Spring Comes Early this Year!

Don’t ask me where this past winter went—then, spring. It’s been more than six months since my last newsletter. My apologies. But, we do have a lot going on at NWREC. The faculty and staff have been busy with the usual round of education programs during the dark days, field work started early this spring, and now it’s full steam ahead into summer.

Here’s the quick recap of the past several months since our last communication. We ended the calendar year strong with a variety of projects needing to be completed to close out the year. The faculty at NWREC get very busy finishing up field work before the weather turns and writing project reports.

December included Wei Yang’s annual blueberry pruning workshop. This year’s session included a new twist—sharing data from a pruning research trial testing new ways for pruning...and, teaching the workshop in Spanish for the first time—as well as, the normal English delivery.

In January, we hosted our second youth tractor safety training and certification course. That audience was ten juvenile department youth from Clackamas County. The purpose was to provide a positive learning experience for youth needing to change the direction of their lives. Providing employable and practical skills and helping youth experience positive success in their life was the real goal. Mission accomplished—as a result, we have now employed one of these young kids for the summer.

Many of our NWREC faculty and staff were involved in the annual North Willamette Horticulture Society meetings in mid-January at the Canby Event Center that brought together nearly 300 farmers for a three day educational program. OSU Extension faculty and researchers provided much of the up-to-date learning.

Late January was the North American Raspberry and Blackberry Association’s annual meeting held this year in Portland. NWREC faculty, again, were heavily involved.

February included numerous education events and activities from nursery best practices workshops for field and greenhouse workers, Christmas tree and Master Gardener presentations, to professional meetings, vegetable grower and special seed grower meetings, the canola debate, and on and on.

Spring Break was a good time to offer the next three-day youth tractor safety training and targeted local farm kids and those wanting to work this summer. Since we filled the session and had a waiting list, we held another three day training in May, too.

Then, there was a series of food safety and handling workshops taught by Bilingual Educator Luisa Santamaria during April and May. Eight locations from Albany to Gresham were sites for these day-long trainings that included a three hour English session and a three hour Spanish session at each location.

We have more to share on the following pages. We hope you enjoy reading about what our faculty and staff are doing to make Oregon’s agriculture in the Willamette Valley successful, profitable, and able to provide the food and fiber the people of this state need and want.

Michael C. Bondi
Director of the North Willamette Research
and Extension Center

oregonstate.edu/dept/NWREC
A "new" species of Christmas tree is now one of Oregon's most widely planted. Noble fir and Douglas-fir have long been Christmas tree mainstays in our state, but nordmann and Turkish fir (genetically closely related trees) have now replaced grand fir as the third most common Christmas tree species in Oregon with around 430,000 trees planted yearly.

Why a new tree?
There's certainly nothing wrong with our mainstays. Both are native to the Pacific Northwest and grow well. But, consumers like choices, and our new species have their place. Also, tree farmers have been looking for an alternative to noble fir where that tree may not grow well. In this article, we will be talking mainly about Turkish fir. Many growers lump Turkish and nordmann fir together since they are hard to tell apart and both originate from the Black Sea area of Asia.

Turkish fir has been grown in Oregon since the 1960's in small numbers. Growers found this species resistant to many of our common root diseases and insect pests. Also, it grew in places too wet for noble, had very dark green foliage, and displayed well in homes.

But, there have always been challenges. First, it is hard to get seed across the globe. Second, when seed has been available we've never known if we were getting the seed from the best locations and best trees in its native habitat. Both these questions are difficult to sort out from such a long distance, too.

Oregon has not been the only state in the U.S. or the country interested in Turkish fir. With interest growing to find better and more secure supplies of Turkish fir seed, a research group was established with representatives from the PNW, Denmark, North Carolina, Pennsylvania, Michigan, and Connecticut. The plan called for a seed collection trip to Turkey that included myself, John Frampton and Fikret Isik (both from North Carolina State University), and Gary Chastagner (Washington State University). We traveled to Turkey in the Fall of 2010. We collected seed from 60 Turkish fir trees and 40 Trojan fir (another relative of Turkish fir) trees. In Turkey we met up with a seed collection expert, climbers, interested foresters and bystanders. The collection regions were separated by hundreds of miles and the trees we collected seed from were only hundreds of yards to miles apart. Each tree required climbing (or, in two cases, cutting down) to reach the cones.

