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Extension Service

A Quarterly Newsletter for Friends of North Willamette Research and Extension Center

SUMMER 2012

Summer Brings New Opportunities

The summer season at the North Willamette Research and Extension Center has been a time of new and exciting programs, our annual activities, and special opportunities. Here's a quick rundown of what's been going on since our last issue of *Down on the Farm*:



- **Youth Farm Tractor Safety Training and Certification**—three day hands-on training for thirty seven youth completed in late June.
- **Discover Willamette Valley Agriculture**—a five day workshop spanning three weeks targeted elected officials and staffers, community leaders and the public introducing participants to world of agriculture and what it takes to be successful.
- **High School Emerging Scholars** program began in June with eight students learning pathology lab skills and developing summer research projects.
- Small Farms **livestock management field workshops** focusing on beef, sheep, swine and poultry launched in June and go through August.
- Our new **"Farmer to Farm" program** began in June with Big B Farm in Aurora our pilot grower now working on about seven acres of conventional and organic land in three locations at NWREC.
- Welcomed the **Wilsonville Chamber of Commerce** for a "business after hours" event in late June.

- **Bugs in the System** was a new first-time nursery integrated pest management workshop for growers and managers taught in July.
- The annual **Berry Field Days**—Strawberry, Caneberry and Blueberry—provided up-to-date field reviews of research and new knowledge during June and July.
- The **NWREC Community Open House** held in July, attracted a huge crowd.
- **Re-roofing** has been approved for the NWREC Main Office building in June. Expected start date is the first week of August for this month to six week project.

As you can see, several of the programs and special activities listed above will be finished up the end of the summer and into the fall. More information about several of these new opportunities is showcased inside this edition of *Down on the Farm*—plus other items of interest.

Thanks for following our news from the North Willamette Research and Extension Center. Please pass this information on to others who may be interested. Subscriptions are free upon request.

2012 has already been busy—and, there is a lot more to come!

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

Training on the Tractor



Farming starts on a tractor for 37 youth aged 14 to 17 years old, and NWREC helped them get their start. NWREC's first-ever farm tractor training and certification course was a joint effort of the Clackamas County 4-H program and our farm staff. Extension 4-H Agent, Jan Williams, coordinated the certified instructors, marketing, advertising and recruiting the youth...while NWREC's Farm Manager, Marc Anderson, handled logistics and equipment plus brought in business sponsors to support the event.

Certified Tractor Safety trainings are 24-hour instructional programs that include classroom review of safe operational equipment guidelines and practice driving, maneuvering trailers, and hooking up implements. As many as eight tractors of various sizes and technologies were available from NWREC and business sponsor, Ag West, to give the youth a range of driving experiences.

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Discover Willamette Valley Agriculture



NWREC Extension Vegetable Agent, Bob McReynolds, spearheaded an effort to bring the story of agriculture to a group of

community leaders and decision makers through a brand-new workshop offered this past June and July. Discover

Willamette Valley Agriculture was a five-day, 40-hour workshop that included 1/2-day classroom sessions and 1/2-day field tours to a variety of agricultural farms, processing facilities, and field sites showcasing a range of crops and commodities.

McReynolds said, "The motivation for this course came from a desire to share the story of our region's agriculture with a group of people who need to know and who are involved with making important decisions about agriculture, but may not have a lot of technical knowledge to help inform their decisions."

According to Bill Graupp, City Council member from Aurora, "It was most interesting to learn how government regulations and consumer demands interact to both the enhancement and detriment of the agriculture supply chain."

Funding for Discover Willamette Valley Agriculture was provided this year through a grant from the Clackamas Extension and 4-H Service District. A sustainable source of on-going funding will be needed to continue the program into future.

Welcome, Heidi!

We are pleased to welcome Heidi Noordijk, our new Small Farms Program Assistant working with Metro Small Farms Extension Agent, Nick Andrews. Heidi began her work in April. One-half of the funding for Heidi's position is provided by the Clackamas County Extension and 4-H Service District and the other half comes from Nick's grants and contracts.



Heidi was born and raised in Michigan and completed her Bachelor's degree at Michigan State University with a major in Horticulture and a specialty in pomology or tree fruit science. Although not a farm kid, Heidi does credit her dad with stimulating her early interest in plants as an avid gardener. Also, she received some of her earliest practical experience working on a cousin's farm in New York.

Heidi came to Oregon to participate in the Sauvie Island Organics Farm Apprenticeship Program. She ended up staying with Sauvie Island for the past 3 1/2 years, and eventually, coordinating their Apprenticeship outreach. While at Sauvie Island, she had the opportunity to work with Nick and his field research projects.

