

Winter is here and some welcome precipitation has finally arrived in the past week or so. Despite the recent rainfall our area is still experiencing moderate drought conditions this winter. Landowners planting trees this winter should make note of these conditions. Unless rainfall patterns return to normal soon, new trees planted this winter may use up available soil water earlier in the summer. Managing competing vegetation around the base of new plantings helps to free up available soil moisture for your trees.

Speaking of tree planting, it is that time of year. With that in mind, this edition of *Tall Timber Topics* features a variety of articles that are in one way or another related to the techniques we use in regenerating our forests. First off, there is a discussion of early seral forest conditions - the community of plants that naturally occupy a site right after a disturbance like logging or fire - and the challenges of balancing this important ecological stage with the need for getting trees off to a good start. Secondly, for those that have a little too much early seral vegetation on their hands, some tips for winter weed management are discussed. Finally, I've included an article discussing current research in biomass utilization that may affect the way that slash piles (a precursor to tree planting) are handled in the future.

For those still on the hunt for seedlings, a rundown of public tree sale events can be found on page 3.



Finally, I would like to recognize our newest class of Master Woodland Managers that graduated from their training late last year. We had sixteen graduates complete the training from Clackamas, Columbia, Linn, Washington, and Yamhill Counties. These individuals are already busy in their communities and enhancing the capacity of our Extension program. Thank you!

The MWM class of 2013

Amy Grotta

OSU Extension Forestry & Natural Resources Faculty - Columbia, Washington & Yamhill Counties

Office Location: Columbia County Extension Service, 505 N. Columbia River Hwy, St. Helens, OR 97051

Phone: (503) 397-3462

E-mail: amy.grotta@oregonstate.edu

Web: <http://extension.oregonstate.edu/columbia/forestry>

Blog: <http://blogs.oregonstate.edu/treetopics>

Upcoming Events



Woodland Management Shortcourse

**Wednesdays, Feb. 5th, 12th, 19th, 26th, 6:30—9:00 pm; Field session Sat. March 1st
Washington County Public Services Building, 155 N. First Ave, Hillsboro**

A introductory course covering the basics of growing and caring for forests. Topics covered include assessing your property and site; tree biology and forest ecology; tree planting, care of an established forest, and weed control; and timber sale logistics. Cost is \$40/individual or \$50/couple. To register: call Vicki, 503-397-3462 or register online at <https://secure.oregonstate.edu/osuext/register/670>.

Yamhill County Small Woodlands Association Meetings

**OSU Yamhill County Extension Auditorium, 2050 NE Lafayette Avenue, McMinnville. Social hour 6:30 pm/
program 7:00 pm.**

Wednesday, January 22nd: Speaker is Alan Kanaskie, Forest Pathologist, Oregon Dept. of Forestry. Alan will discuss tree diseases.

Wednesday, February 26th: Speaker is Steve Bowers, OSU Forestry Extension. Steve will discuss forest roads.

Wednesday, March 26th: Speaker is Mark McKelvie, Consulting Forester. Mark will discuss the pros and cons of commercial thinning.

Washington County Small Woodlands Association Meetings

North Plains Fire Hall, 31370 NW Commercial St., North Plains. All meetings begin at 7:00 pm.

Tuesday, January 28th: Speaker is Ed Kamholz, local logging and railroad historian.

Tuesday, February 25th: Speaker is Mike Cafferata, District Forester, Oregon Dept. of Forestry. Mike will discuss the Tillamook Trail and other updates.

Washington County Agricultural Pesticide Collection Event

Saturday, February 8th, 8:00 am—2:00 pm, Cornelius

Free, anonymous collection and disposal of old pesticides, for commercial growers. Registration is required. For details, call the Tualatin Soil & Water Conservation District or visit <http://www.swcd.net/programs/pesticide-collection/>

2014 Oregon Forest Landowner Leadership Academy

Saturday, February 22nd, Oregon State University, Corvallis

The goal of this program is to equip forest landowners to take active roles in leading Oregon forest landowner organizations. The academy will help new and existing leaders gain the skills they need to succeed. Free! For details and registration, contact Jen Rains, 503-224-8046 or see flyer [online](#).

Clackamas Tree School

Saturday, March 22nd, Clackamas Community College, Oregon City

Tree School catalogs are in the mail, and online at <http://extension.oregonstate.edu/clackamas/forestry>. Register early!

