



Down on the Farm



Oregon State
UNIVERSITY
Extension Service

A Newsletter for Friends of North Willamette Research and Extension Center

SUMMER 2017

Welcome, Kristie!

Dr. Kristie Buckland arrived in Oregon on August 1 to assume her new position as the Vegetable and Specialty Seed Crops Extension Specialist at the North



Willamette Research and Extension Center (NWREC). Kristie is the fourth new faculty hired at NWREC in the past two years joining Nik Wiman, Extension Tree Orchard Crops Extension Specialist; Lloyd Nackley, Nursery and Greenhouse Production Research; and, Greg O'Neill, Field Center Director for the IR-4 (Pesticide Registration

program). Dr. Buckland replaces Bob McReynolds—long-time Vegetable Extension Agent who retired in 2012.

“We have hired a great group of new talent at NWREC over the past couple years,” said Mike Bondi, NWREC Director. “I believe we are shaping the research and education we will be doing at NWREC for the next 20 years or more—as well as, what will be happening on the ground at the Center and what this research farm will look like. It’s all very exciting!”

Dr. Buckland completed her PhD at Utah State University last fall. Her recent academic degrees have occurred following a ten year career in the Air Force where Buckland was a pilot and flight instructor.

Her PhD dissertation research focused on production methods for quinoa in Utah trying to develop a new agricultural industry for the state. Buckland’s Master’s degree, also from Utah State, looked at onion insect pest management strategies for thrip control.

Kristie is married and has two children. She hopes to find a home and community to settle into in the north valley area. Kristie was able to visit Oregon and the Center in late May for 10 days to meet the faculty and staff, growers, and industry representatives and look over communities and housing options.

Welcome to Oregon, Kristie!

Open House was Great Evening—across the board

This summer’s annual Community Open House at NWREC was a great evening. We enjoyed a picture-perfect Northwest summer evening—high temperatures in the low 80s during the day, hardly any breeze, and a relaxing, laid-back, and steady crowd throughout the three hour event. The attendance count for the evening was 260. Another 50 faculty, staff and volunteers were at the event to support all of the activities.

“I must say that this was probably our best Open House over the past seven years. A good-sized crowd and excellent weather are the first things that come to mind,” said NWREC’s Mike Bondi. “But, more than this, we had wonderful participation by our faculty, staff and programs with outstanding displays and demonstrations. All of the comments I heard from numerous participants throughout the evening were all very positive.”

Bondi shared a written note from one of NWREC’s neighbors
.....continued on pages 6-7



OSU’s Benny Beaver, always a hit with the crowd, pauses for a photo with Charbonneau residents, and ardent Beaver Believers, Garry and Karen Heinke.

Berry Field Days— another big success

This summer's Berry Field Days were another success with excellent crowds and a great collection of speakers. More than 200 berry farmers and industry professionals attended the three events—Strawberry Field Day, Caneberry Field Day, and Blueberry Field Day.

Bernadine Strik, Berry Research Leader at NWREC, coordinates the programs every year. A highlight this year was fantastic summer weather. "Last year's berry harvest was about the earliest we've ever seen," said Strik. "This year's weather was much more normal."

Besides field evaluations looking at the latest varieties of berries in the field and tasting fruit samples, presentations described the latest research on nutrient management, irrigation, pest management, and weed control. Strik recruits speakers from OSU and campus partners and from Washington State University.

Joyce Loper, Associate Dean in the College of Agricultural Sciences at OSU attended two of this summer's field days. "We all know Bernadine has a great program and has built strong and close relationships with research partners at USDA's Agricultural Research Service in Corvallis, on the OSU campus, at Washington State University and in British Columbia. But when the growers tell me how great our programs are and when our colleagues around the country say we are a world center for berry research, that's really special to hear."

Congratulations, Bernadine!



The Berry Doc, Bernadine Strik, organizes NWREC's Berry Field Days each year.



Taste testing fresh berries—with vanilla ice cream—a tradition at all NWREC Berry Field Days.



Dr. Chad Finn, USDA Research Geneticist and Small Fruit Breeder, leads discussion in the strawberry variety evaluation trial.



David Lowenstein, OSU's Brown Marmorated Stink Bug Project Leader, updating growers with the latest research and control information.