"I've always been interested in growing food and helping people learn these methods for themselves. Extension provides a great chance for me to learn while I'm helping others," said Heidi.

One of Heidi's first educational tasks has been coordinating a series of four summer livestock production workshops: June 19 (Raising Cows on Grass), June 28 (Raising and Marketing Healthy Sheep), July 16 (Small Scale Poultry Processing), and August 22 (Integrating Pigs into a Diverse Small Farm). This is the first time the local Small Farms Extension program has focused attention on raising livestock. Also, Heidi and Nick are planning a Small Farms School for Saturday, September 8 at the Clackamas Community College in Oregon City.

NWREC Hosts Wilsonville Chamber

In a continuing effort to reach out to the community, the North Willamette Research and Extension Center hosted the Wilsonville Chamber of Commerce for a "business after hours" event in late June. Nearly 40 local businesses joined for a relaxing evening networking program and to hear about NWREC, what we do and why it's important. For most, it was the first time they were ever at NWREC or heard our story.

"Community outreach is an important priority for us," said Mike Bondi, NWREC's Director. "I believe we are the best kept secret in the area. The work we do at NWREC is important to local farmers throughout the Willamette Valley and the food and fiber every one of us rely on. But, in many cases, most just don't know how important our work is for the community."

The evening event included vegetables for munching, strawberry rhubarb crisp, and strawberry lemonade—all from locally grown fruits and vegetables.

Huge Number Turns Out for Open House

More than 225 attended the Community Open House at the North Willamette Research and Extension Center (NWREC) in mid July. The three-hour late afternoon and early evening event featured nine learning stations, berry tasting, free fresh veggies from local farmers, hay wagon farm tours and tractor driving.

"If was great to see all of our neighbors from the Charbonneau, Wilsonville and Aurora areas," said Mike Bondi. "We appre-



How wasabi grows was the topic Joe DeFrancesco covered at the Open House.



NWREC's Robin Rosetta draws a crowd to hear about the latest research on slugs and snails.



Four hay wagon farm tours were packed with about 30 participants each.

ciated the opportunity to share the important work that is done at the Center and help folks understand why what we do is important to local farmers—and, as a result, to each and every one of us."



But, Bondi noted that attendees to the Open House came from all around the Valley and southwest Washington.

A new feature of this year's Open House was tractor driving. "Our Farm Manager came up with this idea. Many folks have never driven a tractor. Others may not have driven farm equipment for many years. We thought tractor driving could be something unique that isn't always possible for people."

And, it was. The tractor driving waiting line

included 15 people at one point. And, the wide grins on faces—young and old—tell the story about how well this part of the Open House was received.



OSU Master Gardeners sharing their knowledge about plant tests.

Calendar of Events

The events listed below are education programs that OSU faculty at NWREC have designed or provide leadership to organize. Check the NWREC website for additional events, details, and registration information.

- August 7 NWREC Advisory Council.** 5:00-8:00pm. Facilitator: Mike Bondi
- August 20 Christmas Tree Certification—SERF program.** 1:00-4:00pm each day. NWREC. Instructors: Chal Landgren
- August 22 Integrating Pigs into a Diverse Small Farm Operation.** 1:00-6:00pm. Growing Seeds Farm, Corbett. Instructor: Nick Andrews
- September 8 Small Farms School.** 8:00am-5:00pm. Clackamas Community College, Oregon City. Facilitators: Nick Andrews and Heidi Noordijk
- September 10 Christmas Tree Certification—SERF program.** 1:00-4:00pm each day. NWREC. Instructor: Chal Landgren
- September 24 Christmas Tree Certification—SERF program.** 1:00-4:00pm each day. NWREC. Instructor: Luisa Santamaria
- October 4 OktoberPest—Good Neighbors: An Introduction to Beneficial Insects and Mites.** 9:00am-Noon. NWREC. Instructor: Robin Rosetta
- October 11 OktoberPest—Good Neighbors: An Introduction to Beneficial Insects and Mites** (in Spanish). 9:00am-Noon. NWREC. Instructor: Luisa Santamaria
- October 18 OktoberPest—Deny Disease: Reducing the Risk of New Disease Introductions such as Box Blight and Impatiens Downy Mildew.** 9:00am-Noon. NWREC. Instructors: Robin Rosetta and Luisa Santamaria.
- October 25 OktoberPest—Deny Disease: Reducing the Risk of New Disease Introductions such as Box Blight and Impatiens Downy Mildew;** (in Spanish). 9:00am-Noon. NWREC. Instructor: Luisa Santamaria

