.

Aggressive pruning of the cankers is really important for long-term control. Copper sulfate can be sprayed before rains start, and again when leaves fall. Good coverage is very important.

I'm disappointed to find out that lime sulfur fungicide may be hard to find these days. According to the Pacific Northwest Plant Disease Handbook, most of the home-targeted products in small packages are no longer available. So, the homeowner sizes are going to be difficult, if not impossible, to find. My peach tree really needs this stuff to stave off the peach leaf curl. There are alternative products. I can also check small feed and seed stores that may still have a dusty bottle of lime sulfur on the back of a shelf.

For more information on fungicides, visit <http://pnwhandbooks.org/plantdisease/pesticide-articles/fungicides-disease-control-home-landscape>

I hope you are enjoying the lengthening days and getting outside. The sun will return!

*Lisa M. Long  
Columbia County Master Gardener™  
Free gardening ebooks at:  
Smashwords.com/profile/view/LisaMarieLong*

# MARCH

## 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.

### Planning

- Plan the vegetable garden carefully for spring, summer, and fall vegetables that can be eaten fresh or preserved. If you lack in-ground gardening space, plan an outdoor container garden.
- Use a soil thermometer to help you know when to plant vegetables. Some cool season crops (onions, kale, lettuce, spinach) can be planted when the soil is consistently at or above 40°F.

### Maintenance and Clean Up

- Lawn mowing: set blade at 0.75 to 1 inch for bentgrass lawns; 1.5 to 2.5 inches for bluegrasses, fine fescues, and ryegrasses.
- Compost grass clippings and yard waste, except for clippings from lawns where weed-and-feed products or herbicides (weed killers) have been used.
- Spread compost over garden and landscape areas.
- Prune gooseberries and currants; fertilize with manure or a complete fertilizer.
- Fertilize evergreen shrubs and trees, only if needed. If established and healthy, their nutrient needs should be minimal.
- If needed, fertilize rhododendrons, camellias, azaleas with acid-type fertilizer. If established and healthy, their nutrient needs should be minimal.
- Prune spring-flowering shrubs after blossoms fade.
- Fertilize caneberrries (broadcast or band a complete fertilizer or manure).

### Planting/Propagation

- Divide hosta, daylilies, and mums.
- Use stored scion wood to graft fruit and ornamental trees.
- Plant insectary plants (e.g. Alyssum, Phacelia, coriander, candytuft, sunflower, yarrow, dill) to attract beneficial insects to the garden. See PNW550 (Encouraging Beneficial Insects in Your Garden) for more information.
- If soil is dry enough, prepare vegetable garden and plant early cool-season crops (carrots, beets, broccoli, leeks, parsley, chives, rhubarb, peas, radish). Plant onions outdoors as soon as the soil is dry enough to work. Plant berry crops (strawberries, raspberries, blueberries, blackberries, currants, gooseberries, and other berry-producing crop plants). See OSU Extension publications for varieties.

### Pest Monitoring and Management

- Monitor landscape plants for problems. Don't treat unless a problem is identified.
- Spray trees and shrubs for webworms and leafrollers, if present.
- Protect new plant growth from slugs. Lest toxic management options include barriers and traps. Baits are also available for slug control; iron phosphate baits are safe to use around pets. Read and follow all label directions prior to using baits, or any other chemical control.
- Learn to identify the predatory insects that can help to keep aphids and other pests under control.
- Spray to control leaf and twig fungus diseases in dogwood, sycamore, hawthorn, and willow trees.
- Prune ornamentals for air circulation and to help prevent fungus diseases.
- Monitor for European crane fly and treat lawns if damage has been verified.
- Start rose blackspot control tactics at budbreak. Control rose diseases such as black spot. Remove infected leaves. Spray as necessary with registered fungicide.

### Houseplants and Indoor Gardening

- Trim or shear heather when bloom period is finished.
- Start tuberous begonias indoors.
- Take geraniums, begonias, and fuchsias from storage. Water and fertilize. Cut back if necessary. Move outdoors next month.



## Farm and livestock notes

### How to assess pasture condition

Many pastures were damaged by the very dry summer, winter cutworms, and/or overgrazing. A number of people have reported a dramatic increase in the amount of moss covering the ground. As temperatures are starting to warm, grass growth should be picking up. If you don't see much grass growth or are not seeing much grass at all in the next several weeks, your pasture may be in real trouble.

Walk your field carefully. Some parts may be ok and others in need of help. If there is quite a bit of grass but more moss than usual, fertilizing the pasture with ammonium sulfate at the rate of about 275 pounds per acre can stimulate the grass and also damage some of the moss. If grass is there but growth is weak and moss isn't a problem, fertilize with about 100 pounds of urea (46-0-0). Some grasses, especially bentgrass, don't respond as much to fertilizing but with crowns weakened after the drought, it might still be worth it. Try to have fertilizing done by early April. Avoid heavy grazing on weakened pastures. Give the grass time to recover.

