



Oregon State University
Extension Service



POLK SOIL AND WATER
CONSERVATION
DISTRICT

Cultivating

Healthy Farms, Forests, Food
and Families in Polk County

WINTER 2017

A 'Second Life' Filled with Christmas Trees

By Mitch Lies
CULTIVATING Editor

DALLAS, Ore. — Don and Jo Ann Beal didn't know what to do with the Christmas trees on their Dallas farm when they purchased it seven years ago. Eyeing the farm's activity this holiday season, it appears they arrived at a good solution.

The Beals today are in their sixth year of operating what has become a thriving choose-and-cut Christmas tree farm. And they are loving the experience.

"We really enjoy it when the families come out, and the kids are out there running around finding their favorite trees," Jo Ann said. "And we enjoy talking to the families."

Located at 700 Oak Villa Road, Beal Christmas Tree Farm features a wide selection of Christmas trees, including different shapes and sizes of the aromatic grand fir, the ever popular noble fir, the increasingly popular Nordmann fir, and the classic Oregon Christmas tree, the Douglas-fir. Crafts, many of which are made by Jo Ann, are on display in the farm's 9,000-square-foot shop. And central to its success, the farm features a friendly atmosphere and an emphasis on customer service.

"We are all about great customer service," Don said. "We even train our workers that they wave to everybody as they



PHOTO BY: Mitch Lies

Don and Jo Ann Beal, inspecting a Nordmann fir on their Dallas, Ore., Christmas tree farm, have embraced a "second life" in the choose-and-cut Christmas tree business.

drive up and as they leave, and I think that is why a lot of people come back year after year."

The Beals took an unusual arc to becoming Christmas tree farmers. The 30 years Don spent in law enforcement and a career in environmental compliance by Jo Ann did little to prepare the couple for what Jo Ann described as "a second life" in Christmas trees. Still, after some initial trepidation, the couple embraced the opportunity to enter the Christ-

mas tree business when they found the property of their dreams and decided to move from Northern California to Dallas.

As Don explained: "Jo Ann said, 'What are we going to do with all of these trees?' I said, I guess I'll find somebody around here to just buy them all. Then I was doing research and got to looking at some things and pricing things out, and I told her: You know what, we might be able to make a go

of this. Let's just make a little Christmas tree business and see how it goes.

"Well, it just took off," Don said. "I guess we did something right."

The couple pulled together knowledge about Christmas trees from several sources: They joined the Pacific Northwest Christmas Tree Association and participated in a six-week webinar; they gleaned information from articles on Christmas

(Continued on page 4)

Oregon Leads the Nation in Christmas Trees

With about 4.8 million trees sold annually, Oregon leads the nation in Christmas tree production. Second, with annual sales of about 2.8 million, is North Carolina.

Most of Oregon Christmas trees are sold domestically, with California comprising the largest market. Mexico is Oregon's largest export market.

Oregon Christmas tree farms range in size from operations like Holiday Tree Farms of Corvallis, which will sell around 1 million trees this year, to small operations that sell in the hundreds to mostly choose-and-cut customers.

The industry in Oregon has experienced multiple dips and peaks over the 60-plus years that growers have grown in plantation settings, the most recent of which occurred when the industry's annual sales dropped from 7.4 million trees in 2008 to today's projected 4.8 million estimate, a decline of 35 percent. The number of Christmas tree operations in Oregon declined from 1,633 in 2010 to 690 in 2015, according to the USDA, a 42 percent drop in just five years.

It takes from seven to 10 years from the time a Christmas tree is planted before it is ready for harvest. Noble fir and Douglas-fir, grown widely in the Pacific Northwest, rank with Fraser fir, grown in the Eastern U.S., as the top selling species of Christmas trees.

INSIDE: Polk SWCD Annual Meeting

Who We Are OSU Extension Polk County

The Polk County Office of the Oregon State University Extension Service provides research-based educational information and programs in Agriculture, Forestry, 4-H/Youth and Family and Community Development for the citizens of Polk County.

OSU Extension's mission is to convey research-based knowledge in a way that is useful for people to improve their lives, their homes, and their communities.

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Who We Are Polk Soil & Water Conservation District

Nearly 3,000 Soil and Water Conservation Districts (SWCD) across the United States are helping local people conserve land, water, forest, wildlife, and related natural resources. SWCDs are charged with directing programs to protect local renewable natural resources. Polk SWCD was formed in April 1966, and promotes erosion control, reduction of invasive species, improvements to farms and forests, control of animal waste, as well as improving wildlife habitat and water quality/quantity issues in Polk County. The Polk SWCD is administered by 7 locally elected volunteer directors representing 5 zones and 2 at-large positions within the county. The Polk SWCD is a source of information and education on natural resources.

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Calendar of Events

Polk SWCD and
OSU Extension Polk County

December

ALL MONTH
SWCD NATIVE PLANT SALE:
www.polkswwcd.com/nps18

13 - Polk SWCD Open House and Board Meeting: 12pm and 6pm

14 - Orchard Management Series: Pruning Fruit Trees, Lebanon

25 - SWCD and OSU OFFICES CLOSED FOR HOLIDAY

January

ALL MONTH
NATIVE PLANT SALE:
www.polkswwcd.com/nps18

01 - SWCD and OSU OFFICES CLOSED FOR HOLIDAY

09 - OSU Wheat and Seed Production Meeting, W. Salem Roth's

09 - OSU Wheat and Seed Production Meeting, Albany Linn County Fair & Expo

10 - OSU Wheat and Seed Production Meeting, Forest Grove Elk's Lodge

10 - Polk SWCD Annual Meeting: at Pressed in Dallas 5:30 - 8:30

11 - OSU Orchard Management Series: Site Selection & Pest Management, Tangent

15 - SWCD and OSU OFFICES CLOSED FOR HOLIDAY

25 - Orchard Management Series: Nutrient Management, Tangent

TBD - NRCS Local Work Group Meeting

February

03 - Native Plant Sale PICKUP: Polk County Fairgrounds 9am-2pm

03 - Marion & Polk Food Summit, Salem

14 - Polk SWCD Board Meeting: 6 pm NRCS Meeting Room

19 - SWCD OFFICE CLOSED FOR HOLIDAY

24 - Small Farms Conference Spanish Track

24 & 25 - Mid-Valley Winter AgFest (mvwagfest.com)

Cultivating is a quarterly publication of Oregon State University Polk County Extension Service and Polk Soil And Water Conservation District. Included in these pages, readers can find practical information on farm and forest management, on home and lifestyle choices and on the many programs and services available through the Service and the District.