Also see next page for details on area seedling and native plant sales.

Check for more upcoming programs on these calendars:

<http://extension.oregonstate.edu/columbia/forestry/events>

<http://calendar.oregonstate.edu/extension-forestry/>

<http://knowyourforest.org/events/upcoming>

Seedling and Native Plant Sales



Tree planting season is upon us once again. Below are the details on upcoming seedling and native plants sales in our area. Be aware that forestry seedlings are in short supply this year; so it is recommended that you pre-order seedlings if possible or arrive early to public sales.

Yamhill Soil & Water Conservation District Native Plant Sale

Pre-orders are due January 31. Pick-up is February 6th, 7th, and 8th.

A wide variety of native, trees, shrubs, and understory plants are available. Pre-ordering is recommended as quantities may be limited. Order forms and plant descriptions are available at <http://yamhillswcd.org/> or by calling (503) 472-6403.

Columbia County Small Woodlands Association Seedling Sale

Saturday, March 8th, 9:00 am - 2:00 pm

Lawrence Oil (Pacific Pride) station, St. Helens

A variety of forest and landscape species available: 'Elite' Douglas fir, noble fir, western redcedar, giant sequoia, grand fir, Oregon ash, red flowering currant, Pacific madrone, coastal redwood, Chinese dogwood, dawn redwood, red Japanese maple, sugar maple, eastern redbud, quaking aspen, ponderosa pine, incense cedar, sweet gum, red elderberry, and juneberry. Douglas-fir, western redcedar, and noble fir available in bag quantity (\$50/bag) but there will be a limit on the number of bags that an individual can purchase. First come, first served! Questions: Paul, 503-556-8800

Washington County Small Woodlands Association Native Plant Sale

Saturday, March 8th, Bales Thriftway, Farmington (tentative). Check www.wcswa.com for details. A wide variety of native plants (including trees) are typically available at this sale.

Weyerhaeuser Public Seedling Sales

Saturdays, February 8th and March 8th, 8 am—noon, Aurora nursery

A variety of forest and ornamental species available in individual quantity, and forest/Christmas tree species available in bag quantity. No preorders. For details: <http://myseedlings.com>

You can also search seedlings available from nurseries and landowners at the **Forest Seedling Network**. <http://forestseedlingnetwork.com>.



OSU Forestry & Natural Resources Extension is now on Facebook!

<https://facebook.com/osufnr>

“Log” on and engage with the Oregon forestry community from your home, from the forest, from just about anywhere!

Chasing Early Seral

By Amy Grotta

Reprinted from TreeTopics, <http://blogs.oregonstate.edu/treetopics>, January 8, 2014

Early seral...it's one of the biggest buzzwords in Pacific Northwest forestry these days. But what is it? Put simply, early seral refers to the first stage in forest development following any disturbance, including wind, ice, fire or logging. An early seral, or early successional community is made up of the [first colonizers](#) of a forest opening: grasses, other herbaceous plants and broadleaf shrubs.

This biologically rich early seral stage was highlighted as a high priority at last year's [Wildlife in Managed Forests Conference](#). It's also an important component of the "ecological forestry" strategy that is [proposed under the Wyden bill](#) for management of federal forest lands.

There are several reasons why these early successional communities are the subject of research and policy discussion. One is their value for wildlife: these hardwood mixtures contain a high variety and abundance of foliage, fruit and pollen used by all manner of insects, birds, and larger animals. In fact, some birds rely almost exclusively on this landscape component.

