Greetings! We have several exciting items to mention. First, the really good financial news for us has been the generous contributions by our Friends of NWREC. As a result of gifts made during the past 16 months, we have about $18,000 of funds that will be invested in several projects to upgrade our facilities at NWREC and support key programs and activities. Come and see our new entry steps and handrails for the Main Office building. Look for a new overflow/big rig parking area along our exit drive, the renovation of the landscape areas in front of the Main Office building and Parker House, cleaning out and renovation of the Winter Garden, gravel for our permanent roads on the farm, wood deck repairs around the Main Office, purchasing a tunnel varmint control system, and exterior painting for at least one building. These projects will represent a huge improvement in our facilities, our looks, and farm management. In addition, we plan to support several important community outreach events in the coming months. A special thanks to those who have contributed to our Friends of NWREC campaign during this past year! A current list of our Friends can be found on page 5.

More important news includes four NWREC research and education projects that have received funding for completion in 2012. This first time funding source, called the Innovation Fund, is provided by the Clackamas County Extension and 4-H Service District to encourage new and creative work. The successful NWREC projects and their leaders will be:

- Christmas Seed Orchard and Seed Bank Reserve Area; Chal Landgren ($4,500)
- Developing High School Scholars in Science; Luisa Santamaria ($12,200)
- Novel Pruning Methods and Trainings; Wei Yang ($18,000)
- Summer Willamette Valley Agriculture Institute; Bob McReynolds ($35,000)

Finally, during the winter we have been working out the details for creating a pilot effort to bring commercial agriculture to NWREC through a new land lease program. We plan to test this approach that will provide acreage to local farmers interested in working with us on the farm. We will provide land at NWREC to help farmers try new ideas and/or expand their operations—while working with our faculty and staff to learn together side-by-side. We’ll keep you posted on this new concept.

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

Is Flax Back?

This past year we grew a two acre patch of flax in our organic area at NWREC to get experience with this former, once common Willamette Valley crop—and, one that seems to have a renewed interest. During 2012 we are expanding this project to include 15 acres that will be planted in three five acre blocks. Here’s the short story on why we are continuing to look at this crop.

Flax has a long and rich history in our region. Flax fiber is used to make linen. It is well suited to Oregon’s soils and climate and may require fewer inputs to grow successfully. Flax was grown as early as 1844 in the Willamette Valley. A flax oil mill was established at Salem in 1867 and the first flax-spinning mill was operating at Albany by the 1870s. An exhibit of Oregon flax won the bronze medal and certificate of merit at the Philadelphia Centennial Exposition in 1876. By the 1890s, the U.S. Department of Agriculture was touting Oregon and

Don’t let this be your last issue, sign up to continue receiving Down on the Farm. See the back page for details.

oregonstate.edu/dept/NWREC
Diane loved to work with growers to identify growing these crops. A generalist in nature, while looking at the practical aspects of growing strawberry and cane berry crops. She provided education and outreach to growers throughout the North Willamette Valley while looking at the practical aspects of growing these crops. A generalist in nature, while looking at the practical aspects of growing strawberry and cane berry crops. She provided education and outreach to growers throughout the North Willamette Valley while looking at the practical aspects of growing these crops. A generalist in nature, while looking at the practical aspects of growing strawberry and cane berry crops. She provided education and outreach to growers throughout the North Willamette Valley while looking at the practical aspects of growing these crops. A generalist in nature, while looking at the practical aspects of growing strawberry and cane berry crops. 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OSU Organic Fertilizer & Cover Crop Calculator Widely Used

By Nick Andrews, Metro Small Farms Extension Agent

Organic fertilizers are more expensive than conventional fertilizers and science-based ways of estimating the availability of nitrogen were not readily available to farmers and gardeners.

Cover crops protect soil from erosion and legume cover crops fix atmospheric nitrogen which can then become available to the following crops. This nitrogen is produced without fossil fuels and is cheaper than most other organic nitrogen fertilizers, but farmers did not have a reliable method for estimating how much nitrogen their cover crops provide.

In collaboration with vegetable farmers in the north Willamette Valley, Nick Andrews and Dan Sullivan (OSU Soil Scientist) conducted lab and field research to predict nitrogen mineralization rates from organic fertilizers and cover crops. Data from this research was used to develop and validate models that predict the availability of nitrogen from organic fertilizers and cover crops. We incorporated these models into the OSU Organic Fertilizer and Cover Crop Calculator which is available online at http://small-farms.oregonstate.edu/calculator. Jim Julian, an agricultural economist, worked with Nick to develop an economic spreadsheet for the calculator that compares the cost of fertilizers and cover crops.

