



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 2015

Programs for you . . .

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

- Mar. 3 **Scappoose Bay Watershed Council.** 7 p.m., Scappoose Bay Watershed Council's office, Warren
- Mar. 5 **Demonstration Garden and other MG Extension Projects Planning Meeting.** 10 a.m., OSU Extension Classroom, St. Helens
- Mar. 5 **Master Gardener™ Board Meeting.** 10:30 a.m., OSU Extension Classroom, St. Helens
- Mar. 10 **Lower Columbia Watershed Council.** 7 p.m., SWCD office-35285 Millard Rd., St. Helens. Speaker: Doug Hatch, Senior Fishery Scientist with the Columbia River Inter-Tribal Fish Commission, will talk about Pinnipeds in the Columbia River. The public is welcome.
- Mar. 14 **17th Annual Tree Seedling Sale - Columbia County Small Woodlands Association.** 8:30 a.m.-1:30 p.m., Lawrence Oil, St. Helens - Arrive early for best selections! See back page for details
- Mar. 18 **Soil & Water Conservation District.** 7:30 p.m., SWCD office-35285 Millard Rd., St. Helens
- Mar. 21 & 22 **2015 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. PLUS the Annual Pruning Demonstration on March 21st.**
- Mar. 26 **Master Gardener™ Chapter Meeting.** 6:30 p.m. Speaker will be Andy Stockton, "Hebes," OSU Extension Classroom, St. Helens. **The public is invited. Free.**
- Mar. 26 **Upper Nehalem Watershed Council.** 7 p.m., Vernonia Grange, <http://nehalem.org/> 503-429-0869
- Apr. 25 **20th Annual Spring Garden Fair.** 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.



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

Climate change and gardening

Gardeners got a first hand look at climate change when the USDA released their new plant hardiness map in 2012. These maps are updated periodically and are based on the last 15 years of weather data for each area. Columbia County is now listed as a zone 8a for south county and a zone 8b for Clatskanie. St. Helens used to be zone 7b. Higher numbers reflect higher winter low temperatures. They are now planting corn for dairy silage in Tillamook. Until recently, it wouldn't reliably mature.

What else might we see as the climate changes in Columbia County? Here are some possible scenarios:

☐ Plants will bloom earlier. This may affect fruit set if frosts are still possible. On native and/or cultivated plants, it may affect pollinator activity if their timing is off relative to blooms. It might also affect insect pests of fruit crops either by having more generations and/or fewer predators. Or it could go the other way and we might have reduced pests and more predators.

☐ If summers are hotter and drier, it will affect our choice of trees to plant. They will need to be more drought tolerant and potentially more fire resistant. Home watering restrictions in parts of California are already affecting the types of trees that they are purchasing from our wholesale nursery growers. One scientist concerned about bird species that feed on caterpillars is suggesting that we plant trees that harbor lots of caterpillars (like oaks) and avoid those that don't. He also suggests more diversity. Lists are being developed for each

region. Foresters on state and federal timber projects are beginning to hedge their bets by planting different trees (or the same trees from seed zones that are warmer and drier) that may be more adapted to a warmer and drier summer pattern.

☐ Water will be the defining variable as climate change proceeds. Warmer climates with good rainfall will tend to support more species and crops. Drier climates are harsher and more challenging for wildlife, farmers, and gardeners alike. We have always known

that we have to water most of our summer crops and gardens. But a ten-inch reduction in annual rainfall (a future that has been predicted) will lower water tables, reduce stream flows, require greater water use on crops and gardens, and increase fire danger. Domestic and/or farm wells may dry up. Some

of the larger rural drinking water systems might also be at risk. The communities along the Columbia River get their water from the river. That source should be reliable. But the Vernonia area could have real challenges.

☐ By adding composts to soils in the landscape and the vegetable garden, you improve water-holding capacity in the summer. This is a good long-term investment. Especially as city metered water rates rise. And compost effectively fixes carbon in place rather than releasing it into the air as carbon dioxide.

☐ Many weeds seem to grow faster in CO₂ enriched environments. Some herbicides may be less effective in the same scenario.