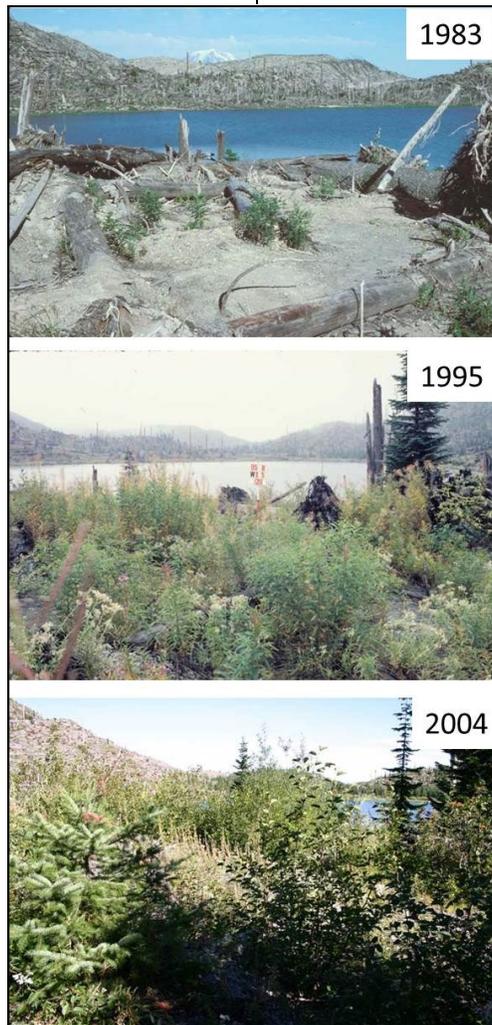
Secondly, there's not as much of it as there used to be. "Wait a minute", you say, "what about clearcuts? Shouldn't there be more early successional sites on the landscape?" The thing is, most landowners want to get trees growing again as quickly as possible; and our Forest Practice rules require it. Shrubs and grasses are seen as getting in the way of this objective, for good reason. So, in effect, the early seral stage on most private lands begins to disappear as soon as the trees are Free to Grow; by law, in six years.

On the other hand, early seral communities can last decades when they evolve naturally after a big disturbance, without any trees being planted. In fact, much of the thinking behind early seral characteristics comes from research done at Mt. St. Helens, [where these communities persist 30 years after the blast](#). In fact, as I heard one scientist put it, when it comes to early seral communities, "regeneration failure is success!"

Obviously, on private lands, regeneration failure is not what we are after! So, there's [quite a bit of research](#) going on at OSU and within private industry about how to balance the competing objectives of growing new trees quickly while maintaining the structural characteristics of an early seral community.

Meanwhile, as a small woodland owner, you may find that your land management goals allow some room for these early seral habitats. So while we pay attention to what the science tells us, there are also examples and lessons to be learned from other woodland owners who have successfully (or unsuccessfully) tried to encourage early seral communities in their regeneration areas. This summer our Master Woodland Manager class visited a clearcut where, thanks to some careful management, the trees are free-to-grow and deciduous plants are thriving. Herbicides were used to control bigleaf maple clumps and to free up growing space around the trees, but shrubs such as elderberry and hazel were left to grow in spaces between the trees.

"Early seral" may not yet be the topic of your next dinner party. But in the conversation of forestry, it appears that this is one that is here to stay for a while.



Time series of early succession in the Mt. St. Helens blast zone. Credit: USDA Forest Service, Mt. St. Helens National Volcanic Monument

Winter Weed Work

By Glenn Ahrens, OSU Extension Forestry & Natural Resources, Clackamas, Marion & Hood River Counties

Winter can be a good season for dealing with weed trees and brush in conifer forests with ground-based treatments (as opposed to aerial treatments). The leaves are off, the brush is down, and it is easier to see where you are going. It is also easy to see the conifers you may want to release from competing hardwoods and brush species. When you are done with the winter work in the brush, you will have opened up ground for planting trees in early spring, if needed.

But there can also be some compromises with winter weed work in terms of effectiveness in killing the undesirable trees and brush species. It is important to develop a winter weed management strategy that will be most effective on your target weeds, depending on your capabilities in terms of tools, resources, labor, and/or do-it-yourself abilities. We have some winter weed work to do at the Hopkins Demonstration Forest, so I will use this as an example.

In our Uneven-aged Management Unit at Hopkins Forest, we have patches in need of preparation for planting, and other patches with established seedlings and saplings in need of release from hardwoods and brush. In both situations, our goal is to make room for up-and-coming Douglas-fir and western redcedar. The primary weed trees are bigleaf maple, red alder, bitter cherry, and willow. Primary brush species are hazel, vine maple and Himalaya blackberry.

I reviewed a variety of options for dealing with our target weeds, as discussed below. We plan to do our weed work with help from staff and volunteers on Community Forest Work Days at Hopkins Forest. Discussion of herbicide treatments and likely effectiveness is based on the PNW Weed Management Handbook, updated annually with recommendations for major species of trees, shrubs, and herbs (<http://pnwhandbooks.org/weed/other-areas/forestry-and-hybrid-poplars/forestry>).