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Mitch Lies
Cultivating Editor

Cultivating Productive Farm & Forest Businesses

Christmas Trees

(Continued from page 1)

tree production from Oregon State University Extension publications; and they soaked up information from neighboring farmers, including retired OSU Extension Christmas Tree Specialist Ken Brown, who lives just over the hill from the Beals.

"We are so fortunate to have been able to meet and keep in contact with Ken Brown," Don said. "What a resource that man is. Now and then, he'll show up and I'll be outside and we'll chat for a while. He wants to know how things are going, and I can bounce things off of him. I've also called him on the phone and asked him questions.

"Really, everybody has been like that," Don said. "They are all very helpful to us."

The first thing Don discovered about Christmas tree production was the complexity involved in what, on the surface, appears like a relatively simple slice of agriculture.

Depending on the species, Christmas trees take seven to 10 years before they are ready to be cut and placed in homes. During that span, trees are subject to pressure from insects, diseases and environmental stresses, such as drought. In the latter years of tree production, farmers shear trees each summer to attain the shape desired by consumers, requiring extensive hand labor.

"There is a lot more to the science side of Christmas tree production than I thought," Don said, "and I've enjoyed learning how to grow the best trees: from the ground prep, to the planting of seedlings, to the shearing, to the managing of insects and diseases."

The Beals sold primarily wholesale from the time they purchased the farm in 2011 to when they moved to it upon completing their professional careers in 2015. The idea all along, however, was to focus on choose-and-cut, Don said, and the Beals today sell only a few thousand trees annually on the wholesale market, and only to a select few customers that have been with the farm since its start.

Among customer conveniences they offer, the Beals shake and bale trees for free, a service many choose-and-cut operations charge extra for. They cut trees free of charge, which is common among choose-and-cut operations, and they offer a delivery service, where they will deliver trees to homes, something few choose-and-cut farms offer.

"We don't have all of the hay rides and some of the bells and whistles that some big farms have," Don said. "But we do a good job for our customers, and they seem to appreciate that.

"The trees ultimately sell themselves, because everybody wants a Christmas tree," Don said. "All we're doing is trying to give them the best that we can when they come to buy it. So that hasn't been too difficult."

"We're just really enjoying ourselves," Jo Ann said. "The only drawback is we are getting so busy that now we aren't able to talk to our customers as much as we would like."

It turns out they are working on that, too. "We are making some adjustments in personnel duties so that we can have more opportunities to talk to our customers," Don said, "because that is so important to us."

Beal Christmas Tree Farm 700 Oak Villa Road, Dallas
Hours: Tuesdays - Sundays from the Friday after Thanksgiving through Dec. 23 from 9 a.m. to dusk
Phone: 503-837-9002 • Website: Bealchristmastreefarm.com

Key Discovery Found in Effort to Manage Slug Pests

By Mitch Lies CULTIVATING Editor

Oregon State University slug specialist Rory McDonnell said he has uncovered what could lead to a breakthrough in the effort to manage slug pests in Oregon.

In a report on his first year's progress into managing slugs in Oregon, McDonnell unveiled that he and a colleague found the parasitic nematode *Phasmarhadditis hermanni* in Oregon. The nematode is the active agent of a popular slug control product in Europe that is not available in the U.S., in part because the active agent was not known to be present in the U.S. Finding it here, McDonnell said, could allow a chemical manufacturer to seek registration for the product in the U.S.

"It is a very important discovery, because it represents the first time that this nematode species has been found in the United States outside of California," McDonnell said, "and it potentially opens up Oregon as a state where this (parasitic) nematode could be used as a biological control agent."

Among next steps, McDonnell said researchers need to compile data on how lethal the nematode is to key slug and snail pests in Oregon and to native species, as well.

In initial tests, results have been encouraging.

"We know that it is lethal to the gray field slug, (the most damaging slug pest in Oregon)," McDonnell said. "We found slugs dying within 48 hours, and 100 percent of the slugs were dead in our replicates within three or four days.

"I think nematodes are going to be an im-

portant tool for managing slugs here in Oregon."

McDonnell came to Oregon last summer to help manage a multi-million dollar problem in Oregon agriculture. Slug damage estimates in Oregon grass seed alone top \$90 million annually, and slugs are a significant problem in nursery crops, Christmas trees and other crops.

Among findings from his first year here, McDonnell said that Oregon has lived up to its reputation for high slug populations. "Over the past year, I have seen absolutely enormous populations of the gray field slug," he said, "bigger populations than I've seen anywhere else in the world."

The gray field slug populations peaked in the first half of November, he said, then declined in December and January with the onset of winter storms. "That was expected," McDonnell said. "But what was surprising to me is that even during these really harsh conditions, some of the mature adult slugs remained very



PHOTO BY: Mitch Lies

Oregon State University slug specialist Rory McDonnell, on an Oregon Christmas tree farm, said a parasitic nematode that he found in Oregon this year may one day play a big role in managing slug pests in Oregon.

active."

McDonnell found that most egg-laying occurred February through March, with a peak in early March.

"From a control perspective, it is really important to kill egg-laying slugs before they release their eggs into the environment," he said. "If they are not killed, you are likely to have very severe slug problems come the fall, and possibly into the following spring, as well."

McDonnell, who hails from the Republic of Ireland, came to Oregon from University of California at Riverside, where he spent five years as a research specialist.



Jackson Morgan

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Cultivating Productive Farm & Forest Businesses

Bovine Manure Tax Credit Pencils Out

With winter weather rapidly approaching, the time to start thinking about the runoff and erosion associated with our annual rainfall and flooding events is upon us. While preventing every possible contaminant from leaving a field or orchard during these “winter downpour” periods is virtually impossible, implementing cheap, simple, and new best management practices (BMPs) could help contain contaminants better, protecting both agricultural water quality and availability for the future.