☐ Future newsletters will have more on these topics.



Are they moles or gophers?

Columbia County has two mound building animals. Of the two, moles are much more common. In fact, it is rare that I see evidence of pocket gophers until I get up on top of Dixie Mountain on the Multnomah/Columbia line. But if you travel south from there down into the Hillsboro area, gopher numbers go up significantly.

Gophers do direct damage to plants. They are rodents who eat plants for a living. Moles, on the other hand, eat mainly grubs and earthworms. They may do a little plant damage but most of the damage blamed on moles is a result of field mice (or voles) using the mole runways and eating plants.

The mounds made by both species are different. Gophers make a somewhat

crescent shaped mound with a plugged hole in the center. Moles make a “volcanic” mound, more

rounded and generally taller.

It is important to know which species you have since both cause different types of injury to your landscape. Gophers are the most serious pest. They can be trapped, baited, or gassed. Read and follow all label instructions. Moles, on the other hand, are hard to bait and harder to gas. Trapping has always been the most effective approach.

You can construct raised beds with plastic coated 1/2 inch mesh wire or fiberglass hardware cloth underneath the bed. This will keep out moles, though the jury is out on how effective this is on gophers.

Basic gardening advice

Don't rototill the soil too early. Most Columbia County gardeners have clay-based soils. If you till when the soil is too wet (when you dig a handful and squeeze it together, it stays in a tight ball) you will destroy soil structure and create miserable clods to boot. However, this year may allow tillage much earlier than normal due to the recent warm, dry weather.

Cover fine seeded crop and flower seeds with row covers or potting soil to prevent soil crusting. Clay soils form crusts after they have been tilled and planted when rain or irrigation hits them. Small seeded crops like carrots and beets can't break through the crust and they die before they can get to the sun. Sand, peat moss, or potting soil won't crust.

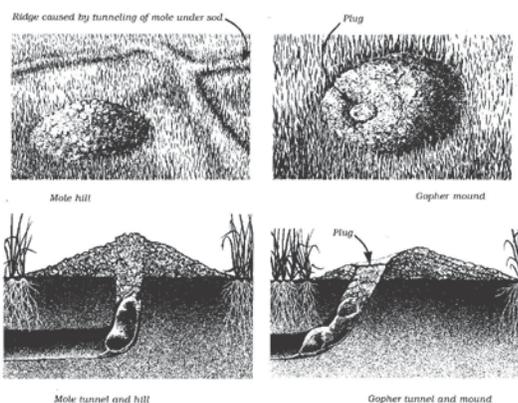
Dogwood anthracnose

Dogwood anthracnose is a springtime disease. The fungus spreads in warm and wet weather after the dogwood leaves have emerged. Infected leaves get brown splotches along the edges and wood infections can girdle small twigs. A sure sign that you had the disease last year are leaves that are still hanging on.

One disease management approach is to improve air circulation. Prune out some of the twiggy growth common to dogwoods. In addition, remove other plants or plant limbs in the area that reduce air flow.

Fungicides have had limited effect on this disease. The best options appear to be daconil or copper sprays. These could be applied now and later as the leaves grow in the spring.

Perhaps the best answer is to plant some of the resistant dogwood varieties like *Cornus kousa* or *C. kousa* x *nutalli* cultivars.





That's the Way it Grows

Bulbs Already Blooming

All of the sunshine recently has been wonderful. I relish its warmth after winter's grayness. I definitely feel less stressed and happier when it's sunny. I stand in the sun and turn my face to it and soak it up. I've started acting like a plant, I guess.



With the mild winter, and all this sunshine, my little tête-a-tête narcissus are blooming. I see them in bloom all around, along with crocus. Soon, the tulips and daffodils that have already emerged will be blooming, as well as the beautiful masses of wild Camas.

As blooms fade, deadhead to encourage more blooms, as you would any flowering plant. Too soon, the blooming will stop and foliage will be left to wither to the ground. It really is best to leave the foliage until it has died back to the ground. It feeds the bulbs, which need to fatten for next year's blooms.