New Blueberry Research Aim to Improve Production Methods

By Amanda Vance, Faculty Research Assistant—Berry Research

The Berry Crops Research Program, led by Dr. Bernadine Strik at NWREC, has planted two new blueberry research fields in the last 2 years. The first, planted in the fall of 2015, is focused on developing best management practices, particularly pruning methods, for the machine harvesting of a new cultivar, 'Mini Blues' (see photo).

'Mini Blues' was recently released by the USDA-Agricultural Research Service (ARS) and OSU Cooperative Breeding program, led by Dr. Chad Finn (USDA-ARS, Corvallis). This cultivar produces very small, flavorful berries that are well-suited to specialty processed markets, such as bakery items.

However, the new cultivar is difficult and time consuming to prune and growers can only afford to machine harvest it. The new research trial will be testing different pruning techniques to determine best management practices that reduce hand labor while producing efficiently harvested crops with good yields.

In addition, different pruning and training methods for 'Legacy', a high-yielding cultivar

that is widely grown in the Willamette Valley for fresh market, will be evaluated. 'Legacy' and is also somewhat difficult to prune because it has a different growth habit than most blueberries grown in this area. Hand-harvesting the 'Legacy' plants will begin this summer and machine harvesting for both varieties will begin in 2018 when the plants have had time to grow large enough to withstand machine harvest.

The second planting, established in the fall of 2016, is focused on mulching practices and the impacts on plant growth, water use, and soil organic matter during establishment in the cultivar 'Duke'. Dr. David Bryla, Research Scientist with USDA-ARS in Corvallis is working with Strik and Vance on this project. The mulches being evaluating are black- or green-colored landscape fabric, each with or without fir sawdust mulch underneath, as well as, a sawdust mulch with no landscape fabric on top (see photo). Plant growth using digital imaging will be monitored, plus soil cores will be taken to evaluate root distribution



Amanda Vance (left) works with BioScience Technician, Scott Orr, installing thermocouples to measure soil temperatures in the blueberry mulching study. Traditional sawdust mulch is compared with black and blue-green colored fabrics.

during the study. After 2 years, whole plants will be excavated and separated into various plant parts to see how the treatments impacted growth.

These projects will provide valuable information to growers on best management practices and novel techniques for growing blueberries. Funding is provided by the Oregon Blueberry Commission for the 'Mini Blues' trial and the Agricultural Research Foundation for the 'Duke' mulch trial.

Berry Growers Successful in Legislature

It pays to have friends.

OSU administrators knew they would be lucky during the 2017 Legislature, if they could just keep their budget "whole" from the previous biennial session in 2015. This meant the goal for the 2017 session was a budget increase based only on the cost-of-living increase and no new positions.

The 2015 Legislature provided the first significant increase in the Public Statewide Services budget (i.e., OSU Extension Service, Agricultural Experiment Station, and Forest Research Lab) in 16 years. That increase of \$14 million to our base budget allowed for the hiring of nearly 40 new faculty positions around the state for Extension offices and agricultural experiment station facilities—with two of those positions coming to NWREC.

But, our berry grower friends were still hoping for a new position at NWREC to support the strawberry and caneberry Extension programs. NWREC had such a position for many years, but when Diane Kaufman retired in 2011, her position was never refilled.

Matt Unger, Oregon Strawberry Commission Chair; Mike Christensen, Oregon Strawberry Commission Board member; and Philip Gutt, Executive Director for the Oregon Strawberry Commission and Oregon Raspberry and Blackberry Commission, worked in the Legislature to gain support. Representative Rick Lewis, Silverton, was particularly sensitive to the berry industry's needs. And, in the final hours of the Legislative Session ending in early July, a position was funded at NWREC.

Although the details are still being worked out, the funding provided by the Legislature is for the biennial session—and, not recurring. None-the-less, this increase in funding is a huge step forward.

"We are excited to have this new opportunity," said Mike Bondi, NWREC Director. "We didn't expect any new positions coming out of the Legislature this year, so this is a very pleasant surprise. I know how important it is for the strawberry and caneberry growers to get more help to support the education and applied research needs. We look forward to working with them to build something that can be sustained into the future."

And, a special thanks for Representative Rick Lewis for being sensitive to the berry growers' needs and being able to work with his colleagues in the Legislature to make this new position happen.

Summer Student Helps Beautify Center

Kody Transue is third-year summer student at NWREC. Kody's first year was working with the Berry Research program. Last summer and this year he has been working with the Tree Orchard Crops program.

Kody is pursuing a horticulture degree at Clackamas Community College and has a special interest in landscaping. And, Kody has noticed that we have plenty of areas around the office buildings at NWREC that could use his landscape design and maintenance interest.