The introduction of contaminants, sediment, pesticides, etc. as a result of runoff and erosion has drastically negative effects on agricultural water quality. These include the clogging of tile lines, changes in overall water chemistry, changes in water availability, changes in river biology, algae blooms and fish kills. One of the biggest contaminants in terms of its negative impact on agricultural water quality is bovine manure. The introduction of bovine manure is typically associated with the over-nitrification of a water body, and often, this surplus of nitrogen in the water is utilized as fertilizer by aquatic flora at an exponential rate. This rapid growth in aquatic flora is typically followed by a rapid deple-



Bay manure collection facility.

PHOTO SOURCE: Mill Creek Manufacturing

tion of dissolved oxygen, killing many aquatic species, and potentially leading to toxin bioaccumulation problems in the future.

Fortunately, bovine manure can be easily managed and contained; and thanks to recent legislation, could now qualify you for a tax credit. The Bovine Manure Tax Credit (BMTC) was transferred to the Oregon Department of Agriculture from the Department of Energy by House Bill 2066 in 2017. As this bill currently stands, bovine manure

collected in the State of Oregon, and used in the State of Oregon as a biofuel, or to produce biofuel, would be subject to a tax credit of \$3.50 per wet ton. According to the wordage of HB 2066 “Biofuel” means “liquid, gaseous or solid fuels, derived from biomass, that have been converted into a processed fuel ready for use as energy by a biofuel producer’s customers or for direct biomass energy use at the biofuel producer’s site.” A meeting regarding finalizing the rules relating to the BMTC was held

Oct. 31, but the outcome of this meeting has yet to be made public.

While \$3.50/wet ton of manure might not seem worth the hassle of finding a biofuel user/producer, simple calculations prove otherwise. Assume a small/medium size dairy of no more than 50 head, at roughly ~1000 pounds each, sticks to the USDA NRCS pre-determined average value of 80pounds manure produced/day/1000-lbs animal unit. At 50 head, assuming 1000Lbs per head, the animal

unit in question is roughly 50,000 pounds.

• 80Lbs/day/1000Lbs animal unit (USDA NRCS-dairy manure generation) * 50 (50,000Lbs total animal unit) = ~4000lbs of manure produced per day.

• 4000Lbs/day * 365 = 1,460,000Lbs/year.

• 1,460,000Lbs/year * .90 (best possible manure recovery factor) = 1,314,000 Lbs/year.

• 1,314,000 Lbs/2000Lbs/ton = 657 tons of manure/year.

• 657 tons * \$3.50 = \$2,299.5 credit/tax year

With the rules regarding this tax credit currently in the process of being finalized, now is the time to start planning or thinking more about manure storage and management if the BMTC is one that you would like to try and take advantage of. Due to its infancy, information regarding the BMTC is scarce, but available through the Oregon Department of Agriculture website, and is updated as often as possible. For information or assistance relating to manure management, storage, winter weather related BMP’s, or any other related question, please feel free to reach out to Polk SWCD, or me directly, via email jackson.morgan@polkswcd.com or via phone at (503) 623-9680 ext. 113.

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A few Polk County programs:

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Claudia Ingham
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Cultivating Productive Farm & Forest Businesses

It's all about your roots

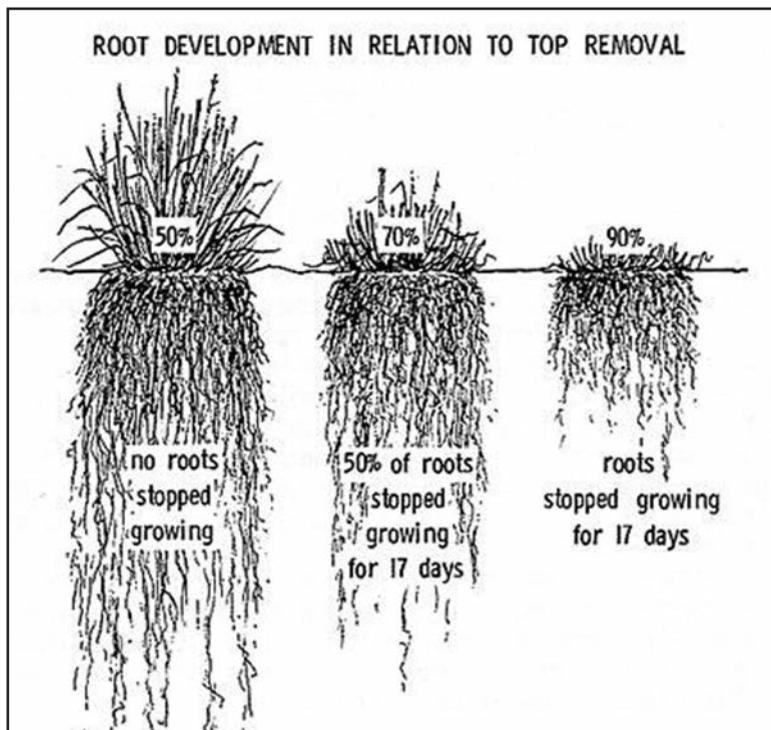
What's happening in your pastures at this time of the year? Why are your neighbor's animals kept on a different pasture at the start of the rainy season each fall? Let's consider these questions with a brief review of grass growth for the types of grass commonly planted in Pacific Northwest pastures.

Now that our rainy season has started, we see fall green-up in our pastures, particularly in the grasses. This new growth is certainly palatable, but careful planning of how to use this fall resource is needed. Before you turn animals out on this new growth, consider how much grazing that you will have available in each

month of the year and treat fall growth as your return on investment. The investment is for the long-term health of the grass sward including the roots.

We all relish those sunny fall days in between the misty rains which make our region so beautiful and appealing. While we marvel at the fall leaf colors of our broadleaf trees and perennial crops like blueberries and grapes as they senesce, the pasture grasses are actively capturing those intermittent sun rays on those sunny fall days. These cool-season grasses actively grow when the temperature of both air and soil are cooler than conditions favored by grasses species like corn, sorghum and the pest crab-grass. Most of our common pasture grass species are Eurasian in origin. These grasses evolved in regions where the climates are relatively mild and precipitation occurs throughout the year. This is in contrast to our dry summers where available soil moisture becomes the primary limiting factor for growth.