The cones we collected in Turkey were processed there to remove and clean the seed. In the end, our 3 weeks of collecting yielded over 200 pounds of seed and the first wide ranging Turkish fir collection ever in the U.S.

Connecting to Oregon and NWREC
Once back in the Pacific Northwest, the seed was planted in a nursery near Springfield, OR and finished its second growing season this past fall. These seedlings are being planted this spring in progeny evaluation trials at 10 locations in 7 states across the U.S. In these trials, the trees will be grown and cultured by Oregon State University's Extension Service has been working with Christmas tree growers in our state since the beginning of this industry in the 1950s. In fact, early Extension Agents worked closely with farmers to develop the concept of growing trees in rows in farm fields—rather than cutting trees from the forest. For the past 35 years, Oregon has been the nation's largest Christmas tree producing state providing about 25% of all trees to households in the U.S. and generating more than $100 million to the state's economy through tree sales.

OSU's Christmas Tree Extension Program is housed at the North Willamette Research and Extension Program—the only research center in the state working with this farm crop. Chal Landgren is the OSU Extension Specialist for Christmas trees. In addition, three OSU Extension Forestry Agents in western Oregon work with Chal to provide education programs and support the applied research done to address the needs of Christmas tree growers in our state.
Christmas tree farmers under standard field conditions. Observations will be made throughout their ten-year growth cycle and at harvest to determine the best trees in the fields and identify which trees to propagate for the industry’s seed supply. At that time, branch cuttings will be taken or the trees dug in the field to preserve their genetic material.

While these field evaluations are moving forward on tree farms around the country, a tree seed orchard is being established at NWREC as a place to hold these best tree sources and to grow large quantities of seed from them. A two-acre site on the only hillside area at the Center was selected as the best area for growing trees on the farm. The orchard was cleared and prepared in the fall of 2012. The first plantings of grafted noble, nordman and Turkish fir were planted this past April.

The orchard will be a repository for the best of the best trees. As the field evaluations are completed over the next ten years, those best trees will make their way to the NWREC seed orchard, too—the offspring of mother trees collected in Turkey. By then, the cycle from Turkey to Oregon and to NWREC will come full circle. Ultimately, Turkish fir seed from tested and proven outstanding parents evaluated here in the Northwest—will become available to Christmas tree growers in our region of the county.

Stay tuned as this story continues. In the meantime, remember to look for a nordmann or Turkish fir for your Christmas tree next holiday season—and, see what you think of this new tree species.

High School Scholars Take Awards

During the past four years, Luisa Santamaria, Nursery Pathology and Bilingual Extension Educator at NWREC, has been cultivating the talents of aspiring high school students wanting real-world science experiences. Last summer, Santamaria hosted eight students who interned with her to learn basic laboratory skills in her pathology lab and work on projects to support her nursery program. Several of the students took on their own projects, too, that continued during the school year and, ultimately, were entered in this year’s science fair competitions in Oregon.

And, three students have now won awards for their work. Congratulations to Zaina Zadia, Camile Collier, and Kim Tran.

Luisa has been fortunate to have the opportunity to work with very talented and motivated youth and has been able to provide experiences and guidance to help them reach their potential. In a note to Luisa, Camile wrote, “I first can’t even express how thankful I am towards you as a mentor and a role model. I attribute much of my success to the learning that you have provided me in so many ways.”

Landscape Makeover in Progress, too

Additional funds available in our NWREC budget this year are allowing us to renovate the landscape around the Main office building. A team of several staff members have been working on plans. Most existing plants were removed last fall. As the soil has dried this spring, the farm staff has begun tilling the ground and preparing for planting later this spring and summer.

Be on the watch as this project progresses into the summer! Four high school-aged interns will be making this happen.