Organic and conventional farmers and agricultural advisors in Oregon and around the country now use this calculator to estimate the nitrogen contributions of cover crops and identify the most cost-effective and balanced organic fertilizer plans. The original Organic Fertilizer Calculator was launched in 2008. It did not estimate cover crop nitrogen contributions. By 2010 when it was enhanced to include cover crops it had been downloaded more than 4,800 times and had over 1,300 registered users from 64 countries representing every continent. There were 1040 registered users in the US from all 50 states, with 344 registered users in Oregon. More than 45,000 acres were managed by registered users. Since 2010 more than 620 people have registered to use the revised calculator with 120 from Oregon. Over 52,000 acres are managed using the new calculator. If 25% of the registered users save $50/acre/year on reduced fertilizer costs or increased yields, the estimated annual economic impact of the new calculator is more than $650,000.

Sauvie Island Organics produce organic vegetables on 20 acres. They feed 400 members in their Community Supported Agriculture program and supply 25 restaurants. Scott Latham explains, “We didn’t give our cover crops enough N-credit. The calculator showed us we were getting twice the N we thought. Now, no N is applied to our cover crops enough N-credit. The calculator showed us we were getting twice the N we thought. Now, no N is applied to our head lettuce and we get the same yield and save $275/ac on fertilizer. We invest our savings in additional N to our broccoli field and get higher broccoli yields.”

David and Nancy Brown grow 80 acres of organic fresh vegetables near St. Paul. David was one of the original collaborators in this work. “This year I reduced my fertilizer bill about 60% by working with Nick and Dan and still got great yields. This project helps me evaluate my cover cropping program.”

Andrews’ Work Gaining Recognition

Nick’s work with the fertilizer calculator is gaining more and more recognition. Extension faculty in Hawaii have requested Nick’s assistance and counsel as they build a tropical version of calculator. Nick will be in Hawaii in late April and May working with faculty there.

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.

May 14 NWREC Advisory Council Meeting. 5:00-8:00pm; Facilitator: Mike Bondi.

June 7 Christmas Tree Integrated Pest Management Workshop. 10:00am-2:30pm. Instructor: Chal Landgren.

June 13 Strawberry Open House. 1:00-5:00pm. Instructor: Bernadine Strik.

June 25-26 Discover Willamette Valley Agriculture, Part 1. 8:00am-4:00pm. Facilitator: Bob McReynolds.

June 26 Wilsonville Chamber of Commerce Business After Hours. 5:00-7:00pm.

June 25-27 Youth Tractor Safety and Certification Course. 8:00am-4:00pm daily.

July 9-10 Bugs in the System—implementing biological control in nurseries and greenhouses. (times to be determined). Instructor: Robin Rosetta.

July 9, 10, 11 Discover Willamette Valley Agriculture, Part 2. 8:00am-4:00pm. Facilitator: Bob McReynolds.

July 11 Caneberry Open House. 1:00-5:00pm. Instructor: Bernadine Strik.

July 12 Blueberry Field Day. 1:00-5:00pm. Instructor: Bernadine Strik.

July 18 NWREC Community Open House. 4:00-7:00pm.

503-678-1264 oregonstate.edu/dept/NWREC
College Dean Resigns—heading to D.C.

Sonny Ramaswamy, Dean of the College of Agricultural Sciences and Director of the Oregon Agricultural Experiment Station at Oregon State University, has been named by President Obama to lead the National Institute of Food and Agriculture (NIFA) in Washington D.C.

NIFA is the lead agency in the U.S. Department of Agriculture that supports research, education and Extension programs in the nation’s Land-Grant University System and partner organizations. NIFA impacts local communities through a national network of researchers and Extension educators who respond to public inquiries and conduct informal, non-credit education programs. NIFA helps states respond to areas of public concern that affect agricultural producers, small business owners, youth, families, and communities by providing grants to land-grant universities and researchers.

Sonny relocates to D.C. in late April. Dan Arp, Dean of the OSU Honors College, has been named the new Dean of the College of Agricultural Sciences and Director of the Oregon Agriculture Experiment Station.

NWREC Advisory Council

An Advisory Council was formed last fall with the purpose of providing oversight and guidance to the education programs, research and operation of the North Willamette Research and Extension Center. The Council met in November and in January. Their next meeting is in May. We are proud of our Council members, their affiliation and program connections to NWREC. Feel free to provide any input you might have to these individuals.