Vigorous pasture growth during those open, sunny fall days may be utilized for some grazing, but the action beneath the soil surface is



Grazing and root growth.

100 Native Forage Grasses in 11 Southern States by Horace L. Leithead, Lewis L. Yarlett, and Thomas N. Shiflet, range conservationists. US Department of Agriculture, Soil Conservation Service, Agriculture Handbook No. 389.

your investment in future yields. Root elongation and new root growth occur in fall. Keeping this below-ground part of your pasture healthy is essential even though it's not what you regularly look at.

Seeing is believing, so grab a shovel and dig up some grass in a couple locations. Consider how much root mass there is and how deeply rooted the plants were. Continued growth depends on a number of factors but planning the timing and intensity of grazing are immediate tools available to you. This illustration is one example of grazings effect of roots.

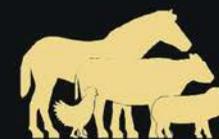
If animals remove too much above-ground biomass then the solar collecting ability of the grass plants is reduced.

If the ability of the plants to store carbohydrates and grow new roots is reduced, then growth the following spring will be affected because the plant has less root surface area to draw nutrients, including water, from the soil.

Repeated heavy grazing of fall growth will result in a decline in plant vigor. Plan for the long term because the pasture is your crop and, if healthy, can persist for many years or decades.



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Support Spawning Silver Salmon *A Pacific NW native returns to Rickreall*

Since 2009, the Polk Soil and Water Conservation District has worked in collaboration with the Polk County Sportsman's Club, the Rickreall Watershed Council, Hancock Forest Management, the City of Dallas, and the Oregon Department of Fish and Wildlife to facilitate the passage of Coho salmon on Rickreall Creek.

These native fish travel approximately 216 miles upstream from the Pacific Ocean before reaching Mercer Dam.

The dam impounds a reservoir that is operated by the City of Dallas to provide residents with drinking water throughout the year. While necessary, the dam is an impassable barrier that isolates 11 miles of the watershed's best spawning grounds. To provide access to this additional habitat, a volunteer collects Coho below the dam from October through December. About two or three times per week, the fish are transported via truck to release sites in several streams above the reservoir. Without access to the stream reaches above the dam, spawning Coho are restricted to approximately five miles of moderate quality habitat below the dam in Applegate Creek, Skid Creek, and Canyon Creek.

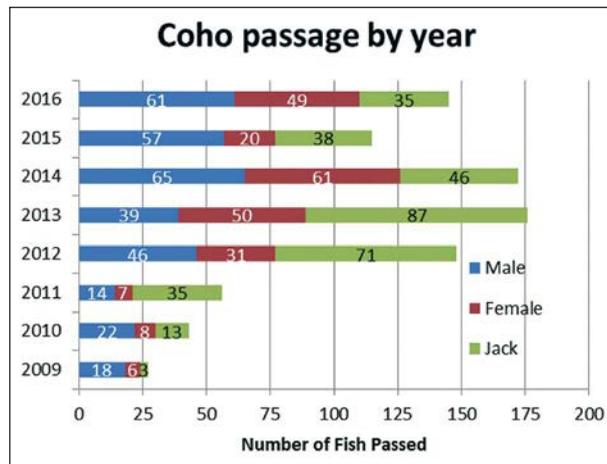
Unlike steelhead, which are a sea-run form of rainbow trout, Coho salmon only return to spawn once in their lifetime. Most adult Coho spend two to six years in the ocean; however some sexually mature after a shorter time and return to

their natal stream to spawn early. The early-returners are called jacks (males) and jennies (females, very rare).

As they return to freshwater, Coho adults undergo a number of changes. Most noticeably, their color turns from a bright flashy chrome to fire truck red with green smudges.

The jaw/snout of the male becomes more hooked and their gums draw back to expose their teeth in preparation for fighting other males for spawning areas and a mate.

These changes are more pronounced in the males, but are seen to some degree in the females as well. Both sexes tend to be fairly single minded on their journey to re-



turn to spawn. They will eat minimally, and as a result, their flesh begins to degrade in order to fuel their one-way journey. Once they turn color, they usually do not make for great eating at all!

As you can see in the graph, data collected during each trapping season show that the Coho population in Rickreall Creek has a cyclical trend. 2012 was the first year adults that had been born above the dam returned to the trap from the ocean.

2014 was a record year, with over 30 fish in the trap one day!

2015 returns were lower than anticipated, a trend reflected throughout the Columbia and Willamette River basins, and likely due to high temperatures in those water bodies late in to the fall. These cycles are influenced by a large number of interconnected external factors, including river temperatures, amount of rainfall and frequency, ocean temperatures, food presence in the ocean and rivers, and pressure from anglers and predators. At times, it can be difficult to tell cutthroat trout from juvenile Coho, especially if you are unaware that salmon live in the creek. Please make sure to positively identify any fish you catch before putting it on a stringer!

While they face many obstacles on their way home to spawn, for the past two years, over 3 percent of the Coho that came over Willamette Falls were passed above Mercer Dam!

The Coho count over Willamette Falls appears to be on track with 2016, which means we expect about 110 fish to be passed around Mercer Dam this year.

The partnership does not currently track



PHOTO BY: Jason Dunkin
Resident Cutthroat trout or Juvenile Coho salmon?

adult numbers spawning below the dam, but it is estimated that the Rickreall population represents about 4 to 5 percent of the Willamette run. Members of the partnership have implemented a number of projects above Mercer Reservoir to create better spawning habitat. Their hope is that as the Coho utilize the improved spawning areas, the run size will increase. Perhaps one day the run might be considered sufficient enough to support a fishery.

Until then, Please remember that Mercer Reservoir as well as Rickreall Creek and its tributaries are closed for salmon and steelhead angling, regardless of life stage!

You can help rebuild the Rickreall salmon run by encouraging other anglers to abide by ODF&W fishing regulations.