Calendar of Events

See NWREC website for detailed information and registration details.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>Time</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 10</td>
<td>Caneberry Open House</td>
<td>NWREC</td>
<td>1:00-5:00pm</td>
<td>Bernadine Strik</td>
</tr>
<tr>
<td>July 17</td>
<td>Blueberry Field Day</td>
<td>NWREC</td>
<td>1:00-5:00pm</td>
<td>Bernadine Strik</td>
</tr>
<tr>
<td>July 24</td>
<td>Community Open House</td>
<td>NWREC</td>
<td>4:00-7:00pm</td>
<td>Mike Bondi</td>
</tr>
</tbody>
</table>

503-678-1264 • oregonstate.edu/dept/NWREC
The North Willamette Research and Extension Center hosted its first youth tractor safety and certification training in late June, 2012. The program was made possible through a collaborative effort of the Center and their facilities and staff—along with the Clackamas County Extension office.

Jan Williams, Clackamas County Extension 4-H Agent said, “We had been getting requests from youth and their parents about finding a place to get certified to operate farm machinery. But, we didn’t have an easy way to make this happen. NWREC has the perfect facilities, equipment, and the staff willing to make the training happen. And, it’s a great connection for NWREC to these kids and their families in the community.”

Tractor trainings are hard to find. But, youth wanting to work on farms need the training and certification to be employable. Few certified instructors are available, too.

NWREC’s first training included 37 youth. The event was a great success and more and more calls started coming in asking, “When’s the next class.” Another class was offered the first week of January with 10 students. The next class was Spring Break and we limited the group to 20 students. The event was a great success and more calls started coming in asking, “When’s the next class.” Another class was offered the first week of January with 10 students. The next class was Spring Break and we limited the group to 20 students. The next class was Spring Break and we limited the group to 20 students. The next class was Spring Break and we limited the group to 20 students. The next class was Spring Break and we limited the group to 20 students. The next class was Spring Break and we limited the group to 20 students. The next class was Spring Break and we limited the group to 20 students. The next class was Spring Break and we limited the group to 20 students. The next class was Spring Break and we limited the group to 20 students. The next class was Spring Break and we limited the group to 20 stu-

dents. We now believe that the smaller class size provides a better learning experience for the youth and more driving time and supervision. Since the Spring Break class filled quickly, a follow up training was offered in May, too.

NWREC Director, Mike Bondi, said, “I believe we can play an important role to offer a high quality training with lots of hands-on experience for the kids and prepare them for working on farms. I’d like to see us offering regularly scheduled trainings each spring and early summer, so folks can plan in advance—and, know we will be there.”

Local farmers and machinery dealers have been very supportive of the youth tractor trainings, too. Ag West provided tractors for last summer’s training. Pape Machinery, John Deere, and Brim have supplied equipment, too. Other farmers and business have provided lunches, purchased official certification T-shirts for the successful trainees, and helped defray the costs of operating the program. And, as a special feature of the program, the Aurora Fire Department has come to the trainings to provide a fire safety training showing the kids how to operate fire extinguishers for initial attack.

According to Bondi, “It’s great to see this support. We know we are doing something important when the community steps up to support a program like this. We want this program to grow. We want to help prepare the next generation of farmers and workers. We want this program to be sustainable into the future. Together, we can make this program the best around.”
Long-time Veggie Agent Retires—again

Bob McReynolds, Extension’s Vegetable Agent at NWREC is set to retire—for the last time from OSU. McReynolds officially retired in June, 2010, but has continued to work for the past three years at 1/2 time. During this time, he has continued to serve the vegetable and specialty seed crop industry and has worked with growers to develop an endowment for his program.

“Bob has been a real asset to our programs during these past three years,” said Mike Bondi, NWREC Director. “His continued work has allowed us to have a person working with these industries even though the university wasn’t able to rehire this position. But, more importantly, Bob has worked closely with his growers to form an endowment to continue this position.”

During the past 2 1/2 years, the endowment effort has raised nearly $300,000 from 18 individuals, businesses and organizations to support the endowment. Bondi says the endowment will need at least $500,000 of funding support before it can be considered for a staffing position.

McReynolds is a highly respected and trusted educational voice in the vegetable industry. His accomplishments include starting the pesticide registration program at NWREC that has worked to evaluate efficacy for pesticides on specialty crops, food handling best management practices for fresh vegetables, and working closely with specialty seed crop growers in Western Oregon.

Become a Friend of NWREC Today!

Our Friends are great and many have already renewed their membership with a 2013 contribution. Those not yet already a Friend of NWREC are encouraged to join the team.