Bigleaf maple, alder, cherry, and vine maple in a conifer plantation – a winter weeding “opportunity”? Photo: G. Ahrens

Discussion of herbicide treatments and likely effectiveness is based on the PNW Weed Management Handbook, updated annually with recommendations for major species of trees, shrubs, and herbs (<http://pnwhandbooks.org/weed/other-areas/forestry-and-hybrid-poplars/forestry>).

Cutting only – Remove aboveground competing vegetation by cutting all the weed trees and brush down to the ground with chainsaws. Many landowners rely on repeated cutting as their primary weed control method. It is labor intensive, but it can succeed with diligence and repetition. Unfortunately, most weed trees and brush re-sprout vigorously and winter cutting does little to reduce sprout vigor since many plants store energy reserves in their root systems for the winter. Cutting is often most effective in reducing sprout vigor when it is done early summer after plants have expended energy in spring shoot growth.

Cutting plus treating stumps with herbicide – treating cut stumps with appropriate water-based herbicides is effective for killing root systems on most weed tree and brush species. Winter stump treatment can work OK, though higher rates of chemical are often needed and effectiveness is somewhat less than application in the optimal season (usually summer or fall - varies depending on chemical and weed species). Based on the PNW Weed Handbook, imazapyr would be one of the most effective herbicides for this across our target species list.

All methods involving cutting have the drawback of putting a lot of slash on the ground, which may require treatment to improve access and reduce fire hazard –by lopping and scattering or making small piles. Working with chainsaws has safety hazards due to the saws and exposure to exhaust fumes.

Herbicide injection or hack and squirt with appropriate water-based herbicide is effective for killing root systems on most weed tree species. By leaving the trees standing, slash is not an immediate problem and standing dead trees provide partial shelter from excessive sun exposure of overtopped conifers. Small-stemmed brush species are not easily treated this way. Similar to stump treatment, injection or hack and squirt may require higher herbicide rates in winter and be less effective than applications in optimal season.

Basal bark treatment with herbicide in oil is an effective winter treatment on most all of the target weed species. A preferred chemical for this is triclopyr-ester. Some advantages of the basal bark method are that one herbicide solution can be used on both trees and shrubs, there will be no immediate slash problem, and it kills the roots effectively. As it says in the PNW Weed Handbook “...basal applications are effective from February to November. For basal treatments, mix the spray with oil and apply to the lower 15 inches of a tree trunk or brush stem, soaking the trunk liberally to the ground line. Basal treatments usually control even larger hardwood trees with thick bark. Application is easiest if the base of the tree is scraped bare of moss and debris before treating.”

For our work at Hopkins, we will most likely employ a combination of 1) cut stem with water-based herbicides and 2) basal bark treatment with herbicide in oil to provide some demonstration of effective options. Besides the options above, various other methods and strategies for winter weed work may work for you.

For more information and education about forest weed management, see the following:

- [Forest Vegetation Management](http://blogs.oregonstate.edu/treetopics/?cat=55528), Tree Topics blog: <http://blogs.oregonstate.edu/treetopics/?cat=55528>. Covering topics including: Weed Control and Herbicide Basics, Understanding Foliar Herbicides, Using Foliar Herbicides.
- Weed Management classes at Clackamas Tree School, March 22, 2014, Oregon City.
- Forest Weed Management Field Day, April 19. Call 503-655-8631 or email jean.bremer@oregonstate.edu.

Forestry Pesticide Disclaimers

The attention given to herbicides does not indicate an advocacy for their use but an acknowledgement that using herbicides presents some unique risks, and that landowners and managers need to know enough about them to make informed decisions on their use.

Trade-name products are mentioned as illustrations only. This does not mean that the Oregon State University Extension Service either endorses these products or intends to discriminate against products not mentioned.

Use pesticides safely!

Wear protective clothing and safety devices as recommended on the label. Bathe or shower after each use.

Read the pesticide label—even if you’ve used the pesticide before. Follow closely the instructions on the label (and any other directions you have).

Be cautious when you apply pesticides. Know your legal responsibility as a pesticide applicator. You may be liable for injury or damage resulting from pesticide use.

Reading this on paper?

You can receive this newsletter (in full color and with working links) and other news by subscribing to our email list.

Just send an email to vicki.krenz@oregonstate.edu and request to be on the forestry email list.

Please indicate which county you are in. Include a physical address and phone number (so we can remove you from our paper mailing list and keep our email list current).