So, Kody began collecting plants left over from research trials and propagating others. Kody's first project was a very nice low-maintenance herb bed between the Main office and Parker House. Other areas at NWREC planned for landscape renovation are the patio outside the downstairs meeting room and the Winter Garden—overgrown location between the Entrance and Exit Roads.

Thank you, Kody, for your great work!

Record Number of Summer Students this Year

NWREC has 31 summer students (two-thirds college and one-third high school) this year supporting our research and education programs. This is a record high for us. Over the years, NWREC has always relied on summer students to assist the faculty and staff plus provide quality work-related experiences in agriculture. Every year can be pretty different depending on the number of faculty and who have grants or funding to support the summer projects.

But, in recent years the number of students working at NWREC has increased, in part, because finding field migrant labor—a common practice in the past—is much more difficult. For instance, our berry picking is now done mostly with summer students and using mechanical harvesters.

So, the Berry Research program usually had had the most summer students due to their harvesting work schedule. But, this year, three programs each have eight summer students—Berry Research (Bernadine Strik), Tree Orchard Crops (Nik Wiman), and the Farm Crew (Marc Anderson). Three students are working with the Nursery program (Lloyd Nackley and Luisa Santamaria), three with Berry Extension (Wei Yang), and one with Small Farms (Nick Andrews).

It's hard to imagine what we might get done in the summer—or, not get done—if we didn't have our student workers. We do appreciate their interest and dedication to our mission.



Established last summer, Kody's herb bed is well-established and in full flower this year.

Calendar of Events

Aug. 24 Hazelnut Marketing Board Annual Meeting (8:30am-Noon)

Aug. 25 Public Farm Tours (2:00-4:00pm) Come visit NWREC and get a close up tour of farm.

Sep. 14 Vegetable Variety Field Day (3:00-5:00pm) Join growers producing fresh vegetables, industry and seed company representatives evaluating new varieties for the PNW.

Sep. 15 NWREC Harvest Dinner (5:15-8:30pm) Invitation event. A unique farm-to-plate dinner prepared with fruits and vegetables from NWREC's research and education projects at NWREC this summer.

Sep. 18 Stroda Christmas Tree Field Tour (2:00-6:00pm) Meeting at Kirk Stroda's Farm.

Sep. 20 Tractor Safety & Certification Course (all day) Advanced Tractor Safety & Certification Course. Complete information and registration on NWREC website—see Tractor Safety Training page.

Sep. 21 Small Farm School (8:00am-4:30pm) is a full day event with hands on and classroom workshops at the Clackamas Community College in Oregon City.

Sep. 29 Public Farm Tours (2:00-4:00pm) Come visit NWREC and get a close up tour of farm.

Oct. 5, Oct. 12, Oct. 19 & Oct. 26 OktoberPest (9:00am-Noon) (class speakers and topics TBD)

oregonstate.edu/dept/NWREC

Pack House Progress

Food safety education has become a hot topic in agriculture in recent years. The *E. coli* outbreak on strawberries in Washington County in 2011 was the motivation for the berry industry to launch education outreach on best practices for field workers harvesting fruit. Also, the federal government's new Food Safety and Modernization Act is requiring new food safety standards when handling all produce in field and processing facilities.

To provide education opportunities for smaller farmers, a new produce Pack House and Cold Storage trailer are being built by the Extension Small Farms Program at the North Willamette Research and Extension Center. The first phase of the Pack House was completed last summer when a 20' x 14' cement pad was poured and corner posts and roof were constructed. The Pack House is located immediately west of the NWREC Learning Farm operated by the Small Farms Program—a two acre parcel east of

NWREC's Exit Road. A dry storage room was added to the Pack House in July. Washing and processing facilities are being designed and built by local small farmer, Josh Volk, and should be ready for this fall's harvest.

Also, to be completed in August, will be a cold storage trailer. The box-trailer will be converted into a cooler, with an air conditioner and Coolbot keeping the temperatures ideal for storing produce. Solar panels will be mounted to the roof, supplying power to the unit. The trailer will be a model for how to construct a low-cost mobile storage unit that can be taken to



New Pack House dry storage room is being added this summer to the processing structure built last year by the Small Farms Extension program.

the field when harvesting or go directly to market. The cold storage trailer will be ready for this fall's harvest.

The Pack House and Cold Storage Trailer will be featured at this year's Vegetable Variety Field Day on Thursday, September 14.