Mike Anderson, Carlton Plants; Dayton—nursery
Mike Beard, Community Member; Lake Oswego—community
Greg Bennett, NW Onion Company; Salem—vegetables
Bob Boyle, NW Farm Credit Services; Salem—business and finance
Mike Iverson, Aurora Farms; Aurora—vegetables
Jim Johnson, Oregon Department of Agriculture; Salem—state agency
Charlotte Lehan, Clackamas County Commissioner; Oregon City—elected official
Greg Leo, The Leo Company; Aurora—community
Neal Lucht, NW Transplants; Molalla—nursery
Lance Lyon, Community Member and Nursery Consultant; Aurora—nursery and community
Ron Oberg, Clackamas Extension Advisory Council; Oregon City—small farms and community
Eric Pond, AgriCare; Jefferson—berries
Craig Pope, Polk County Commissioner; Dallas—elected official
Mark Schmidlin, Schmidlin Farms; Banks—Christmas trees
Manual Silviera, NorPac; Stayton—vegetables
Matt Unger; Unger Farms; Cornelius—berries
Tom Winterrowd, Pitkin Winterrowd Farms; Canby—small farms

Vegetable Endowment—first year report

2011 was the first year for the new Extension Vegetable and Specialty Seed Endowment fund—the first such effort to endow a county Extension Agent position in Oregon. The purpose of this endowment is to provide permanent and sustainable funding support for the Extension Vegetable and Specialty Seed Agent position at the North Willamette Research and Extension Center.

Long-time Extension Vegetable Agent Bob McReynolds retired in June, 2010. Since that time, McReynolds has been working 1/2 time to keep his program going and to work with growers interested in assuring that his position is replaced. Bob is set to retire—for good—by the end of this year. With funding challenges facing Extension statewide, including the recent state hiring freeze, there are no current plans to refill Bob's position soon.

The Vegetable and Specialty Seed Crop Endowment has an immediate goal of raising $500,000 to provide leverage and a more favorable position in the priority order of filling vacancies—once rehirings are allowed. Currently, Extension has 33 vacancies statewide in its agriculture programs in Oregon going back over the past 9 years during a time of budgetary decline.

During the first 16 months of the Endowment effort, vegetable and specialty seed growers, organizations, business partners, and private individuals have raised over $230,000 of contributions and commitments. “This is an amazing effort,” said Jack Holpuch, Director of Development with the Oregon State University Foundation and staff person working directly with those interested in supporting the endowment project.

“We're almost 1/2-way to our immediate goal. If we can get there in the next twelve months, we will have demonstrated the very strong support for this position and be in a great position for refilling when Extension is able to make commitments to programs. If all goes well, the hiring restrictions now in place could be lifted at the beginning of the next biennium—mid 2013.”

Those wanting to learn more about the endowment project or get involved can contact Holpuch at 541-737-4218.
Become a Friend TODAY!

We are very excited to see the strong support from those you have become Friends of NWREC. We certainly appreciate the financial help and look forward to using your dollars to make a real difference in our facilities and programs here at the Center—accomplishing what we can’t do with our normal budgets.

If you’d like to join our team of supporters, please do. We are planning a special recognition event for our Friends in the fall—a harvest dinner to thank those who care and share the vision for our programs going forward.

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
Community Open House Coming!

We will open our gates, again, to the public for an up close look at NWREC, what we do, and why it’s important. Here are the details. Come join us and learn more about our programs and activities. Invite your friends and neighbors, too.

Wednesday, July 18
4:00-7:00pm
See-the-farm hayrides at 4:00, 5:00 and 6:00pm
Walking tour available, too, to see work on wasabi, blueberry trees, slugs and snails, Christmas trees, composting and nursery production...plus much more.

Don't miss berry tasting—find out how we determine the next great berry for the market.

Fresh vegetables available again this year.

2011 Open House Snapshots

Discover Willamette Valley Agriculture

This is a special new effort that provides a unique view of agriculture in our region and what it really takes to be a farmer in today’s world. Farming is hard work, requires long hours, many skills and the ability to handle risk.

Discover Willamette Valley Agriculture is a workshop designed for school teachers, elected officials, decision and policy makers—anyone wanting to know more about agriculture, where our food comes from and how we can all take responsibility for its future supply.

This workshop will be taught by a variety of OSU Extension faculty, local farmers and other agricultural professionals. Dates for Discover Willamette Valley Agriculture will be June 25 and 26 plus July 9, 10 and 11. Each day begins at 8:00am and ends by 4:00pm. Enrollment is limited to 30 attendees.

For more information, contact NWREC at 503-678-1264 or check our website.

Summer Internships Target Young Scientists from Wilsonville and West Linn

The North Willamette Research and Extension Center, in cooperation with the Wilsonville-West Linn School District’s Center for Research in Environmental Sciences & Technologies (CREST), will offer up to six summer internships for high school students during June through August at NWREC. The students will work in the nursery pathology program with Extension faculty Luisa Santamaria.

The purpose of this pilot project is to expose motivated students to agricultural and environmental research. The target audience for this project generally has little awareness about agriculture and the practical nature of the work we do and how science is a critical element of our education. Students will be given the tools and understanding to conduct independent research projects—including working in a laboratory, controlled experiments, and accurate data collection. Field trips to area facilities and sites where research is being conducted will be included, too. This program hopes to ignite a passion in talented students to pursue careers in agriculture and environmental sciences.