Biomass Research Brief—Transportation of Residues: Would You Bundle?

By Janna Loeppky, M.S. Candidate, Oregon State University

This update is from the Northwest Advanced Renewables Alliance (NARA), a research effort focused on the potential for woody biomass to be converted to jet fuel. More info: <http://owic.oregonstate.edu/NARA>

In the forest industry, timber harvesting supplies the demand for one of the world's most renewable resources: logs. Although the majority of consumers may only know about the final products purchased from mills and lumberyards, the harvesting operation is quite extensive. From stump to mill, the costs for extracting desirable trees to fulfill market demand range in cost depending on the size of the unit being harvested and the amount of trees to be cut.



What's the most cost-effective way to convert biomass in slash piles to a feedstock? Photo credit: Oregon Dept. of Forestry

In a recent interview with Dr. John Sessions, Professor of Forest Operations Management in the College of Forestry at Oregon State University, the topic of bundling and biomass transport was discussed. So, what is bundling you may ask? Forest harvest residues (slash) left after harvesting are normally put into a roadside grinder to increase their bulk density before shipping to a plant because branches and tops occupy about 4-5x the volume of solid wood. Although density is increased significantly by grinding there are several disadvantages. First, the grinding takes place in the field using diesel. Diesel, in the Pacific Northwest, is about 3 times the cost per unit of energy as electricity. Second, the ground materials are transported in large chip vans that do not have the mobility that stinger-steered log trucks have. Chip vans are restricted to flatter grades, require wider roads, and must have a larger area to turn around. Third, forest residues, once ground, do not continue to dry, and under some conditions are subject to spontaneous combustion.

Bundling or baling has advantages of marking "artificial logs" at the landing at bulk densities at least as high as ground materials. These artificial logs, bundles or bales, may have potential to be carried on more truck trailer with greater mobility such as modified short log trailers. Bundles or bales are less subject to spontaneous combustion, and can be stored for longer periods of time. Bundles or bales can be ground at the plant on electricity at the plant, at a much lower energy cost than diesel grinders. Electric grinders are also less expensive to run. Although bundles are denser than ground materials, getting trailers up to weight can be a challenge, as staked trailers do not have the same volume capacity as large chip vans. Care also needs to be taken to ensure bundles or bales do not become safety hazards during transport over public roads.

Why isn't everyone bundling? The primary holdup is the cost of the bundle. The supply chain for the bundle is not currently competitive with the roadside grinding because of the high cost of bundling. That is not for lack of effort in Europe and North America, but it is still to be demonstrated under what conditions bundling can be competitive. Some potential avenues include mounting bundlers on lower cost carriers, reducing labor costs by combining bundling with other log processing activities on the landing, and making denser bundles so that transport costs can be further reduced.

As part of the NARA project we are investigating all opportunities to reduce feedstock supplies including bundling and baling. Planned activities this year include grinding tests of residues and slash bales to compare energy requirements for comminution, examine opportunities to increase bale density, and to measure moisture content reduction over time for baled residues.

Works Cited

- Laitila, Juha et. al. (2013). Productivity and Cost-Efficiency of Bundling Logging Residues at Roadside Landing, *Croat.j.for.eng.* 34(2):175-187.
- Loeppky, J. – Interview with Dr. John Sessions concerning his research in biomass residues and their transportation (personal communication, December 8, 2013)
- (2013). *ODOE: Bioenergy in Oregon*. Biomass Producer or Collector Tax Credits. Retrieved from: <http://www.oregon.gov/ENERGY/RENEW/Bio>

New Extension Publications

“Alternative Forest Management” Case Studies

This series of publications illustrate successful examples of nontraditional forest management techniques and highlight lessons learned along the way. They can all be found at

<http://extension.oregonstate.edu/catalog/pdf/silv/silv1.pdf>, or downloaded as individual case studies.

EM 9082, Two-Aged Stand Management in the Coast Range

<https://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/42990/em9082.pdf>

EM 9083, Individual Tree Selection (ITS) in a Northeast Oregon Mixed Conifer Forest

<https://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/42986/em9083.pdf>

EM 9084, Mixed Conifer and Hardwood Forest Management in Southwest Oregon

<http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/44661/em9084.pdf>

EC 1628, Home Heating Fuels, Should I switch to firewood or wood pellets?

Author: J. Reeb; Revised November 2013, 6 pages.