If you need to reseed and there is a lot of moss, disking the pasture several times is probably your best bet. Broadcasting pasture seed is rarely successful if the seed can't have good soil/seed contact due to moss and/or old grass stubble. Seeding can be done when temperatures are hitting 60° or more over several days and weather is forecast to be good, with some rain, after you seed. Use high seeding rates (35-40 pounds per acre) since less than ideal pasture preparation often

results in spotty stands at lower seeding rates. Fertilize with either urea or a blended N-P-K product if you are planting a grass/legume mix about four weeks after grass starts to emerge.

Don't graze at all until the grass is well established and the ground is firm and then only lightly.

An alternative to seeding grass this spring is to disk the field, broadcast spring oats, and harrow them in. Fertilize with nitrogen about a month or less after emergence when the ground is firm enough. The spring oats can give you a good crop of hay and the pasture can be seeded in the fall. Usually there are fewer broadleaf weeds in the fall that might compete with your pasture seeding.

### Winter mold on hay

This has been a very moist winter in the northwest corner of Oregon. We have had punishing rainstorms and days where fog and mist just lingered. Total rainfall in St. Helens is about 50% above normal for this time of year.



All this moisture can cause mold to grow on hay bales stacked in barns, especially those where hay was stacked next to an open side. This hay came into the barn in good

condition but now has a coating of gray to bluish-gray mold. The mold can be brushed or washed off to a degree but evidence of the mold growth can't be completely eliminated. When you open a bale, usually the mold hasn't penetrated more than an inch at most into the bale. Succulent hays like alfalfa are the first to show symptoms. The damage perhaps could have been slowed or prevented by covering the more exposed hay with a tight tarp.

So how safe is moldy hay? There are two issues of concern. First is the respiratory impact of the mold spores on your animals and possibly yourself.

These spores can be inhaled as the hay is being put out or when the animals consume it. If the hay is misted before feeding, the spores are less likely to be inhaled. Still, caution with farm handling of the hay is advised. Horses seem especially sensitive to mold spores in their lungs and they shouldn't be fed moldy hay at all. But sheep and cattle can also develop respiratory issues if fed lots of moldy hay.



The more serious problem is the possibility of mycotoxins (toxins produced by fungi) present in the hay. However, it must be noted that few fungi found on hay commonly produce detectable quantities of mycotoxins. An OSU Extension livestock agent from the Willamette valley has sent in a number of these “winter mold” samples over the years and has not yet got back a result with a mycotoxin load. However, that doesn't eliminate the possibility. If you are concerned, you can get a mycotoxin panel test from Dairy One Forage laboratory for \$69 (<http://dairyone.com/analytical-services/feed-and-forage/services-and-pricing/> ). I can lend you a hay coring tool so you can take a good representative sample.

Several other alternatives exist. Since the molds are on the outside of the bale, you can try to remove that portion and feed the rest. Pregnant horses, goats and sheep are most at risk for mycotoxin injury and probably should get the hay bales from inside the stack that usually don't have the mold. Sheep can be fed the more questionable bales after they have

lambled. Cattle seem generally more resistant to molds assuming that it is surface mold only. I want to reiterate that this discussion is

about hay that came into the barn without mold (i.e, it wasn't baled wet) and acquired the veneer of mold on the outside over the winter. Hay moldy through and through is another discussion entirely, although the same issues are still present, just ramped up in intensity.

For more information and especially a discussion of symptoms and feeding behaviors with mycotoxin contaminated feeds, there is a very informative publication at <http://polk.uwex.edu/agriculture/crops-and-soils/moldy-hay/>

## **Grass-fed labeling standard dumped**

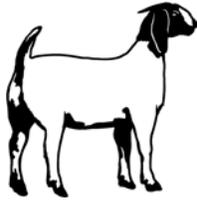
There is a building consumer demand for grass-fed beef and milk products. Part of the interest is the difference in the fat composition of grass fed animals. The fats are thought to be less likely to clog arteries.

In recognition of that demand, USDA developed a “grass-fed” standard in cooperation with farm, livestock and consumer groups in 2006. The standard required that to be sold as grass-fed, 99% or more of the energy in feed (after weaning) had to come from grass, roughage legumes like clovers and alfalfa, and other non-grain feedstocks.

Apparently, the standard was challenging to enforce. In fact, one part of USDA that wrote the standard couldn't agree with another part of USDA that enforced the standard what the standard meant. This led to USDA's decision to wash their hands of the whole thing.