For more information, see http://oregon-state.edu/dept/NWREC and click on ‘Education & Volunteers’.

World’s First Blueberry Tree

Extension Berry Agent, Wei Yang, describing the development of the world’s first blueberry tree—a project he is working on in the Propagation House at NWREC. Wei’s visitor is Tyler Frisbee, a Legislative Aide for Oregon Congressman Earl Blumenauer.
Washington as good flax growing areas. However, costly hand labor required to harvest and process it and competition with European producers limited flax production.

In 1915, the state of Oregon built a flax processing plant at the state penitentiary in Salem, and this plant became known as the State Flax Industry. The state joined the Works Progress Administration to construct three cooperative flax processing plants at Springfield, Canby, and Mount Angel in 1936. Six processing plants and two spinning mills were operating in Oregon by 1941, and production reached its peak during World War II, with increased demand and reduced access to European flax. At that time, it is reported that the Valley included about 20,000 acres of flax. More processing plants were built to meet the demand, but the industry declined following the war.

Interest in growing flax has been growing, again, in recent years. Flax seed is considered by some as the new wonder food. Preliminary studies show that flaxseed may help fight everything from heart disease and diabetes to breast cancer—known to contain high levels of omega-3 oils, antioxidants, and a good source of fiber. Flax oil is used for human consumption and as an industrial oil. Flax fiber and linen products are natural fiber products that could be easier to grow with fewer nutrient and pesticide inputs than crops like cotton. Finally, flax has potential as a biomass crop, too.

Natural Advanced Technologies (NAT) is a 15-year old company that is interested in developing new flax-based fiber products and has been working extensively in the mid-Atlantic region. Beginning in September 2011 they opened an Oregon office with the intent to build a flax industry here to provide supply for their products. NAT is now working with companies like Hanes, Levi’s, Carhartt and Target to explore the use of flax fiber in socks, undershirts, denim, towels, curtains, and many more items. As any farmer knows, markets are your key to success. We might have an opportunity coming in the Willamette Valley that will create demand for this crop.

There is a lot to like about the potential of flax for the Willamette Valley. Flax is robust and grows quickly. It’s resistant to cold, rain, and heat. Its shallow root system grows well in our wet soil and, overall, flax requires very little in terms of upkeep or inputs. Being a broad leaf crop, flax rotates easily with all of our established grass crops, and the fact that there are 90 or 120 day strains could work well with growers of vegetables and fruit crops. Flax planting can take place in fall to overwinter or planting can be done in the early spring, late spring, and even summer—to be harvested whenever it is ready.

According to Jay Nalbach, Chief Marketing Officer at NAT, “One thing that I am very excited to report is that OSU already has its own strain of flax, named “Lin-Ore,” which is tall enough to be a good fiber or seed crop.” And, according to the team at Naturally Advanced Technologies, the flax byproduct can be used for animal bedding, shipping materials, mulches, fuel pellets, kitty litter, or simply turned back into the soil.

Flax fields are beautiful, too. We saw this last year in our small planting at NWREC. When the flax flowers bloom, the fields are full of white, purple, or blue-tinted flowers for several hours per day. This blooming takes place over a three-week period, which makes for a gorgeous landscape.

Could flax be a new crop—reborn for the Willamette Valley—and able to provide a new industry and market for our farmers? Plan to come by this summer and see what you think of our crop. We expect to have a field day to share our work. We will be trying a two different seeding methods (row and broadcast) and seedling rates. This should be interesting to see how we do.
Sign up NOW for more *Down on the Farm*

It’s time to purge our 3,800 piece mailing list we have distributed *Down on the Farm* to these past two issues. We are happy to provide you with our news from NWREC. So, sign up today to continue receiving future issues. **Our sign up deadline is May 31...otherwise, this will be your last issue.**

We are offering two options for *Down on the Farm*—electronic copy emailed to you through a list serve or as a hard copy mailed through the postal service. Either way, *Down on the Farm* is a free of charge newsletter. Be sure to recommend our information to business associates, friends, neighbors and others you know who are interested—or should be. We are encouraging as many as possible to sign up for the electronic version of the newsletter to minimize our printing and postage costs, but we are happy to provide hard copy, too.

Here’s how to sign up:

1) **Send us an email** to jan.egli@oregonstate.edu and request to be on our *Down on the Farm* mailing list—either electronic or hard copy version. Provide appropriate information for your distribution preference.
2) **Phone in** your *Down on the Farm* sign up information to NWREC at 503-678-1264 and leave your information with the attendant or on our voice mail.
3) **Mail your sign up information** to NWREC, 15210 NE Miley Road, Aurora, OR 97002.

Thanks, we hope to have you on our list for our next *Down on the Farm* in July.