Contributions by our Friends of NWREC have been instrumental in helping us transform our facilities, plus initiate new educational programming and outreach in the community. We are very grateful for the support.

Find out more about our Friends and how to join on our new website at http://oregonstate.edu/dept/NWREC. You’ll see the Friends of NWREC tab across the top rail—and, down the right side rail, too. Memberships begin at $25. Our goal this year is to reach 200 members and $25,000.

Membership—Friends of North Willamette Research and Extension Center

YES, I WANT TO BECOME A FRIEND OF THE NORTH WILLAMETTE RESEARCH AND EXTENSION CENTER!

Name: ____________________________________________

Address: ____________________________________________ City, State, Zip: ____________________________

Phone(s): ____________________________ Email(s): ____________________________

☐ I prefer to remain anonymous. Please do not publish my name in future publications.

Membership Category (circle one):

- $25 Member
- $100 Second Crop
- $500 Director’s Club
- $2,500 President’s Club
- $50 First Crop
- $250 Bumper Crop
- $1,000 Dean’s Club
- $5,000 Sustainable Agriculture Club

Make checks payable to: OSU Foundation–NWREC

Mail to: North Willamette Research and Extension Center, 15210 NE Miley Road, Aurora, OR 97002

Membership forms for the Friends of North Willamette Research and Extension Center are also available by contacting the NWREC office at 503-678-1264 or downloading from the website at http://oregonstate.edu/dept/NWREC.

Contact Director, Mike Bondi, for more information or to discuss life or deferred gifts options.

Phone: 503-678-1264 • Fax: 503-678-5986 • E-mail: michael.bondi@oregonstate.edu • Cell. 503-705-2434
The *E. coli* contamination in a strawberry field in Washington County during the summer of 2011 caught area fresh fruit and produce growers by surprise. The situation could have been much more devastating than what turned out.

But, to help avoid future problems, berry growers decided they needed training for their farm field workers and their supervisors on how to minimize the risk the potential for food-borne disease contamination.

Luisa Santamaria, a nursery pathologist and bilingual educator at NWREC, was asked to lead the training last year and teach three-hour food safety and handling workshops—in both English and Spanish—at four locations in the Valley. She did and the sessions were very successful, reaching more than 250 field workers and supervisors.

The berry growers are expanding their education and outreach efforts in 2013. Eight workshop locations were delivered this past April and May throughout the Willamette Valley. Each workshop location included three hour English and Spanish sessions. These are “train the trainer” sessions, so it is expected that attendees will take their new knowledge and educational material back to their farms and share with their workers.

The first Food Safety and Handling workshop was held at the North Willamette Research and Extension Center on April 4. Other locations were in Cornelius, Woodburn, Gresham, McMinnville, Jefferson, Salem and Albany.

**Tours Keep Coming...Winter, Spring and Summer!**

Portland was host to the North American Raspberry and Blackberry Association’s annual meeting this past January. And, of course, the berry growers and industry representatives wanted see local farms and practices while in the area.

“It was a wonderful event,” said Dr. Bernadine Strik, OSU Extension Specialist for Berries and the Berry Research Leader at the North Willamette Research and Extension Center. “We had several days of meetings in town and a great field day to showcase the industry here in the Valley.”

Strik led a team of people to organize the field day for the meeting. The first stop on the tour was at NWREC to view research being done on berries in the region. The Research Center is considered one of the top places in the world for its work on strawberries, cane berries and blueberries. Evaluation trials for new berry cultivars, pruning, irrigation and nutrient management research studies all occur at NWREC. Also, the Center is home to the largest blueberry and blackberry research trials being done on certified organic ground-anywhere in the world!

In May we began opening our doors at NWREC to community tours, too. Local groups are now calling to see what we are doing. The Canby Church of Christ brought 22 visitors. A group of agricultural extensionists and development staff from Tajikistan (county just north of Afganistan) spent a day with our staff at the end of the month, too. And in June, we began regular tours on the first and third Fridays of each month through October—aimed at sharing the important work we do with the public audience.
Oregon State University is cooperating with Solar City—a Portland area based company—to develop solar energy applications to reduce power bills for the institution. Two solar arrays (each an acre or two of solar panels) were installed at two locations in the Corvallis area. A third array of about six acres is scheduled for installation in the coming months.

