



**Oregon State**  
UNIVERSITY  
**Extension Service**

A Newsletter for Friends of North Willamette Research and Extension Center

SUMMER 2016

## Berry Field Days Provide Important Outreach

For many years, berry growers from all around Oregon and Washington—have gathered at the North Willamette Research and Extension Center each summer to hear the latest information they need to grow their crops, examine in the field the new berry cultivars being developed, and provide feedback on tasting preferences for the different berries grown at NWREC. This summer’s visitors even included growers from Bulgaria!

“2016 was much more comfortable weather for our berry field days,” said Bernadine Strik, Extension Berry Specialist and organizer of the berry field days.” This past summer featured a Strawberry Open House on June 8; Caneberry Field Day on June 29; and the Blueberry Field Day on July 6. Over 200 growers attended these events.

“We moved the field days up on the calendar this year since the seasons have been

so early the past two years. We didn’t miss the 90 to 100 degree heat this year, for sure! But, the seasons were all still early and we were well into harvest—or about done—for some of our crops by the time we had our field days scheduled.”

Commercial berry growers, industry field representatives, consultants, researchers, and Extension faculty participate in these field days each year. Technical presenta-

.....continued on page 2



*Berry Extension Specialist, Bernadine Strik, leading the discussion at Blueberry Field Day. About 100 attended this year.*



*One of the highlights this year, was a peregrine falcon demonstration for bird control in blueberry fields.*

## Long-standing Donation Appreciated by Berry Program

Littau Harvesters Inc., a company based in Stayton, has generously donated an “over-the-row” machine harvester to the berry program at the NWREC for over 15 years. Bernadine Strik, NWREC’s Berry Research Program Leader, uses the machine harvester to pick various blueberry and caneberry research trials and to help evaluate whether advanced selections in the

.....continued on page 2



*Littau Machine harvester being used to pick blackcaps at the NWREC.*

## Littau Donation from page 1 .....

breeding program will succeed as commercial cultivars.

According to Strik, "All of our raspberry and blackberry cultivars need to be picked by machine. Growers just can't afford to hand pick for the processed market. So, we need cultivars that machine pick well."

Littau harvesters are the most common type used by Willamette Valley growers. Their machines are in such demand that it's incredibly generous that Littau provides a machine to the program for the berry picking season at no cost.

"We simply couldn't have the berry program that we have without their support," said Bernadine. Berry growers also greatly appreciate the support Littau provides the program, as it helps us get information of use to the industry much faster than we would otherwise.

Thank you, Littau!

## Berry Field Days from page 1 .....

tions are provided by Oregon State and Washington State University faculty, staff, and graduate students.

"These events are an important time for

those involved in the berry industry to see and hear what's new and to bring them up-to-date on the latest information to improve production and profitability," according to Strik.



Berry tasting, along with vanilla ice cream of course, is used to compare new cultivars with older standards and is always a popular part of the berry field days.

## Students Back for Summer at NWREC

Each summer, the NWREC staff nearly doubles as we welcome 20-30 summer students. This year's group includes 22 summer workers—11 college students, 10 high school students, and 1 volunteer.

Below is a listing of summer folks by the program where they are working. Students assisting with research programs are hired and funded by the Extension and Research faculty at NWREC. Farm Crew students work for our Farm Manager and are funded out of our Center budget and do a wide variety of tasks including mowing, berry picking, rodent trapping, tillage, painting, and event setup/cleanup, and supporting the tractor training classes for youth and adults.

We are fortunate to have several returning students, again, this year. Students with one or more years working at NWREC are noted with an asterisk (\*).