Women ONLY Tractor Class Brings Out-of-Staters

The North Willamette Research and Extension Center has become a leading location for farm equipment safety training and certification in the Northwest, if not the western U.S. Starting in 2012, NWREC began partnering with the Clackamas County Extension Service and their 4-H program to provide a national certification tractor safety training program for youth ages 14-17 wanting to work on area farms. Over the past six years, more than 15 youth trainings have reached approximately 300 participants. Youth have come from all over the state for the trainings, but most have been local north valley participants.

During the past four years adult farm equipment safety trainings have been offered, too, at the annual Clackamas Small Farm School in Oregon City, at NWREC, and as custom trainings for local



The first exercise of the morning is getting to know the tractor-inspecting and getting familiar with all of the key components and operation. Instructor Derek Wells (back right in photo) leads the discussion with his student worksheet.

farms, businesses, and agencies in the area. Beginning adult classes, advanced adult classes, and women's ONLY classes have been held each year. All of our equipment safety training classes are led by Derek Wells, NWREC's assistant farm manager.

We believe that NWREC may be the only place in Oregon offering this suite of classes focusing on equipment safety each year—knowing of no other research center, experiment station, Extension office or business doing anything similar.

Visitors from California at the recent Women's ONLY Tractor Safety Training verified our assumption. Four U.S. Bureau of Land Management employees from Riverside, California traveled to NWREC in mid-July just for our training. The ladies camped at NWREC, after travelling during the day, so they could

be ready to go first thing in the morning. The ladies reported that they had been trying to find a practical, hands-on training, but have never seen anything like what we offer. And, the group plans to return in September for the Advanced Tractor Safety Training class.

Veggie Variety Trials

The Vegetable Variety Trials are back, again, this year at NWREC. Five private seed companies—Vitalis, Pan American, Sakata, Territorial, and Osborne are cooperating with the Metro Small Farms Extension program under the direction of Nick Andrews, Metro Small Farms Extension Agent, and his Program Assistant, Heidi Noordijk. Jim Myers, OSU's vegetable breeder, has entries of tomatoes and peppers he's been developing. Other entries come from public breeders at Cornell and University of Wisconsin and private seed breeders, Wild Garden Seed and Adaptive Seeds.

This year, the vegetable variety trials are demonstrating the performance of 18 different vegetable types with many varieties of each type, including 41 tomato varieties. "We are looking at how the different vegetable varieties do in our climate and growing conditions," said Andrews. "Each of the companies provides a contribution to our program that allows us to bring in a summer student to help with the project. Noordijk provides the leadership for the program at NWREC.

"We have one summer student this year and help from Lane Selman, Myers' faculty research assistant," according to Noordijk. "Annie Allen is from Evergreen State College and is interested in pursuing grad-



Summer student, Annie Allen, has been working hard this spring and summer to get all of the vegetables seeded and transplanted for the variety trials project. And, once we got to mid-June, the weather has been picture perfect!

uate studies in plant breeding. Working at NWREC taking care of the vegetables is giving her practical experience, plus meeting plant breeders from around the state is exposing her to future research opportunities."

This year's vegetable variety trials will be featured at an afternoon field day on Thursday, September 14. Seed company representatives will be on hand to discuss

varieties and their field evaluations. The event begins at 3:30pm and is free. Participants are welcome to stay for a paid reception following the field day to continue discussions.

And, a side benefit of the Veggie Variety Trial project at NWREC is the being able to utilize some of the produce at our Harvest Dinner—scheduled this year on the next evening at the Center.

NWREC Community Open House

Continued from page 1...

a couple days after the event as an example of the feedback he received..."We really enjoyed our visit to your wonderful research center! All the years we've lived in Charbonneau, we have never been over there. I was really impressed with everyone we spoke to—they were all exceptionally knowledgeable and just really nice people!

Bondi went on to say, "My final comment would be to recognize our Farm Staff for the amazing job they all did to get us ready for the event. They had the farm looking fabulous—neat and tidy. Marc, Geoff, Derek and their summer students did all the set up for tents, tables, chairs and electrical. It was perfect. Very well organized. It all takes a team—and, we have a good one!"



Summer student, Olivia Parker, helping attendees with their fresh vegetable needs at the farmer's market. All of the beautiful produce supplied, again this year, by Frank Battilega (Big B Farms) and Mike Iverson (Aurora Farms).