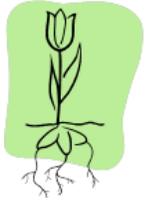
If you want to fertilize your bulbs, the best time is right after they have bloomed. A low Nitrogen fertilizer is better, such as 5-10-5.

Summer-flowering bulbs can be planted right after the frost-free date, but with this mild winter, I think they could be planted any time now. You can fertilize them lightly at planting by scratching in some bulb-boosting formula, or bone meal.

Easter lilies can be planted in the garden after they have died back in their festive pots. I planted one a few years back and it continues to get bigger and have more blooms each year. The foliage is really

interesting in the landscape, too.

Digging and dividing doesn't need to be done each year, only when the bulbs become crowded or if bloom is reduced. I find that my container-grown bulbs need to be planted in the landscape either the first or second year, or they just don't perform well.



Right now, you could get away with digging up your gladiolas and moving them, before they begin to grow. If you left the foliage, or just cut it back, they will be easy to find by the dried stalks. Just remember to plant them right side up.

Plant Your Strawberries!

I just planted my new strawberry patch, and I'm excited for homegrown strawberries again this summer!

Strawberries naturally decline after a few years of production, and patches need replanting, or repopulating with runner plants. This time, I planted in a raised bed for easier picking and maintenance. Since I used my favorite garden mulch, the soil is nice and loose to promote the runners to root.



Another bonus of the raised bed is the strawberry plants will not outgrow their area. As long as I keep the runners from spilling over the sides, they won't spread. Happy planting at last!

—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 caneberries (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. Least 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.





The Grapevine
 News for Columbia County Master Gardeners™
www.columbiacountymastergardeners.org
March 2015



Deadline for THE GRAPEVINE - All materials will need to be into the OSU Extension office no later than the 20th of each month.

Certificates Awarded

Certificates for those completing the required hours were: *Sue Hart, Kurt Kimsey, Pat LaPointe, Leo Mock, Dorinne Pedersen and Lauren Trank.*

Awards of Appreciation went to Linnton Feed and Seed.

Master Gardener of the Year for 2014 was presented to *Deb Brimacombe*. BeJewelled Award to *Kit Gardes and Linda Bainbridge* and Behind the Scenes Award to *Wes Bevans*.

Congratulations to all of you. With all of your hard work and efforts we are able to not only have a successful chapter but make a positive impact in our communities. Thank you.

Dues are Due!

Make your \$10 check payable to CCMGA. Then turn them in at the next chapter meeting or drop them off at the extension office.

Remember to let me know if your contact information has changed.

You must have dues paid by March 31st to be included in the 2015 roster.

--Peggy Crisp, treasurer; pegcrisp@gmail.com

Calling All Master Gardeners

Raffle tickets are now available for the Columbia County Master Gardener Annual Spring Fair to be held April 25 at the St. Helens High School from 9:00 a.m. to 3:00 p.m. Just \$1.00 each for a chance to win some terrific prizes, including plants, planters, potting table, fertilizers and tomato cages. Check out a few bundles of tickets to offer to gardener friends. Tickets are available at Chapter meetings, Extension Office and by calling Debbie Broberg at 503-366-7850.



Calendar: At-A-Glance

- || Mar. 5.. Demonstration Garden and other MG Extension Projects Planning meeting, 10 a.m., Extension office
- || Mar. 5.. Board Meeting, 10:30 a.m. Extension office
- || Mar. 21&22 Columbia County Home & Garden Show, Columbia County Fairgrounds – see back page
- || Mar. 26. Chapter Meeting, 6:30 p.m., Speaker: *Andy Stockton*, “Hebe’s”, OSU Extension Classroom, St. Helens (Andy comes from Joycreek Nursery and will speak to us on Hebe's. Hebes are wonderful small evergreen shrubs from New Zealand. They provide a wide array of texture and color for any garden. They have garnered a bad reputation for dying in the winter, which can happen, but there are many ways to avoid that though proper plant choice and placement. We will look at varieties that thrive in the Northwest and techniques for keeping the trickier ones alive.)