### Berry Research:

Kaylee Shearer—Canby High School

Sophia Rutz\*—Canby High School

Matt Robinson\*—North Marion High School

Kara Guttridge\*—Canby High School

Derek Estrada—North Marion High School

Eliza Smith—Oregon State University & Chemeketa Community College

Trevor Wood\*—Clackamas Community College

Cameron Watson—Oregon State University

### Branch Experiment Station Intern:

Amanda Serven, Oregon State University

### Tree Orchard Crops:

Kylie Mendoca—California Polytechnic State University

Kody Transue\*—Clackamas Community College

Chase Unger\*—Oregon State University

### Farm Crew:

Cole Anderson—Canby High School

Ethan Schroeder—Tualatin High School

Logan Wood\*—Canby High School

Olivia Parker\*—Portland Community College

CJ Sullivan—Canby High School

Danner Sullivan—Canby High School

### Nursery/Greenhouse Interns:

Grant McKinney—Chaminade University, Hawaii

Harley Sikes—Chemeketa Community College

### Small Farms:

Casey Wilson\*—Oregon State University

Douglas Ashby—Volunteer

# All Aboard the Biocontrol Bus!

By Robin Rosetta, Nursery IPM Extension Agent

Local greenhouse and nursery growers leaped at the opportunity to jump onto the Biocontrol Bus with two days of workshops and tours held in June for beginning and advanced users of biological control. NWREC's Extension Faculty Robin Rosetta worked with Sharon Selvaggio of the Northwest Center for Alternatives to Pesticides (NCAP) and Suzanne Wainwright-Evans, Buglady Consulting Inc., to organize the two-day series. "The interest in using biological control has grown so much our beginner's tour registration at the NCAP website was sold out with a waiting list before I could even advertise it," said Rosetta.

The workshop was led by the popular "Buglady," Wainwright-Evans, who consults with nurseries and teaches nationally on the subject of biological control. Indoor class sessions were held at NWREC. Field tour sites included Fessler Nursery and Woodburn Nursery and Azaleas. A very popular addition to the format of the tours were the many onsite demonstrations by representatives from BASF, BioBest, Bioworks, Evergreen Growers Supply, and staff at Fessler, Monrovia, and Woodburn Nurseries.

"With these workshops and tours we show growers that the use of biological control for greenhouse and nursery pests is economically feasible and highly effective. Participants learn from both experts and their peers about how to implement a bio-

logical control program for a range of pests," said Rosetta. Additionally, growers learned about crop insurance options for nurseries, including a new crop insurance program, Whole-Farm Revenue Protection (WFRP), from George Harris, with Northwest Farm Credit Services.

"Many growers have been pleasantly surprised in recent years to discover how

effective their biocontrol programs can be," says Sharon Selvaggio, healthy wildlife and water program director with the Northwest Center for Alternatives to Pesticides. "This is exciting work at a time when so many consumers want to know that their ornamental plants have been produced in a sustainable manner."

The workshop was sponsored in part by a grant from USDA Risk Management Agency and by industry sponsors.



Kelly Vance, Fessler Nursery, discusses how banker plants are used for bio-control.



Jana Lee, Researcher Entomologist with the USDA Agricultural Research Service in Corvallis, sharing beneficial insect specimens with program attendees.

## Calendar of Events

- August 23** **Dry Farm Field Day** (4:00-7:00pm). No registration. Contact: Heidi Noordijk
- August 26** **NWREC Public Farm Tour** (2:00-4:00pm). Registration required—no fee. Please call 503-678-1264.
- September 8** **NWREC Summer Vegetable Variety Field Day** (1:00-4:00 pm). No registration. Contact: Heidi Noordijk
- September 13** **Adult Advance Tractor Safety Training and Winter Maintenance** (8:30am-4:00pm). Registration required. See NWREC website home page.
- September 15** **Small Farm School** (8:00am-4:30pm). Registration information: <http://smallfarms.oregonstate.edu/small-farm-school>. Contact: Heidi Noordijk
- September 28** **Vegetable IPM Workshop: Carrot rust fly, Cabbage fly and Brassica moths** (9:00am-1:00pm). Registration information: <http://smallfarms.oregonstate.edu/vegetable-insect-ipm-series-aurora>. Contact: Heidi Noordijk
- September 30** **NWREC Public Farm Tour** (2:00-4:00pm). Registration required—no fee. Please call 503-678-1264.
- September 30** **NWREC Annual Harvest Dinner** (5:30-8:30pm). Registration required. See <http://oregonstate.edu/dept/NWREC/>
- October 6, 13, 20, 27** **Oktoberfest** (9:00am to Noon, each day). Registration required. See NWREC website home page. Topics vary throughout the month and designed for nursery and greenhouse growers.

# Open House—another successful event

NWREC's annual Community Open House is a real harbinger of summer—fun activities for kids, burgers and dogs on the grill, berry tasting from our research trials, hay wagon tours of the farm, fresh veggies, tractor driving—and, of course, our faculty and staff showcasing what they do.

"We really like putting this event on each year," said Mike Bondi, NWREC Director. "We believe it's important to share our work with the community. And, we're proud of what we do and the difference our work makes in the lives of many who rely on local farmers."



Chal Landgren, Extension Christmas Tree Specialist (right), joined by Nursery Interns Harley Sikes and Grant McKinney at the Christmas tree program display.