<http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/44105/ec1628.pdf>

EC 1643, Home Heating Fuels Workbook: Compare the cost of using firewood or wood pellets with other fuels for home heat

Author: J. Reeb; New November 2013, 2 pages.

<http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/44143/em1643.xlsx>

EM 9090, The Scribner volume and value tables: bucking for maximum revenue

Author: Steve Bowers; New November 2013, 7 pages.

<http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/44035/em9090.xlsm>

Establishing and Managing Forest Trees in Western Oregon

By Tristan Huff, Joe Holmberg, Chal Landgren, and Rick Fletcher.

Published by Oregon Forest Resources Institute.

Download or order a printed copy from <http://oregonforests.org/content/ofri-resources>

Trees and Forests in the News

[Oregon wildfires in 2013 burn more land than any year since Tillamook Burn](#) (*The Oregonian*, October 16, 2013)

325 square miles burned overall in Oregon. The state spent \$122 million fighting the fires, which burned an estimated \$370 million in timber. Fire experts predict that big fire years like these will become more the norm in the future due to climate change.

[Alternative harvesting method provides foundation for Wyden O&C plan: Guest opinion](#) (*The Oregonian*, November 30, 2013)

Jerry Franklin (Univ. of Washington) and Norm Johnson (Oregon State Univ.) describe variable retention harvesting, the system that they are piloting on Bureau of Land Management forests and which is prescribed under Senator Ron Wyden’s proposed legislation for increasing timber harvest on federal lands.



Christmas Tree Corner

By Chal Landgren, OSU Extension Christmas Tree Specialist

Good Times Ahead?

The 2013 harvest season is now a memory. And with luck, the dismal glut of the last 5 or so years is also behind us. More than a few growers reported being “sold out” this year, two words that have not been heard for a while.

Exports into Hawaii were much improved this season, but still far from perfect. Just over 200 containers were shipped into Hawaii this season and around 17% were rejected. Last year 38% were rejected. Again, slugs were the problem despite multiple shaking(s) and slug baiting efforts of growers this year.

Exports into Mexico went smoothly for most growers. One load was rejected for strawberry root weevil and some loads were delayed due to paperwork problems, but overall trees made it to Mexico with minimal problems or delays.

New for 2014

As to “new items” for 2014, there is a new herbicide that recently was registered for use in Christmas trees. The trade name is Mission. The chemical is flazasulfuron and it has been used in Europe for a number of years in Nordmann fir plantings. It is both a pre- and post-emergent product to control broadleaf weeds and grasses less than 4 inches tall. It cannot be used in the first year of planting. In a number of trials I have observed very good control of Queen Anne’s Lace with Mission. No word on cost yet.

Also somewhat new this year is the developing seed orchards for noble and Turkish fir at NWREC. These are small, about 1.5 acres for both. Grafting scion wood cuttings began in 2012 and will continue over the next few years. The trees are not even knee high yet, but survived last summer in good shape, though I need to admit the nobles received one irrigation shot during the long dry spell we had in early summer. The orchards will have at least two purposes. One will be future seed production, though that will be a few years distant. The other purpose is that the site will be a way to preserve the “best-of-the-best” from progeny trials.

For noble fir, the orchard will include cuttings from the top 15% (\$ value/tree) of the progeny from tests stretching from 1996 to 2013. The Turkish fir orchard will similarly have cuttings from the top sources from trials in 1999 and 2004 plus the best sources from the trial planted in 2013 with 60 progeny sources from individual trees in 3 regions of Turkey in 2010. This 2013 test planting on Jim Heater’s farm contained over 3000 seedlings and had 99.9% survival by the time fall rains arrived this year.

Wishing you a great 2014...



Turkish fir seed orchard with some newly grafted seedlings planted in October 2013



Oregon State University Extension Service
 Columbia County
 505 N. Columbia River Hwy
 St. Helens, OR 97051

NONPROFIT ORG.
 US POSTAGE
 PAID
 ST. HELENS OR
 PERMIT NO. 002

Return Service Requested

<i>In this issue:</i>	
Upcoming Events.....	Page 2
Seedling and Native Plant Sales.....	Page 3
Early Seral Forests.....	Page 4
Winter Weed Work.....	Page 5
Biomass Research Update.....	Page 7
New Publications.....	Page 8
Trees and Forests in the News.....	Page 8
Christmas Tree News.....	Page 9