**Master Gardeners Contacts
Officers for 2015**

<u>Title</u>	<u>Name</u>
President	Wes Bevans
Vice President.....	Joe Crisp
Past President.....	Dennis Snyder
Secretary	Susan Snyder
Treasurer	Peg Crisp
Historian	Lavina Patterson
OMGA Rep.....	Chuck Petersen
OMGA Alt. Rep.....	Deb Broberg
Demo Garden.....	Linda Bainbridge
.....	Mary Newell-Dickenson
Spring Fair	Kathy Johnson
CCMG website: www.columbiacountymastergardeners.org	
Webmaster	Larry Byrum
OSU Extension Service:	
Extension Faculty	Chip Bubl
Secretary	Vicki Krenz
Guide to Plant Disease Control:	
OSU	http://plant-disease.ippc.orst.edu

Living with beavers (part two)

In last month's article on beavers, I noted the important role beavers have in our natural landscape. But beavers readily take down landscape trees and shrubs, plug culverts, and flood portions of property that used to be dry. This strains the tolerance of many landowners. What are some options to help us co-exist with beavers?

First, many of our riparian restoration projects are of fairly limited scope along streams. We often plant cottonwoods, willows, Douglas spirea (hardhack), and red osier dogwoods on the stream edge to stabilize banks. These are favorite foods for beaver and while they readily re-sprout after being chewed down, over time, they may be eliminated if overbrowsed. Part of the answer is planting lots more of the preferred foods over a wider area. If landowners can cooperate to install these plants in longer and denser patches on multiple ownerships, over grazing is less likely to occur and the bank edge plants have a chance to stabilize and provide both beaver feed and shade.

Second, we can plant trees and shrubs that don't really like (though tastes of individual beaver may vary and trees are cut for building materials as well as food). These native species are generally more likely to survive beaver activity: Cascara, ninebark, blue and especially red elderberry, Indian plum (osoberry), twin berry, and Sitka spruce.

Third, we can try to protect individual specimen trees with physical barriers to beaver feeding. These include 4' high pieces of metal roofing wrapped around the trunks, welded wire mesh or livestock fencing wrapped in the same manner, and plastic drain pipe slit on one side and wrapped around smaller stems. All solutions have some problems. The wire needs

to be removed and reinstalled before the tree grows into it. It also should be staked. The black drain pipe and metal roofing can get quite hot on some sites and burn the trunks. Wider pipe or metal roofing installations tend to reduce that problem as does the color of the roofing and holes and/or color of the pipe. Both the drain pipe and the metal roofing can also protect field mice which then chew the bases of the trunks anyway. Those can be baited.

Fourth, some people have used either woven wire fences or electric fences to exclude beaver. However, our streams respond to rain quickly, so these can only be used above any possible high water line.

Fifth, there has been some use of white latex paint mixed with masonry sand (big grit size) painted on the stems. Results vary but it is worth a try. I have wondered about mixing the latex and sand with some ground cascara bark but haven't actually tried that yet. Some of the deer repellents based on rotten eggs or fermented blood meal may help send them to the neighbors but they need to be applied often.

Finally, there are several methods to either control the water level of areas behind dams or prevent beavers from blocking culverts. These structures may need permits. The installations are described in detail in an excellent publication from Washington Department of Fish and Wildlife:

<http://wdfw.wa.gov/living/beavers.html> . Also see Oregon Department of Fish and wildlife site for information on relocation rules and other topics:

http://www.dfw.state.or.us/wildlife/living_with/beaver.asp



Farm and livestock notes

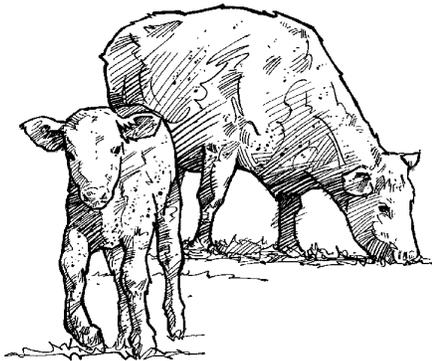
Warming chilled newborn calves, kids, and lambs

A western Oregon spring is not always the best time to give birth. Recent nice weather is not a predictor of future weather. New-born livestock can come into a cold and wet world over the next couple of months. If the birth process was difficult or they were just a little slower nursing, newborn animals can quickly get cold-stressed. But they can be warmed back to health.