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Developing the World's First Blueberry Tree

By Dr. Wei Yang, Extension Agent—Berry Crops; North Willamette Research and Extension Center

We all know blueberries grow on bushes with multiple stems produced from the base of the plants. Efforts to develop more efficient mechanical harvesting systems for blueberries have been a priority for growers as concerns about the future availability of field labor for hand picking becomes more and more real. With the bush form of the blueberry plant, lots of berries fall to the ground during a mechanical harvest. This fruit loss can be as high as 25%. The



Wei Yang describing his blueberry tree research at the recent NWREC Blueberry Field Day in July.

main reason for the fruit loss is the inability of the catch plates on the harvester to close tightly around the base of the plants. Developing a blueberry tree or plant with a single trunk could solve this problem.

Besides the goal of improving machine harvesting efficiency, a blueberry tree could also potentially reduce other production-related costs such as the use of soil amendments for fertility management and moderating soil acidity. Pest management could be more effectively applied, too.

The concept for developing a “blueberry tree” comes from many fruit crops that already use tree-like rootstocks. *Vaccinium arboreum*, a native species of blueberries from the southeastern U.S., grows in the woods and has an upright or tree-like form. Single-stem native *arboreum* blueberries in Texas, Oklahoma, and Florida can have this unique form—but, do not produce a very tasty fruit. So, the idea of bringing the tree-like blueberries from the Southeast to the Northwest...and, adding our favored blueberry cultivars on top of these single-stemmed plants, seemed like an interesting opportunity for the industry here.

Funding for the blueberry tree research project has been provided by the Oregon Blueberry Commission and USDA's Specialty Crops Research Initiative.

All the single stemmed plants were grown from seeds of *V. arboreum* collected in the woods from the Southeast. Rooted cuttings and tissue culture have been used to create additional plant material for the research project in the propagation greenhouse at NWREC. Grafting our Northwest blueberry cultivars onto the tree-like *arboreum* rootstocks was the next step.

A grafted blueberry tree research plot was established at the NWREC beginning in late 2011 and completed in May 2012—when more plant material was available. The purpose of this field study is to determine rootstock and cultivar interactions and compare yield, fruit quality, machine harvesting potential, and the cost of production between blueberry trees and the traditional “own-rooted” blueberries we know in the PNW.

The field experiment consists of two soil treatments, two root types (own roots vs. trees) and three highbush varieties. The blueberry varieties ‘Draper’, ‘Liberty’, and ‘Aurora’ were grafted onto the wild *Vaccinium arboreum* rootstock. The plot consists of 60 ‘Draper’, 60 ‘Liberty’, and 60 ‘Aurora’ blueberry trees growing side by side with their own-rooted counterparts. A wire trellis system was installed to train the new growth of blueberry trees. An automatic drip irrigation system is being installed to allow 4 different watering regimes to compensate for differences in water requirements by trees and own-rooted plants. Growth data, such as plant height, rootstock diameter, and canopy volume, are being evaluated over the summer. Also, fruit quality data will be evaluated to determine if blueberries growing on trees are different from those produced on bushes.

This field study will last until 2014. By then we should have a good idea about the productivity of blueberry trees and their commercial potential. Meanwhile, a few nurseries in the Northwest are already interested in producing blueberry trees for the nursery trade. So, don't be surprised if you see blueberry trees in your garden center in the near future.

Welcome, Tom!

Tom Silberstein has been the Marion/Clackamas Extension Crops and Forage Extension Agent for the past six years. His position



and funding has changed and beginning on July 1 he will now be funded at 3/4 time from the Marion Soil and Water Conservations District, 20% from the Clackamas Extension and 4-H Service District, and the balance from state Extension and Marion County Extension funds. His program will focus on soil and water conservation topics leading to improved land productivity while enhancing farm profitability.

Tom will maintain a presence one day per week in Clackamas County with housing provided at the North Willamette Research and Extension Center. Tom will work with NWREC's farm staff to implement improved crop and soil management practices, assist with the development of a long-range farm management plan, and be a technical resource for NWREC and Extension staff in the region.

We look forward to working with Tom at NWREC and broadening our outreach to the farm community.