Bondi was disappointed in this year's attendance at the Open House. "We only had 200 people attend—down about 1/3 from each of the past two years—despite an incredibly beautiful summer evening." The 2014 and 2015 Open Houses were conducted during very hot weather—well into the 90s. "We didn't miss the heat this year, but we did miss the crowd," said Bondi. "Five or six years ago we would have been ecstatic to think we could get 200 people to come out to the farm. Now, our expectations are a lot different. We need to keep growing and reaching out in the community."

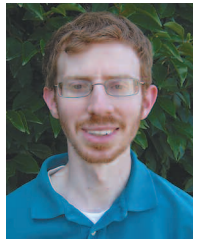
One of the highlights of this year's Open House was a special appearance by OSU's Benny Beaver—a hit with both kids and adults.



Jan Egli, NWREC Office Specialist, posing with Benny Beaver.

## New BMSB Leader

David Lowenstein joined the NWREC faculty on July 1 as a post-doc researcher and a leader in the state-wide Brown Marmorated Stink Bug project (BMSB). Nik Wiman, NWREC Tree Orchard Crops Extension Specialist, held this position for three years prior to his new position nearly a year ago.



Lowenstein will work with Wiman and other OSU faculty to coordinate OSU's research and outreach efforts focused at understanding the stink bug's life history and biology and develop effective control programs. His research will focus on *Trissolcus japonicus*, a promising parasitoid wasp that attacks the eggs of BMSB that was recently discovered in Portland and Vancouver. The BMSB was introduced into the Pacific Northwest in 2004 and has become a damaging pest in agricultural crops, and a nuisance in landscape plantings and around the home.

# Pack House Going in at NWREC

By Nick Andrews, Metro Small Farms Extension Agent

We are building a new small-scale packing shed at the NWREC Learning Farm that will help us demonstrate good harvest, handling and storage methods for small-scale local produce growers. We hope to complete construction of the washing and packing area by September, 2016, and to add a storage area in 2017.

Small and mid-sized farmers have many questions about how best to harvest, handle and store produce to ensure great quality and limit the cost of harvest and handling. For example, variable costs to grow an acre of organic lettuce are in the range of \$5,000, with about half of these costs related to harvest, handling and short-term storage. The fixed costs of packing and storage facilities are not clearly defined. Poor storage conditions can also account for substantial losses on some farms. We hope to address these and other concerns on small-scale local farms.

Outbreaks of food-borne illnesses in

recent years, especially in large scale food systems, has stimulated the federal government to enhance food safety regulations by passing the Food Safety Modernization Act (FSMA). The federal Food and Drug Administration has now released the final rules that will impact the way all farmers grow produce and hopefully reduce the size and frequency of outbreaks.

The new packing shed at NWREC will help us provide practical hands-on workshops for new and experienced farmers and their employees.

We are seeking contributions from community partners to help pay for construction costs, and plan to apply for grant funding to support curriculum development. In the future, the packing shed may also be used for small applied research projects relevant to farmers supplying local markets.

Please email [nick.andrews@oregonstate.edu](mailto:nick.andrews@oregonstate.edu) or call him at 503-913-9410 if you are interested in this project.

## New Nursery/Greenhouse Faculty Hired

Dr. Lloyd Nackley has accepted an offer to become the new Nursery and Greenhouse Crops Production and Management faculty member at the NWREC. Nackley will begin his work on September 16 after relocating his family from Davis, California where he is currently a post-doc researcher.

Nackley's appointment culminates a five year vacancy in this key position at NWREC—following the resignation of Jim Owen when he accepted a new position at Virginia Tech University in 2011.

"We are very excited to make this announcement and, finally, get this important faculty position hired," said Mike Bondi, NWREC Director. "We appreciate everyone's patience with the process. It has been a long road with the recession, tight budgets, and failed searches along the way. But, the important thing is that we had excellent candidates in our last recruitment pool and we are very pleased to have someone with Lloyd's experience joining our staff at NWREC."

Dr. Nackley has a PhD from the University of Washington (2012) in Plant Physiological Ecology and a B.S. in Environmental Horticultural Science at California Polytechnic State University (2003). In addition, he is completing his second post-doc research position.

Nackley has a broad background and experience that should provide him with an excellent foundation to address the needs of nursery and greenhouse growers in the Willamette Valley. Nackley has researched bioenergy crops for the National Science Foundation, developed garlic growing practices for the Korean Department of Agriculture, investigated how climate change and invasive species were threatening citrus growers in South Africa, and provided research-based solutions for specialty crop growers challenged with water shortage, pollutants and pathogen issues in the California Central Valley.

Welcome to Oregon, Lloyd!