Farmers have known for a long time that a warm water bath is the very best technique to revive the stressed animal. Research compared a dry, 70 degree F room with added heat lamps and/or blankets to a 100-degree water bath. They looked at the time needed to regain normal body temperatures (103° F for calves) from an 86° degree starting point. Time for the heat lamp/blankets = ~90 minutes while the water bath achieved the same result in ~60 minutes.

Interestingly, the metabolic heat produced by young animals was (in one study) twice as much with the heat lamps/blankets versus the warm water bath. That metabolic loss will affect slow the recovery process even after the lambs/calves are fully warmed.

Support the head of the animal while they are in the bath and dry them well when they come out. Return them to their mothers as soon as possible. Sometimes collecting the amniotic fluid (if possible) and putting it on the calf/kid/lamb after warming will help with acceptance. Make sure, one way or another, to get them some colostrum in the first 6 hours after birth. Ruminant stomachs are increasingly less capable of absorbing all the maternal immunity factors contained in the colostrum. *Adapted from an article from Glenn Selk, Oklahoma State University Beef Specialist.*



Livestock short takes

Grass tetany could become a problem soon for cattle, sheep, and goats. With the lush early pasture growth, the potential for this often fatal metabolic disorder, involving low magnesium in the forage, increases. Provide magnesium to them either mixed with free choice salt or in molasses magnesium blocks. Do this right away through May. Feeding some alfalfa hay daily may reduce tetany.

Scours (diarrhea) kills young animals every year. The starting point is often a disease though sometimes it can be an internal parasite like coccidiosis. Scours generally spread through fecal matter. So cleanliness in barns is crucial.

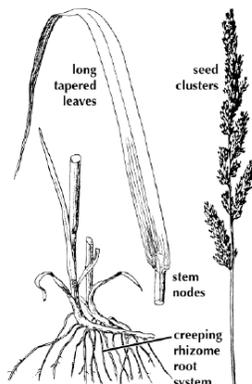
But supportive therapy for an affected animal is almost always necessary. The diarrhea leads to dehydration and the flushing of electrolytes from their systems. These need to be replaced. Drenching may be necessary initially. Suitable electrolyte mixes to add to water can be purchased at farm stores.

Once the calf or lamb begins to recover and is drinking fluids from its mother again, you can back off and watch for improvement. Early scours (1-3 weeks old) are often caused by enterotoxigenic E. coli bacteria but later episodes are generally viral (which don't respond to antibiotics) or coccidiosis (which can be treated). Talk to your vet about scours.

Cattle herds may be rebuilding. Beef cow slaughter was below 3 million head for the first time since 2006. Some of the drought affected south and Midwest regions are recovering. High calf prices are encouraging rebuilding. With dairy prices declining, dairy cows may come into the slaughter market holding beef cow slaughter prices down.

Feeding reed canary grass

Reed canary grass was first planted as a forage species in Columbia County in the 1920s. I have a picture of the Extension Agent at the time, George Nelson, planting the experimental field on Clatskanie dike land. Subsequent plantings were made on dike land farms in Rainier, Deer Island, and Scappoose. If I could roll the clock back, I would. Reed canary grass is tall, coarse bladed, and quite invasive, choking out native vegetation in riparian sites up and down the river.



But since we have it, what is its feed value and what are the best ways to handle it? First, when grazed or harvested immature (less than 24 inches tall) it has fair digestibility (energy) and average to above average protein content. Quality drops off faster than any other grass as it gets more than 2-3 feet tall. In Columbia County, it can get 9 feet tall!