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at the Polk County Fairgrounds

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Gail Wells
OSU Extension,
Public Issues Education Leader

Cultivating Healthy Youth & Families

Statewide Outdoor School Program Up and Running

CORVALLIS, Ore. – The new statewide Outdoor School program, approved by Oregon voters last November, has a new leader and a new pipeline for funds to flow to school districts and education service districts to pay for youth outdoor education programs.

The new program will provide at least three consecutive days of outdoor education to Oregon's fifth- or sixth-graders as part of their school experience, said Kristopher Elliott, a science educator hired by Oregon State University Extension to lead the program. An Outdoor School may run as long as six days and may include overnight stays.

Last November, voters approved Ballot Measure 99, designating funding for Outdoor School programming for school districts and education service districts

(ESDs) to serve fifth- or sixth-grade students in Oregon. The 2015 legislature had already charged OSU Extension with administering the statewide program when funding became available. In July of 2017, the legislature approved \$24 million for the program's first two years.

Elliott, who holds a doctorate in science education from Oregon State University, said his fifth-grade outdoor education experience was a pivotal influence in his life. "I was from a small town in the Sacramento Valley, and I had the opportunity to spend five days on the Northern California coast," he said. "We took night hikes through the redwood forests. I experienced a tide pool for the first time, and I learned the names of the organisms that lived in it. I want every young person to have that kind of experience."

Outdoor educational experiences were common for Oregon's middle-schoolers in the 1960s and '70s, but recession-related funding cuts and property tax limitation measures forced many school districts to reduce or cut their outdoor programs.

"Our task now is to support, to the maximum extent possible, all school districts and education service dis-

tricts that would like to provide Outdoor School programs for the 2017-18 school year," said Elliott.

The funding process, outlined on the Outdoor School website, requires two steps, Elliott explained. First, school districts and ESDs must enter into an intergovernmental "master agreement" with Oregon State University. Many districts have already completed their master agreements; those that haven't may request the forms by emailing odsaccounting@oregon-state.edu.

Once the master agreement is complete, a funding application must be submitted. These will be made available by the first week in October to districts that have completed their master agreements. Districts must submit fund-

ing applications by Nov. 14. OSU Extension will review applications and notify districts of funding by December.

School districts and ESDs are free to design their own outdoor curriculum, Elliott said, as long as the instruction meets the educational goals set forth in the 2015 legislation.

"We know some districts may not have a lot of experience in developing outdoor education," he said. "During the first year, we'll try to connect these districts with others that have more established programs. The Outdoor School team will continue to deliver more resources as we fully implement the program."

Elliott received his bachelor's and master's degrees from Cal Poly. He has been a high school agriculture teacher and advisor to FFA chapters. Most recently he directed STEM (science, technology, engineering and math) education programs in the Nashville, Tennessee public schools.

OSU Extension is developing Outdoor School's administrative structure and fund-distribution mechanism with help from a diverse advisory committee that includes the Gray Family Foundation, Straub Environmen-



PHOTO COURTESY OF GRAY FAMILY FOUNDATION, PORTLAND, OREGON
A boy takes notes at an outing at Oregon's Opal Creek.



Kris Elliott of Oregon State University Extension leads Oregon's statewide Outdoor School program. Districts may apply for Outdoor School funds for the 2017-18 school year.

tal Center, Women for Agriculture, Oregon Forest Resources Institute, school districts, interested citizens and other community partners.

About OSU Extension: The Oregon State University Extension Service shares research-based knowledge with people and communities in Oregon's 36 counties. OSU Extension addresses issues that matter to urban and rural Oregonians. OSU Extension's partnerships and programs contribute to a healthy, prosperous and sustainable future for Oregon.



Marc Bell
Polk SWCD
Resource Conservationist

Cultivating Natural Resource Conservation

Riparian-Restoration Assistance Available

Do you have a stream on your property? If so, you should come to the Mid Valley Winter Ag Fest, Feb. 24 and 25 at the Polk County Fairgrounds.

The Conservation Reserve Enhancement Program (CREP) is available in Polk County. The USDA program is administered by the Farm Service Agency (FSA), while on-the-ground technical support is provided by the Polk SWCD.

For those who may just now be hearing about this program, CREP was established in 1998 by the USDA in partnership with the State of Oregon. Its purpose is to establish riparian vegetation along streams on agricultural land, protecting water quality, preventing erosion and restoring fish and wildlife habitat, especially sensitive ground-nesting bird habitat. The FSA builds an agreement with the landowner to provide not only cost share establishing these buffers, but also time incentive payments, as well as an annual rental rate paid to the landowner to maintain these buffers for wildlife use. Preparing, planting, and maintaining riparian zones is not an easy job; the Polk SWCD district staff is ready to help assist landowners with technical assistance through site assessments, outlining property management goals with the landowner and developing a restoration plan that fits with the landowner's goals and the CREP program requirements.

Eligibility Requirements

Landowners who are interested in CREP must have owned the area they wish to enroll for more than 12 months. The land itself must have a stream, and have been cropped or pastured for four of the last six years and must not be in an

optimal wildlife habitat condition already. Buffers must maintain a minimum of 35 feet in width from the top of the stream bank, but can extend out in a great number of ways to accommodate dynamic landscapes, farming operations, stream crossings and other immovable features if necessary.

The most common CREP practices landowners will implement include: riparian forest buffer, wetland restoration, filter strips, stream crossings, off-stream watering facilities and fencing. Typically the area enrolled in CREP is managed for a reduction in weed species vegetation, planted with a variety of appropriate native shrubs, for example: rose, cascara, spirea, as well as trees like Oregon ash, willows, Douglas fir and Willamette Valley ponderosa pines. Fencing, available with CREP-funded cost-share will be installed for landowners with pasturing animals to prevent them from accessing the enrolled buffer. The Polk SWCD CREP technician will provide the landowner with guidance, and develop a planting plan specifically for your buffer with technical resources from NRCS and the Oregon Department of Forestry.

Land can be enrolled at any point in the year; there are no rigid sign up dates or windows to wait for. If you are interested, let us know at your earliest convenience. If the land you are considering enrolling is within Polk County, please contact Marc Bell the Polk SWCD CREP technician at 503 623-9680 x 103, marc.bell@polkswcd.com or Bev Schmidt at the Marion-Polk County FSA at 971-273-4801. If it is outside Polk County, don't hesitate to contact us to make sure you get to the right technician and FSA representative!