The popular NWREC Harvest Dinner has been scheduled for Friday, September 30 on our North Lawn. We'll begin with social time at 5:30pm, dinner served at 6:30pm, and a program following. We are just beginning the planning for the event, but we are expecting another great evening—as we showcase this summer's food crops from NWREC's research and educational trials and local farmers. Each year is a special meal—don't miss out!

The Harvest Dinner is an invitation thank you event for our Friends, supporters, and contributors. We use our time together to reflect on major accomplishments at NWREC over the past year and look forward to what's ahead. We showcase agriculture and what the university is doing to nurture and sustain this important industry. Last year's Harvest Dinner was attended by 175 and we believe this is about big enough to manage. So, get your reservation in quickly when it arrives. We hope to hold 25 tickets for sale to the public, if space is available.

Invitations are expected to go in the mail by mid-August.

We are now recruiting Table Sponsors for the Harvest Dinner. Individuals, businesses and organizations are invited to participate and be recognized in our advertising and outreach. Sponsorships begin at \$250 (2 complimentary tickets); \$500 (4 tickets); \$750 (6 tickets); \$1,000 (8 tickets—full table); and \$2,500 (special event sponsor). Join the NWREC Team! Contact Mike Bondi for more information and how you can be involved.

# Rich Regan Retires after 32 Years Helping the Nursery Industry

By Robin Rosetta, Nursery IPM Extension Agent and Ryan Contreras, Associate Professor—Ornamental Plant Breeding

Prior to joining the faculty of Oregon State University in 1984, Richard Regan earned a BS degree in Ornamental Horticulture and a MS degree in Soil and Water Science at California State University, Chico where he taught classes for the Department of Plant and Soil Sciences following graduation. Rich started his career at OSU as an Extension agent in Marion County. He relocated to the North Willamette Research and Extension Center where he provided regional Extension education and conducted nursery research on key issues in production such as tip dieback, lygus bugs, *Phytophthora syringae* and *Verticillium*. Rich also provided service to the industry in a variety of roles including President of the Western Region of the International Society of Plant Propagators, OSU Liaison to the Shade Tree Growers Association, and Farwest Show moderator.

Rich's recent work has focused on student training including some of the most important courses a Horticulture student takes during their collegiate career such as Plant Propagation and Plant Nutrition.

## Clackamas Innovation Fund Supports New and Creative Ideas

For the past five years, the Clackamas and 4-H Extension Service District has provided a pool of resources to annually stimulate new and creative projects that address community needs. Each year \$100,000 of funds are offered in a competitive granting process. In 2016, nine projects were funded with nearly \$91,000 allocated. Five projects supported work at NWREC. Four projects supported work at the Clackamas Extension office.

Results from the Innovation Program are shared at a joint staff meeting with NWREC and Clackamas Extension in December—and later with our advisory council.



Rich Regan co-hosts visitors to NWREC from the Lushan Botanical Garden in China.

Rich is a natural teacher and his impact on Oregon agriculture will be felt for years as the students from his courses go on to be leaders in Oregon agriculture and beyond. His expertise and experience has been a huge asset and colleagues, students, and

industry is better for him sharing his knowledge over the years.

All good things come to an end and so we say goodbye to our very knowledgeable and impactful colleague, Rich Regan. Enjoy your retirement!

### CLACKAMAS EXTENSION FACULTY STAFF PROJECTS

Oregon IPM Website; *Weston Miller*; \$5,000

4-H STEM—WeDo Lego Robotics; *Jan Williams*; \$6,500

4-H Fish Stewards Program Expansion & Replacement of Aging Equipment; *Trisha White*; \$8,350

Forest Management Alternatives—Sharing Hopkins Demonstration Forest Results; *Glenn Ahrens and Peter Matzka*; \$8,000

### NWREC FACULTY STAFF PROJECTS

Developing a Douglas-fir Seed Orchard and Testing New Provenances; *Chal Landgren*; \$7,884

Development of a Pollinator Species Inventory in the Willamette Valley; *Nick Andrews*; \$12,140

Assessing Collaborative Research Efforts Between Clackamas Community College Students & NWREC Programs Through On-Farm, Food Safety Research; *Luisa Santamaria*; \$10,750

Modifying the “Easy Harvester” to Harvest Fresh Quality Blueberries; *Wei Yang*; \$15,644

Cider Apple Demonstration Orchard: Addressing Education Gaps in a Novel Oregon Industry; *Nik Wiman*; \$16,439

**Total Funded \$90,707.00**

# Will an “Easy Harvester” Work for Harvesting Fresh Quality Blueberries?

By Wei Qiang Yang<sup>1</sup>, Fumi Takeda<sup>2</sup>, Heather Andrews<sup>1</sup>, and Changying Li<sup>3</sup>