Unfortunately, RCG grows quickly in the spring, often on fields that can't be grazed or harvested because they are too wet. RCG can be clipped to preserve forage quality. Some farmers put their stock out early on the best drained land to graze RCG once it gets 8-10" tall down to 3-4" and then take the re-growth as either further short term grazing, hay, or round bale silage. Second cuttings are common if the first one is removed (weather allowing) in early to mid-June at the latest. Given the lack of great drying weather at that time of year, putting up round bale silage or grazing is often the preferred harvesting method.

Reed canary grass has some problems, though. Most of the stands we have come from European seed. These strains produce forage

with significant amounts of alkaloids make the forage taste bitter and thus less palatable, slowing grazing consumption. This, by itself, reduces predicted gains as forecast by the measured protein and TDN of the forage. Alkaloid concentration increases as the forage matures. The alkaloids can also directly affect digestibility and pass through in the rumen and/or increase diarrhea, and thus reduce the effective protein and energy actually utilized by the livestock. Finally, especially with sheep, there may be a fungus that attacks the leaves of canary grass that can cause severe photosensitive reactions including swelling, facial edema, skin loss, and potentially, death. Nitrogen (especially ammonium) fertilizers seem to increase the alkaloid concentration. Newer strains of RCG have a low alkaloid content. However, they seem slow to establish and cannot compete if seeded into a field that has had a pre-existing RCG stand.

Prime does pay

Beef eating quality is gaining more traction in beef breeding programs. One effort is to get more internal marbling in the meat without excess surface body fat that just needs to be cut away during processing.

There is carcass evaluation data on Angus sires that measures heritability of marbling. And there has been enough breeding done with that trait in mind to see if selecting for good marbling actually creates a worse problem in some other aspect of the cow or calf's performance in the herd. The good news is that selection for the marbling trait does not affect age of puberty, heifer pregnancy, calving interval, or mature weight. It actually seems to improve birth weights and calving ease. There is a relationship between steer marbling and the cow's milking ability. So it is possible that milk alone may account for the marbling improvement. There should be more Angus data and data from other beef breeds soon.



Columbia County Small Woodlands Association 17th Annual Tree Seedling Sale Saturday, March 14th

8:30 a.m. to 1:30 p.m.- PACIFIC PRIDE Lawrence Oil parking lot, 845 N. Columbia River Hwy, St. Helens
AVAILABLE: Coastal redwood, Dawn redwood, Eastern redbud, Elite Douglas fir*, Giant sequoia, Golden chain tree, Japanese pagoda dogwood, Noble fir, Oakleaf hydrangea, Pacific madrone, Purple beech, Purple smoke tree, Quaking aspen, Red flowering current, Red Japanese maple, Service berry, Sourwood, Sweet bay magnolia, Sweet gum, Tea crab apple, Turkish fir, Western hemlock, Western red cedar* and Witch hazel. (*=bag quantity limited). Be sure to arrive EARLY for BEST selections. For more info: 503-556-8800, 503-369-9592 or 503-397-5997. Be sure to arrive early for best selections. Proceeds support CCSWA Educational Programs for Columbia County students and teachers.

2015 Columbia County Home & Garden Show - March 21 & 22 Columbia County Fairgrounds, St. Helens

Our Master Gardeners will be presenting 10-15 minute workshops at the top of every hour: Saturday, March 21st: 10 am-How to build a worm bin; 11 am-Patio gardening; 12 pm-Butterflies & butterfly gardens; 1 pm-Waterwise landscaping; 2 pm-Cold frames & season extenders; 3 pm-Weed families & Identification; and 4 pm-How to build a terrarium. Sunday, March 22nd – 11 am-Bumble bees & bee conservation; 12 pm-Moles & how to drive them away; 1 pm-Children gardening ideas; 2 pm-How to build a bug hotel; and 3 pm-Orchids.

Also, the Columbia County Master Gardeners™ will put on their **annual pruning workshop** on March 21st 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.

Complimentary tickets available at: *St. Helens Community Federal Credit Union, The Chronicle, The Chief, Dahlgren's Building Supply, Don's Rentals and Sears Hometown Store in Scappoose.*

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