## Market for meat goats

The market for meat goats has continued to rise but herds of meat goats have not kept pace with that demand. In part, that has been due to the reduction, both in Oregon and across the United States, in places that meat goats could be slaughtered with USDA inspection. Some of that market gap has been covered by imports of frozen product from Australia and New Zealand. Yet many consumers of meat goats prefer a fresh product. In fact, there is a thriving live goat demand in most major cities on the west and east coasts. Most are purchased directly from the farmer by the end consumer or from a broker who has retail contacts with the ethnic communities (Middle Eastern, Hispanic, and SE Asian are the most active) that want live goats.



A study at Michigan State University estimated that the U.S. could support a breeding herd of about 15 million meat goats but currently, the herd stands at about 2 million.. Some common breeds are Boer and Kiko goats. Dairy goat herds are often bred to meat goat bucks to increase the value of the male offspring that are generally sold for meat.

The price for a meat goat kid (70-90+ pounds per head) at auction or at farm direct live sale has been hovering between \$175 – 250 per head for several years now. Improvement in USDA slaughter options would have a great impact on both meat goat and lamb farm direct markets.

Given the efficient reproductive capacity of goats (averaging about 2 kids per year per doe) the income looks decent if economic feed resources could be found and if losses to disease, coyotes, and other predators could be kept down. Goats can fit nicely into mixed species grazing because they prefer to browse the brush and blackberries that cattle tend to

pass on. However, cattle fencing will generally not keep goats confined unless it is retrofitted with some interior hot wires to deter testing by the goats.

Perhaps the best forage opportunities for feeding meat goats in Columbia County are the thousands of acres of unfenced power line right of ways maintained by BPA and PGE. Most have mixes of low browse that would be of sufficient quality to support grazing goatherds. It might be possible to be paid for grazing the areas to control weeds. But herding under those miles of electrical wire would be complex. First, private owners of those lands would have to agree to a grazing project. The herd would have to be protected at night from predators and a herder would need to manage the herd to keep them from straying onto private property beyond the powerline easement. The herder would need to be supplied with food and water and a place to sleep and cook. Good herd dogs would make life easier for everyone.

The doe herd is moved to the farm for the winter (most of the kids would have been sold by then) and offered high quality hay and a dry place to sleep for ~5 months.

## Grass tetany follow-up

A local farmer reported that he keeps molasses/magnesium (mol-mag) and salt blocks available to his cattle year round. They generally ignore the mag blocks until New Year when they start consuming them with vigor. They are fed excellent hay throughout the winter and have some modest access to pasture. This rapid increase in magnesium consumption is important as calving gets closer and the spring grass growth is lush but magnesium diluted. The colder weather might, by itself, encourage molasses consumption but using that demand to stock their systems with magnesium makes great sense. This timing information is very interesting to me.



## Columbia County Small Woodlands Association 18<sup>th</sup> Annual Tree Seedling Sale Saturday, March 12<sup>th</sup>

8:30 a.m. to 1:30 p.m.- PACIFIC PRIDE Lawrence Oil parking lot, 845 N. Columbia River Hwy, St. Helens  
**AVAILABLE SPECIES:** *“Elite” Douglas fir\**, *Noble fir\**, *Western red cedar\** *Giant sequoia*, *American hornbeam*,  
*White fringe tree*, *Red flowering currant*, *Lilac (tiny dancer)*, *Western hemlock*, *Japanese pagoda dogwood*, *Coastal redwood*, *Sweet gum*, *Sourwood*, *Camellia (stewartia pseudo)*, *Carolina silverbell*, *Witch hazel*, *Ponderosa pine*,  
*Incense cedar*, *Katsura tree*, *Sweet bay magnolia*, *Tea crab apple*, and *Golden chain tree* (\*=bag quantity limited).  
Be sure to arrive EARLY for BEST selections. For more info: (503) 397- 5997, (503) 556-8800, or (503) 369-9592.  
 Proceeds support CCSWA Educational Programs for Columbia County students and teachers.

### Pruning workshop on March 12<sup>th</sup>

The Columbia County Master Gardeners™ are putting on a pruning workshop on March 12<sup>th</sup> from 10 a.m. to Noon at the Columbia County Fairgrounds. Topics covered will include pruning fruit trees, small fruits including grapes, roses, and other woody plants. There will be a brief discussion about fruit tree diseases and insects. **The event is free and open to the public.** Dress for the weather and bring pruning tools if so inclined.

### 2016 Columbia County Home & Garden Show – April 2 & 3 Columbia County Fairgrounds, St. Helens

Our Master Gardeners will be presenting 10-15 minute workshops at the top of every hour: Saturday, April 2. classes: unusual fruits for the home garden, dragonflies, hardy fuchsias, deer resistant plants, succulents, irises-goddess of the rainbow, bee gardens; and Sunday, April 3 classes: living herbs, hops, microgreens, mason bees. Complimentary tickets available at the *St. Helens Community Federal Credit Union (any branch)* or *download your free tickets from the web.*

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