© Geoffrey Fricker

Healthy riparian areas.

TOP PHOTO BY: krisweb.com
BOTTOM PHOTO BY: Geoffrey Fricker



Emily Roberts
OSU Extension
4-H Member

Cultivating Healthy Youth & Families

Focus Pocus Not Your Average 4-H Show

Fifteen years ago, a young but growing 4-H club decided to put on their very first cat show. 4-H, a global youth organization specializing in growing the skills of leadership, community service, and communication in the next generation's leaders, is more than just showing swine or cattle at the county fair, but showing cats was one area that this 4-H club specialized in.

Showing animals in 4-H teaches management, leadership, and work ethics. A lot of youth take what they learn about medicine and hard work to become veterinarians, doctors, biologists, many other occupations, as well as valuable members of society. Some youth continue their passions and go on to show animals on a national level, becoming well-known breeders and judges, traveling across the country, following their passion. A 4-H show is where youth congregate to meet other youth from across the state in order to display to a judge their knowledge of their animal. It also serves as a place for youth to grow confidence in themselves and pride in their labor, while making friends who share a passion for animals. This is the type of event that the Focus Pocus 4-H club wanted to put on all those years ago. Although I was not old enough to remember the event, I have heard about how well-known the shows were, and remember helping to put on the club's "come-back" show in 2009. I have watched the leader of the club, Jennifer Roberts, encourage and inspire confidence in many youth throughout the years. After watching her oldest son grow through the program, she took a break, and started with the club again in 2008.

In 2009, the "Focus Pocus Halloween Show" came back to the scene, only this time, with rabbits, poultry, cats and covies, which is the technical name for guinea pigs. What started out as a smaller show with about 50 youth, was put on again this



PHOTOS BY: Jennifer Roberts

4-H members from all over the state gather for the Focus Pocus small animal show.

October with just over 200 entries, and games for all ages, packing in about 450 people for a very fun time. The show has grown out of several buildings, and is now hosted at the Polk County Fairgrounds every fall.

Why is the event so popular? Well let's just say it isn't your average 4-H show. The show brings in youth from across four states, hires quality and nationally acclaimed judges, and always goes all out when it comes to awards, and when I mean "all out," I mean embroidered chairs, trophy/lamp combos, and trophies the sizes of small children. In the past, I recall my old 4-H leader saying, "We just want everyone to have a good time, and will do the best we can with the money we have."

Although I was not eligible to show this year, I watched the Facebook posts pile up on my computer in my freshman dorm, about how amazing the awards were, how much fun the cake walk was, and how they were not sure if the drive would be worth it, but then how they found out it definitely was and that they would be coming back every year. As one can tell, the show continues to inspire the future

generation of leaders. I smile at the fun the club members are having putting on the show, and am reminded of the wonderful community I was able to grow up in.

What does an event the size and quality of this one take? A lot of hard work, hours, and love. Jennifer and Dave Roberts have been 4-H leaders for many years, and have dedicated many hours to the program. They have been aided by many hardworking youth and parents, who have helped to make this well-organized event such a success. In addition, creative and hard-working co-leader Hanna Martin, and project leader Ann Irvin, join Jennifer and Dave Roberts to make one advantageous power team.

Jennifer and Dave Roberts encouraged me to continue with my passion of rabbits in the American Rabbit Breeders Association by becoming a judge in the next few years. The skills they have taught me have also helped me to become a better leader and individual in college and my community. You could definitely say they are amazing 4-H leaders, and yes, they're pretty great parents too.



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In the Willamette River Basin

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RSVP BY JANUARY 2, 2018
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503-623-9680



Chrissy Lucas
OSU Extension
Groundwater Education

Cultivating Sustainable Communities

Winterizing your Water Well System



Winter is coming soon and it's time to weatherize your system. Over the last few years we have had some pretty cold stretches. Freezing temperatures always bring a flood (pardon the pun) of calls to our offices with questions about how to unfreeze pipes, deal with broken pipes, and safety of drinking water. If you haven't already it's time to winterize your water well system to prevent frozen pumps, pipes, and stop potential damage to your water system.

Frozen Pumps and Pipes

A frozen water pump causes more than the inconvenience of losing water for a while; it can also mean burst pipes, cracked water pumps and flooding once the frozen pipes warm up again.

The root cause of this problem is when air surrounding a water pipe drops below freezing, any heat in the water will transfer to the air and cause the water to freeze. The smaller pipes always freeze first because of the larger relative surface area. Therefore, the 1/4 inch lines to the pressure

switches, which turn the pump on and off, will be the first to freeze. A frozen pressure switch will not start the pump. A small heat source, like a heat lamp or heater directed at the pressure switch, will remedy this. Just remember that heat sources should be used prudently, as overheated materials can ignite and start a fire. **Always follow manufacturer's instructions.**

Structural Protection

Pumps that are above ground usually have a small well house built over them to protect the pump from the elements. A well-built pump house, whether built of wood, blocks or metal should have insulation in the walls, the door and the ceiling. Seal any cracks or other openings. If your pump house has windows — add a layer of plastic inside and out. Bubble wrap can also be used as a layer of protection. Lightly spray the window with water, place bubble wrap with the bubble side to the glass, and it will stick until you remove it. Bubble wrap can be used with the additional plastic covers.

It is important to have some heat in the pump house such as a thermostat controlled baseboard heater, heat lamp, or other heat source. The temperature doesn't need to be super warm, but enough to hold between 35 and 42 degrees at the minimum. Make sure all openings and doors are closed properly, keeping the heat in and the wind, which wicks the heat away, out.

(Continued on page 13)

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503-551-5141  **Angie's list.**

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(Continued from page 12)

Insulation for a Well House Pump and Pipes

Insulation of any type will help to slow the transfer of heat in the water to the surrounding air, but spending a little extra for thick fiberglass or foam rubber sleeves specifically designed for this purpose is worth the cost. Covering your pipes with foam insulating sleeves will prevent freezing for a number of hours even in a power failure. Heat tapes are also available to wrap around pipes and to use on the very coldest of nights to keep the pipes from freezing up.