Harvest Dinner Gala Coming in September

Planning is underway for the annual NWREC Harvest Dinner. The event has become a popular event at the end of the summer season, a time to reflect on accomplishments of the past year, thank those who help make our work possible, plus look ahead to the coming year. The Harvest Dinner has been attracting about 175 attendees including local farmers, our faculty and staff, guests from OSU in Corvallis, Advisory Council members, and local elected officials. This year's Harvest Dinner will be on Friday, September 15.

The entire cost of last year's harvest dinner was covered by table sponsors—businesses individuals, agencies, and organizations—supporting the event.

Again this year, OSU's Food Innovation Center is partnering with NWREC to put on the Harvest Dinner event. Research Chef, Jason Ball, is developing the menu utilizing produce from this summer's research and demonstration trials at NWREC. The Harvest Dinner provides an opportunity to tell the story of OSU's research, development, and education that supports agriculture in the region.

OSU Master Food Preservers from the Clackamas County Extension office are

assisting with the food preparation and serving at the Harvest Dinner. In addition, the Food Preservers will be preparing table favors for the guests using berries from NWREC's research trials utilizing the facilities and expertise of the Food Innovation Center staff.

Special features at this year's dinner will include OSU cheeses made by dairy science and food science students at OSU, and an experimental beer pour showcasing work done in the fermentation sciences program on campus. Specialty food product items developed at the Food Innovation Center and at OSU Seafood Lab in Astoria will be shared, too.

"We expect another fun evening," said Mike Bondi, NWREC Director. "The Harvest Dinner is always a great event. We enjoy telling the story of our work through the meal we all share. It gives new meaning to 'farm-to-plate.'"

Invitations to the dinner will be going out on August 1st. A limited number of tickets could be available depending on demand for seating. If you are interested in attending the Harvest Dinner, contact Bondi at michael.bondi@oregon-state.edu.



Kelly Streit, OSU's Clackamas County Extension faculty member working with Community Food Systems (foreground), and her Program Assistant, Buffy Rhoades, cleaning, sorting and processing NWREC blackcap raspberries for "something special" at this year's Harvest Dinner. Streit and a group of about a dozen Master Food Preserver volunteers are heading to the Food Innovation Center in late August to work with staff there to create a table favor surprise for this year's Dinner.

NWREC Community Open House



Drone coming in for a landing.



OSU's Victor Villegas, Technology Specialist, demonstrates the flight control for a drone (unmanned aerial vehicle) as it flies during a demonstration over the Prunus Research Orchard at NWREC.



NWREC's Robin Rosetta (left) sharing information about pest management in the main Program Tent.



Jana Lee, USDA nursery researcher in Corvallis, working with a budding next generation entomologist!

North Willamette Research
and Extension Center
Faculty & Staff

Administration & Support Staff

Mike Bondi, *Director*

Shelley Hughes, *Administrative
Assistant*

Jan Egli, *Office Specialist*

Marc Anderson, *Farm & Facilities
Manager*

Geoff Lewis, *Building Trades &
Maintenance*

Derek Wells, *Farm Management*

Extension & Research Faculty

Bernadine Strik, *Berry Crops Research
Leader*

Wei Yang, *Berry Crops
Extension Agent*

Lloyd Nackley, *Nursery & Greenhouse
Production & Management Research*

Robin Rosetta, *Nursery IPM Extension
Agent*

Luisa Santamaria, *Nursery Pathologist/
Bilingual Extension Agent*

Chal Landgren, *Christmas Tree
Extension Specialist*

Nick Andrews, *Metro Small Farms
Extension Agent*

Kristie Buckland, *Vegetable & Specialty
Seed Crops Extension Specialist*

Greg O'Neill, *Pesticide Registration
Research, Field Center Director*

Joe DeFrancesco, *Pesticide
Registration Research, Emeritus*

Nik Wiman, *Tree Orchard Crops
Extension Specialist*

Research and Program Staff

Amanda Vance, *Berry Crops Research*

Pat Jones, *Berry Crops Research*

Heather Andrews, *Tree Orchard Crops*

Aaron Heinrich, *Tree Orchard Crops*

David Lowenstein, *Brown
Marmorated Stink Bug Research*

Gina Koskela, *Pesticide Registration
Research*

Peter Sturman, *Pesticide Registration
Research*

Judy Kowalski, *Christmas Tree &
Pesticide Registration Research*

Gilberto Uribe, *Nursery Pathology &
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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.

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