Rising labor costs and the lack of field workers are big challenges facing blueberry growers who sell their fruit to the fresh market. Current machine technology does not do an adequate job of harvesting fresh quality berries because it causes internal fruit bruising by its hard plastic or metal catch surface and parts. In experiments conducted with a modified ‘Easy Harvester’, purchased with funding support from a Clackamas County Innovation Grant in 2016, we demonstrated that using a mesh-net and “No-Bruze” padding as fruit catch surfaces could significantly reduce internal berry bruising. Combined with a pneumatic shaker, we were able to harvest fresh market quality blueberries by using the “Easy Harvester”. Research will continue to focus on refining the catch surface design and reducing fruit dropping distances to the catch surface therefore further reducing fruit bruising.

A Blueberry Impact Recording Device (BIRD) sensor was also used to assess the fruit bruising with different fruit catch surfaces. An aluminium catch surface on the “Easy Harvester” had the most internal fruit bruising compared to the “No-Bruze” padding and mesh-net. The BIRD sensor can also be used in packing houses to assess the bruising

impact resulting from fruit dropping at various heights during the packing process. The specific improvement of the packing line suggested by a BIRD evaluation will improve fresh packing quality.

<sup>1</sup>North Willamette Research and Extension Center, Aurora, OR 97002

<sup>2</sup>USDA-ARS-AFRS, Kearneysville, WV 25430

<sup>3</sup>College of Engineering, University of Georgia, Athens, Georgia 30677



*Dr. Fumi Takeda measuring blueberry bruise damage in the field with the BIRD sensor.*



*Branch Experiment Station Intern, Amada Serven (left), and NWREC Bio Tech, Heather Andrews, working in the field with the EZ Harvester and pneumatic berry shakers during evaluations.*

## Hiring Updates—status report

With the hiring announcement of the new Nursery Production and Management faculty member at NWREC, we can say, “One down and two to go.”

Next up in hiring, is the replacement for Joe DeFrancesco, our long-time Field Center Director for the IR-4 program. This is the pesticide registration research position and is responsible for the maximum residue data collection and efficacy research on new pesticides for use on Oregon crops. Joe has announced his retirement for the end of October and we have been scrambling to try and hire a replacement ASAP—with hopes of having a transition between Joe and the new person.

Ed Peachey, a weed scientist and vegetable Extension faculty member on campus, is chairing the IR-4 Search Committee. A national search was conducted. 19 candidates applied for the position and the committee selected seven for phone interviews prior to inviting 4 candidates for site interviews. It is expected that the site interviews will be held in late August and/or early September.

The Vegetable and Specialty Seed Crop Extension position is in the queue, too. The position description has been approved and the advertisement is waiting to be approved by the university. This, too, will be a national search that

hopes to identify several outstanding candidates that can be brought in for interviews—hopefully in October.

By the end of 2016, NWREC should have four new faculty members added since the autumn of 2015—Tree Orchard Crops, Nursery Production and Management, IR-4 Field Center Director, and Vegetable and Specialty Seed Crops.

According to Mike Bondi, NWREC’s Director, “This is all good! But, it has been a crazy year. We haven’t seen hiring like this before at NWREC. But, we’ll definitely take it. With all these new people, we will have a new culture and excitement around the Research Center. I look forward to what’s ahead!”

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 and Facilities  
Manager*

Geoff Lewis, *Building Trades and  
Maintenance*

Derek Wells, *Farm Management*

**Extension & Research Faculty**

Bernadine Strik, *Berry Research  
Leader*

Wei Yang, *Berry Crops  
Extension Agent*

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*

Chip Bubl, *Extension Agriculture  
Agent*

Joe DeFrancesco, *Pesticide  
Registration Research*

Nik Wiman, *Orchard Crops Extension  
Specialist*

**Research and Program Staff**

Amanda Vance, *Berry Research*

Pat Jones, *Berry Research*

Heather Andrews, *Berry Extension  
and Orchard Crops*

David Lowenstein, *Brown  
Marmorated Stink Bug Research*

Gina Koskela, *Pesticide Registration  
Research*

Peter Sturman, *Pesticide Registration  
Research*

Judy Kowalski, *Christmas Tree, and  
Pesticide Registration Research*

Gilberto Uribe, *Nursery Pathology  
and Bilingual Program Assistant*

Heidi Noordijk, *Small Farms  
Program Assistant*



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Make checks payable to: **OSU Foundation—NWREC**. Mail to:  
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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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