Tips for inside faucets

Letting a faucet drip during extreme cold weather can prevent a pipe from bursting. It's not that a small flow of water prevents freezing; this helps, but water can freeze even with a slow flow. Opening the faucet reduces pressure that builds between the faucet and an ice blockage. If there isn't excessive water pressure, the chances of the pipe breaking is reduced even if it completely freezes.

Yes, a dripping faucet wastes some water, so only pipes vulnerable to freezing (ones that run through an unheated or unprotected space) should be left with the water flowing. The drip can be very slight. Even the slowest drip at normal pressure will provide pressure relief when needed. Where both hot and cold lines serve a spigot, make sure each one contributes to the drip, since both are subjected to freezing. If the dripping stops, leave the faucet open, since a pipe may have frozen and will still need pressure relief. You can also help keep pipes from freezing by opening cabinet doors and letting warmer air into places, such as under the bathroom sink.

If you do experience a frozen pump, pipes, or faucets call a professional to help remedy the situation without damaging your water system.

Farm Succession Planning Workshop at Mid-Valley Winter Ag Fest, Feb. 25th with Admission

Experts and grower panel will explain how to pass on the farm

With the average age of farmer in Oregon edging towards 60, up to 10.45 million acres (or 64%) of Oregon farm and ranch land is expected to change hands in the next 20 years. It is uncertain who will farm this land into the future, since recent research from OSU and PSU has found that up to 84% of Oregon farmers and ranchers do not have a plan for passing on their farm business and assets.

The lack of farm succession plans can have a dramatic effect on a farmer's family, the future of the business they've built and their legacy of land. Having a comprehensive succession plan in place can reduce the stress and cost of dividing the estate for the family when the owner passes. And a well-planned estate can help with passing a viable farm business to the next generation.

To help growers take the next step in planning, Polk Soil & Water Conservation District and Rogue Farm Corps are coordinating a farm succession workshop at the Mid-Valley Winter Ag Fest.

WHERE: Polk County Fairgrounds in Rickreall

WHEN: Sunday, February 25, from 11am – 1 p.m.

Presenters will include Salem attorney Joe Hobson of Schwabe Williamson & Wyatt, two local Polk farmers who have been through the process, and Claire Feigner of the Greenbelt Land Trust to explain how working lands easements can help divide an estate.

If you have any questions, contact Nellie McAdams, Rogue Farm Corps, nellie@roguefarmcorps.org, 971.409.6806

Other workshops with admission over the entire weekend (Feb 24th and 25th) will include: Ground Water and Septic Education; How to apply for the NRCS' CREP incentive program (see our current article in Cultivating); How to Take Advantage of Aerial Imaging for Your Farm Business; Current research on forage grass seed in Polk County (including field trial results and how they relate to the benefits these species & cultivars have for those who plant them here in the mid-valley). Times to be determined. Check our website in late December for details. (<https://www.polkswcd.com/ag-fest.html>)



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Neil Bell
OSU Extension
Community Horticulture

Cultivating Sustainable Communities

Winter-Flowering Shrubs Brighten Gray Days

Although the skies are cold and gray and spring may be far off, in the Willamette Valley you do not have to wait to enjoy the sight and scent of flowers in the garden. There are many hardy shrubs for the garden that come into their own in the garden long before Oso Berry, Forsythia and Flowering quince, among other native spring bloomers, bring winter to an end for the garden. Because the weather is so cool this time of year, the flowers on these plants tend to be long-lasting as well, so the show on individual plants goes on a long time. Many of these have the additional advantage of being sweetly-scented, the perfect antidote to the winter blahs!

Even though it is only November, there are flowering shrubs just coming into their own. Among these are Camellias, including *Camellia sasanqua*, of which there is a wide range of cultivars and hybrids which produce their characteristic large blooms November into the winter period. The classic November-flowering fragrant shrub is *Osmanthus heterophyl-*

lus, which produces small, white flowers powerfully-scented flowers in clusters from late October through November.

As November comes to a close, it's time for a relative of our PNW Flowering currant to come into bloom. Chaparral currant (*Ribes malvaceum*) is a very drought-tolerant native of Northern California which begins bloom after Thanksgiving and does not quit until March. The tubular pink flowers are highly attractive to overwintering hummingbirds throughout the winter period. A shrub which proves similarly irresistible to hummingbirds is the large (8' x 8') evergreen Australian shrub sometimes known as Spider flower for its curious red blooms (*Grevillea victoriae*). Though sometimes damaged by cold in the hardest winters, most of the time it is undamaged and blooms non-stop until April.

Possibly the best-know of the scented, winter-flowering shrubs is sweetbox (*Sarcococca* spp.). The small white flowers on these little shrubs (4' x 4') come into bloom right after the new year, and the sweet scent can be detected some distance away. This shrub is particularly useful because they have beautiful, shiny, evergreen leaves, tolerate shade and still flower well, and even thrive in dry soil. The other group of plants that are regularly used for winter color in local landscapes are Heaths (*Erica* spp.). Most of these are dwarf, spreading evergreen shrubs, which lend themselves well to ground-



PHOTO BY: Neil Bell

Viburnum 'Dawn'

cover in sunny locations. There is a huge array of cultivars available, with flower colors ranging from white through pink to red. Starting in January, the entire shrub becomes a mound of color when in bloom.

If you have a bit more space, a well-known shrub which flowers faithfully for us over a long period is *Viburnum 'Dawn'*. This deciduous Viburnum has an upright habit to 8' tall and bears fragrant white flowers in clusters on bare branches from November through March. Another tall, deciduous shrub which has possibly the most fragrant flowers of them all is Wintersweet (*Chimonanthus praecox*). This shrub

can grow to 10' tall. The waxy yellow flowers hang down singly on bare branches starting in January and the sweet scent can be detected yards away on a chilly day.

Lastly, when you are on the lookout for flowering shrubs, keep an eye out for witchhazel (*Hamamelis x intermedia*). These large, spreading shrubs have spidery flowers in colors ranging from red to yellow. Depending on the variety, they begin to blossom from early January to mid-February. Not all the varieties are fragrant, so if you are sure you want that, check that it has scented flowers before you buy.