Friends of North Willamette Research and Extension Center Membership—2012

Sustainable Agriculture Club \$5,000

President's Club \$2,500

Dean's Club (\$1,000 and up)

Clark Cowlitz County Farm Bureau
Joan Parker (deceased)
George Rossman

Director's Club (\$500)

Bi-Zi Farms
Mike & Connie Bondi
C&S Farms, LLC
Dow Agro Sciences
Logan Zenner Seed
Montecucco Farms
Pratum Co-op
Wilber-Ellis Company

Bumper Crop (\$250)

Alta Vista Farms
Aurora Farms
Marion Ag Service, Inc.
Organically Grown Company
Pearmine Farms
Riverside Farms

Second Crop (\$100)

Casale Farms
Chemtura Agro Solutions
Evergreen Growers Supply
Hertel Farms, LLC

Second Crop (\$100), continued

Peter McDonald
Paul & Rose Miken
Monitor Nursery
Northwoods Nursery, Inc.

First Crop (\$50)

Ken & Dorrene Brown
Wayne & Joann Chambers
Peter & Susan Fry
John Martinson & Beverly Koch
David Priebe
S&H Landscape Supply & Recycle

Member (\$25)

James Bernard
Walt & Dona Bubelis
Michael Darcy
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Charlotte Lehan
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Joan P. Parker Memorial

Gail & Robert Burton
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Joan P. Parker Memorial, continued

Rowland & Virginia Giesbrecht
Jeff Malzahn
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Vegetable Crop & Specialty Seed Endowment Fund

Aurora Farms
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Clackamas County Farm Bureau
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Willamette Rhubarb Association
Willamette Valley Specialty Seed Association
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Membership—Friends of North Willamette Research and Extension Center

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

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Membership Category (circle one):

\$25 Member	\$100 Second Crop	\$500 Director's Club	\$2,500 President's Club
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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

Students Take Center Stage— in the Lab

NWREC's Nursery Pathologist and Bilingual Educator, Luisa Santamaria, loves working with kids so much that she has built a program to share her knowledge and expertise with them and to motivate the youth to consider pursuing science careers in agriculture.

"I think kids keep me young," said Santamaria. "And, we all need to help our youth see the real practical value in what we do every day in our jobs and how this information can be used to solve problems they see."

Santamaria has teamed up with Amy Schauer, the Coordinator of the West Linn-Wilsonville School District's CREST program. CREST is the District's Center for Research in Environmental Sciences and Technology program and links real-life science and technology experiences with youth and their interests. This summer, Schauer and Santamaria are providing summer internships at NWREC



Small Farm School Next New Program

A Small Farm School is planned for Saturday, September 8 at Clackamas Community College in Oregon City. The all-day event is designed for beginning farmers and rural landowners. More than 25 indoor and field classes will be offered during concurrent sessions throughout the day and address small farm topics such as crop and live-stock production, direct marketing, small-scale equipment, and soil and water conservation. Experienced farmers, Extension agents, Conservationists, and other agricultural professionals will teach the workshops.

See

[http://smallfarms.oregonstate.edu/
small-farm-school](http://smallfarms.oregonstate.edu/small-farm-school)
for more information and to register.

in the pathology lab there. The program is called, "Student Outreach and Education Program." Seven students from West Linn and Wilsonville are participating each day at NWREC throughout the summer. A

Glencoe High School student from Hillsboro is involved, too.

Ann Bernert, a student at Oregon State University in the Honor's Program, provides the supervision of laboratory activities for the students. Ann was the first student to work with Luisa in her lab three years ago. "I learned so much working with Luisa. My experience with her and at NWREC has shaped my academic path and my career interests. I am anxious to give back to the program and help build a model for other students, so we can expand the opportunities for more youth." Ann is teaching basic laboratory skills to the students this summer, such as, bacterial, fungal and algal culturing; micro propagation; media prepara-

IPM Focus for Nursery Growers

Nursery owners, managers and staff attended a first-ever intensive workshop targeting integrated pest management (IPM) principles and practices for their industry. Robin Rosetta, NWREC's Nursery IPM Extension Agent, designed the two-day program that included 1/2 day field trips and 1/2 day classroom workshops.

Rosetta has been working with nursery growers in the Willamette Valley for the past 16 years focusing on integrated pest management—considered a more environmentally sensitive approach that utilizes the widest range of possible tools for combating a crop pest including careful evaluation of conditions through monitoring, understand pest life cycles, and using biological, chemical and mechanical control methods—where most appropriate.



This year's high school summer student interns with Ann Bernert (left) and Luisa Santamaria (second from right, back row).

tion; and pathogenicity testing.

During the summer, students will be exploring possible special independent research projects they will take on for sharing at science fairs and expositions next school year and beyond.