OSU is interested in developing two more projects at off-campus locations and NWREC has been identified as one possibility. Currently, NWREC spends about $25,000-$28,000 on its electrical bill. The arrays generate about 80% of the total electrical need. No excess power is produced. During periods with adequate sunlight to generate power, the power is utilized as it is produced. Excess power is put back into the utility grid and credited to the producer. When solar power is in short supply, power is provided by the utility.

The proposed solar energy production array at NWREC would be expected to reduce the power bill by up to about 1/2. The project would have a 20 year agreement between OSU and Solar City. During this period the electrical savings could be about $250,000.

Negotiations are currently going forward with Clackamas County government and OSU. Since Clackamas County owns the property where NWREC is located—and, OSU’s lease is only 10 years—hurdles do exist on the project.

Stay tuned for more information in the coming months.

Is Solar in NWREC’s Future?

An article in the Spring 2012 edition of Down on the Farm, shared plans for growing flax at NWREC. The idea was to get experience in growing this crop for fiber production—a once wide spread crop in the Willamette Valley and significant industry up until WWII for the production of linen cloth.

During spring last year we planted about 15 acres in flax. At the time, we were working with a Canadian company, Naturally Advanced Technologies, Inc (NAT) who had opened an administrative office in Lake Oswego. NAT was helping farmers build a flax industry on the East Coast and were interested in doing the same here.

So, what ever happened to our flax story? The flax crop at NWREC grew well last year. We evaluated two seeding methods (broadcast and drill) and two seeding rates. We estimated production at about 3 to 3 1/2 tons per acre. NAT had been working with growers throughout the Valley and had about 400 acres in production at several farms with plans to harvest the fiber, minimally process it here, and ship to the East Coast for further processing. Also, the plan was to harvest the seed crop—before the fiber—so, it would be available to expand the planting acres going forward.

Harvesting the seed proved more problematic than anticipated. Finding the right machinery and its availability was the challenge. None the less, we were able to produce about 5,500 pounds of seed at NWREC. The fiber was even more difficult to work with. The flax wouldn’t cut easily. Laying it on the ground with a roller was the most practical way to get it down to rake. The fiber needed to rett or breakdown naturally by microorganisms on the damp fall ground before the primary processing. But, the fall weather was very dry and warm. Once the rains did start in mid-October—it never stopped! So, getting the crop to rett properly and, then, getting the fiber out of the field never happened.

At NWREC we are committed to learning more about growing flax and finding a fit for agriculture in the north Valley. This year we are experimenting with five flax varieties (fiber, seed and oil types) evaluating for their growth characteristics here. Also, we have retained a small flax field from last year and let the crop overwinter and self-reseed. It appears we will have a full stand this spring. We will continue working on weed control options for growing flax and look a harvesting technologies and primary processing.

Flax Story

Artist's drawing showing the basic design of the proposed solar array at NWREC along Miley Road.
Community Open House—Plan to Join Us

NWREC’s annual open house will be Wednesday, July 24 from 4:00-7:00pm. Everyone is invited. The event welcomes the neighbors, friends and the public to learn about the Center and the work done there to support local farmers—from growing fruits and vegetables, to nursery and greenhouse crops, and Christmas trees.

“We are excited to open our doors to the public annually to share the important work being done at NWREC,” said Mike Bondi, the Center’s Director. “Our research and education targets more than 3,000 farmers—large and small—and, their workers in North Willamette Valley area.”

More than 240 community members attended last summer’s event. The Open House includes educational displays about local garden and landscape pests, research and development underway at the Research Center, and 45-minute hay wagon farm tours that feature the latest field trials around a portion of the farm. The tours will depart at 4:00, 4:45, 5:30 and 6:15pm.

Special topics of interest featured this year will include a proposed solar array planned for sitting along Miley Road at NWREC (see this on the hay wagon tours), the world’s first blueberry tree, and a discussion station for those wanting to learn about GMO wheat.

Other Open House features include fresh vegetables available from local farmers, berry tasting, Master Food Preserver demonstrations, and Master Gardener information.

No registration required. Come and enjoy a beautiful summer evening!

For more information, contact NWREC at 503-678-1264.