Heath (*Erica* sp.)

PHOTO BY: Neil Bell

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Brad Withrow-Robinson
OSU Extension,
Forestry & Natural Resources

Cultivating Natural Resource Conservation

Recipes for Growing a Diverse Forest

Brad Withrow-Robinson and Amy Grotta, OSU Forestry & Natural Resources Extension. Please visit *TreeTopics* blog, <http://blogs.oregonstate.edu/treetopics> to see the full article.

We often hear from landowners that they want a diverse, natural-looking forest. Their reasons vary. Some folks are aware of the many ecological benefits that diversity brings to a woodland property, while others may have been inspired by the beauty of an old growth forest.

Of course, it can take centuries for an old growth forest to develop, and many readers have young stands planted within the last decade or two.

Happily, a landowner has many ways to influence and encourage diversity in their woodlands. Even if you have just bought some recently

done within decades rather than centuries. No, it will not be old growth, but it may help reach many of the diversity-related objectives landowners commonly mention, including an attractive forest setting, better habitat for a variety of animals and a resilient forest.

There is a lot you can do to restore, enhance and maintain woodland diversity, if that is your objective. But what makes a forest diverse? There are several key parts:

Certainly, what is growing in the forest (the species composition) is an important part of diversity. A mix of trees that includes cedar and maple along with Douglas-fir is

more diverse than monocrop of Douglas-fir alone in the forest canopy. Think of the different kinds of plants as ingredients in a recipe. An oatmeal raisin cookie is more diverse than an oatmeal cookie. But not twice as much. There are many ingredients that go unobserved

understory plants, soil microorganisms and fungi play less glamorous but essential roles. Like the flour, sugar and baking powder in making the cookie a cookie. Another easily observed feature of diversity is the forest's structure, or how things are arranged. Looking up and down you may see one or more layers of vegetation from the tree canopy to the leafy plants growing on the forest floor. Looking at these layers, you are looking at the vertical diversity. An Oreo cookie has more of it than our oatmeal cookie does. Looking side to side we can see the texture of the forest (its horizontal diversity). Chocolate cookies are uniform throughout, but chocolate chip cookies are patchy, and more diverse. Structure affects how the woods look, but also how things work.

Having more structural diversity can be visually appealing. And because different animals use different parts of a forest's structure to forage, roost or nest, it may mean more types of animals using your woods too.

As a landowner, you have many opportunities (such as planting, controlling invasives or thinning) to shape your woodland property. Watch for future articles and tours on this topic.

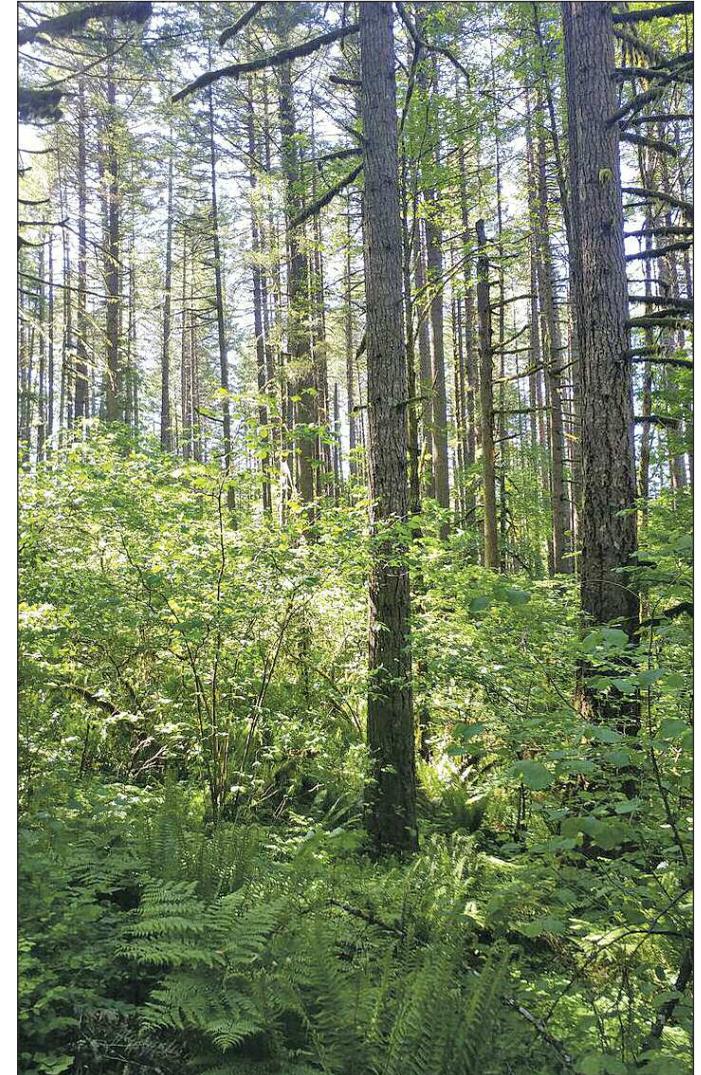


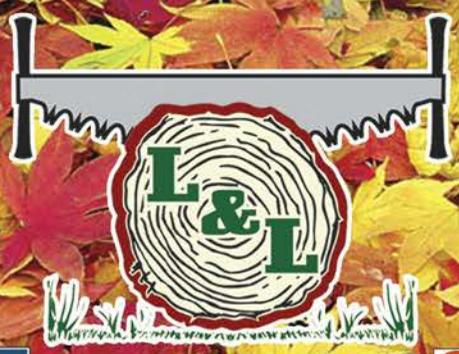
PHOTO BY: BRAD WITHROW-ROBINSON
A diverse private forest in the coast range.



PHOTO BY: BRAD WITHROW-ROBINSON
Although ingredients are similar, the chocolate chip cookie shows more structural diversity than the chocolate cookie.

cut-over land, it does not have to remain a simple timber plantation if you do not want it to be. You can grow a diverse forest. And it can be

or unseen. While trees are the most obvious and the defining elements of the forest (like the oatmeal and raisins), other things like



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