"This summer's students have a very good mentor in Ann," Luisa said. Bernert has published her work on biological control of a blackberry endophyte—an independent research project she worked on at NWREC while in high school. In addition, she has received several awards and recognition for her research. "We are all very proud of Ann and her accomplishments and look forward to finding our next emerging scholars."

"Over the years we've developed a much better understanding of what works with a number of our common nursery pests," said Rosetta. "And, we have some wonderful examples in field nurseries and greenhouse operations around the region. Sharing these successful strategies and demonstrating these effective approaches is an important way to encourage others to try these methods."

Mitch Lies, a reporter with the Capital Press, the Northwest's agriculture and forestry weekly newspaper, attended the first day of the workshop and published a good news story. See the following link for more information: [http://www.capitalpress.com/
content/ml-bio-control-071012-art](http://www.capitalpress.com/content/ml-bio-control-071012-art).

Tractors from page 1

According to Anderson, "These tractor safety trainings are really important for the kids, but also the farming community. Youth need to be certified to get a farm job and operate equipment. NWREC is a great location for this service to agriculture throughout the North Willamette Valley."

Despite the success of the first farm tractor training, another 20 youth are on a waiting list for another session. It's clear there is a need. Building an on-going program will be the next goal.



(above) Tractor kids—team photo.



(left) Youth farm tractor training—hooking up implements.



(right) Youth farm tractor training—Farm Manager Marc Anderson working with a student on Case 290.

Strawberry Field Day Focuses on New Berries

NWREC's annual Strawberry Field Day brings together growers, researchers, and others interested in the next best berry. Held every year in mid-June, the event provides an opportunity to compare field planted berry cultivars and selections from breeding efforts in the Northwest. Dr. Bernadine Strik, OSU's Berry Research Leader, coordinates the event. Dr. Chad Finn, a berry breeder with the USDA's Agricultural Research Service and located in Corvallis, led the discussion about the nearly 40 named cultivars and un-named selections being evaluated each year for hardiness and plant vigor, quality, size and taste of fruit, pest susceptibility, and growth habitat.

Most of our commercial strawberry cultivars are crosses between parents with eight sets of chromosomes. The original parentage of the hybrid strawberry was a cross of a white fruiting strawberry from Chile with the red-fruited Virginian strawberry from Canada. This cross happened in a botanical garden in France in the early

1700s. Since then breeders have been crossing and selecting strawberries and have developed many cultivars during the



Kim Hummer and her special native Oregon strawberry.

past 300 years. Names like 'Marshall', 'Hood', 'Benton', and 'Totem' are cultivars originated from different crosses that breeders have made.

One of the special highlights for the Strawberry Field Day this year was the announcement of a newly named species—the "Cascade strawberry" (*Fragaria cascaden-sis* Hummer). This species grows naturally from about 3,000 to 5,000' elevation on the western side of the Oregon High Cascades.

This species has 10 sets of chromosomes. This joins a group of other 'decaploid' strawberries—those with 10 sets of chromosomes. This group may have potential for crossing and developing a whole new type of commercial strawberry.

For more information about this "new" Oregon strawberry, watch for work done by Kim Hummer, a horticulturist with the U.S.D.A.'s Agricultural Research Service in Corvallis. Dr. Hummer attended NWREC's Strawberry Field Day to share the news of the Oregon native berry and her excitement of discovering this new species.

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Raising the Roof—this summer!

Yes, the North Willamette Research and Extension Center is getting a much needed new roof this summer. The re-roofing project went to bid in June with work scheduled to begin in early August—for completion before the fall rains.

Many have noticed the water damage on the interior walls in the stairwell area of the Main Office building at NWREC. Last winter, during a meeting in our upstairs conference room, guests had to use several waste cans on the meeting room table to catch water drips coming through the ceiling.

“This is a project that is, unfortunately, long over-due,” said Mike Bondi, the Director of the North Willamette Research and Extension Center. “The university has not been investing in the upkeep and maintenance of infrastructure at our field research stations around the state. NWREC is not better or worse than others. But, now it’s time to do something before we have worse problems and bigger expenses.”

The re-roofing project will cost approximately \$110,000—and, possibly more, depending how much dry rot is found once the old roof is removed. The roofing project is the largest single investment made at NWREC since the north addition to the Main Office was constructed in 1987. Federal and state funds will cover about 40% of the cost. NWREC will be obligated for the balance.

Hopefully, our next issue of *Down on the Farm* will include photos of the new roof.