The goal of this monthly newsletter is to serve the best interests of Idaho crop producers. Correspondence and inquiries should be addressed to: Olga Walsh, Cropping Systems Extension Specialist, Southwest Research and Extension Center, 29603 U of I Lane, Parma, ID 83660, Phone: (208)722-6701 (ext. 218), Fax: (208)722-6708, Email: owalsh@uidaho.edu

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University of Idaho Extension improves people’s lives by engaging the University and our communities through research-based education. Our areas of expertise are Agriculture, Community Development, Family and Consumer Sciences, Natural Resources, and Youth Development.

To enrich education through diversity the University of Idaho is an equal opportunity/affirmative action employer and educational institution.
WHAT’S NEW?

UI Parma Cropping Systems Welcomes New Technician

New Research Technician, University of Idaho, Parma R&E Center - Steven Blanscet

August 1, Steven Blanscet has joined the Cropping Systems Agronomy program at the University of Idaho, Parma R&E Center. Steven was originally hired at Parma as a member of farm crew since 2015. Steven holds Bachelor’s Degree in Agricultural Sciences from the Eastern Oregon University (EOU)/ Oregon State University (OSU) La Grande, OR. During his studies, Steven’s education is agricultural sciences, forestry, crop production, and leadership. He has four years of experience in farming. Steven has shown himself to be reliable, hard-working, responsible and capable professional, while working with UI Parma farm crew throughout the last growing season. The search for the new Research Technician has been rigorous and several excellent candidates were considered. Steven surpassed others due to his knowledge of ag practices and hands-on experience working with research equipment and small scale research practices and methodologies.

Steven grew up in La Grande, Oregon; he moved to Parma, Idaho in 2000. He choose to work in agriculture because he really enjoys it; he grew up working outside for different farms while he went to school. While in high school, Steven worker for a local farmer down the road from his parents’ house, responsible for irrigation. Later, Steven combined his college studies with working at another farm, where he gained experience with farm equipment and crop production practices. “What I like most about my job is that I’m working in a field that I love, and that I get to help with research that will hopefully impact farmers in a positive way, to help them save money and increase their yields.”, says Steven. This fall, Steven will be working with Jordan McClintick-Chess, Agricultural Technician, UI Parma R&E Center, to establish 2016-17 research experiments. They will assist in organizing the Annual Southern Idaho Cropping School, and summarizing this year’s results into research and extension type publications and presentations.
Steven’s main duties and responsibilities include assisting Olga Walsh, UI Parma Cropping Systems Agronomist, in conducting field, greenhouse, and laboratory experiments focused on plant nutrition, fertilizer, and water use efficiency. Other responsibilities include developing educational materials, reporting research results at grower and professional meetings locally, regionally, and nationally, and assisting in organizing field days, workshops and seminars and other educational extension and outreach events.

Steven Blanscet - Research Technician, UI Parma R&E Center, applying compost and manure treatments to dual purpose cropping systems research plots in collaboration with Montana State University and Washington State University, funded by Western SARE.

Cropping Systems Agronomy program at UI Parma R&E Center Blog now has a page dedicated to Steven, his activities and research updates: http://idcrops.blogspot.com/p/steven-research-technitian.html.

For more information about our research and extension program, please go to: http://idcrops.blogspot.com/p/about-us.html.

Cropping Systems Agronomy team at UI Parma began corn research in 2016 in collaboration with Dr. Dave Tarkalson (Soil Scientist/Systems Agronomist, USDA-ARS, Northwest Irrigation and Soils Research Laboratory, Kimberly, ID), J.R. Simplot Company, and AgXplore. The study supported by the J.R. Simplot is focusing on evaluation of cover crops in silage corn production system for improved soil health. The cover crop mix including legumes, grasses, brassicas, and other broadleaves, will be planted after silage corn harvest. The study will continue in 2017.

Max (AgXplore International, Parma, MO) with CrossLink Technology is a nitrogen aid with the following proposed advantages: increased nitrogen availability and uptake, reduced nitrogen loss, flexible in regards to application practices and weather conditions, and user- and environmentally-friendly (non-corrosive and no detrimental effects on soil). The study’s objective was to access potential benefits of NZone Max in corn for improving N use efficiency and grain production.

Developing nitrogen fertilizer guidelines for corn in Idaho, in collaboration with USDA’s Dr. Tarkalson, will continue for at least one more growing season. The focus of this work is to put together a robust data base of corn response to nitrogen fertilizer application rates. The study locations are spread out throughout the state of Idaho and will enable us to update nitrogen recommendations for corn growers based on up-to-date, local data, using currently grown hybrids grown under various irrigation systems.
“Corn smuts such as common and head smut are found in all corn producing regions of southern Idaho, but yield losses rarely exceed 3%. Sweet corn is generally more susceptible to smuts than other corn varieties, with common smut being more prevalent than head smut. Temperatures of 79-90°F are optimal for development of the diseases. Infection can occur wherever spores land on the corn plant. Common smut is characterized by the formation of galls, which begin to form one to several weeks after infection. Initially, galls are green-white in color, and finally develop into large masses (6 inches in diameter) of dark powdery spores appearing like soot. Common smut can attack any part of the corn plant, but will do the most economic damage when galls form on ears or above. Sweet corn for the frozen market must comply with strict processing standards; if a corn ear has one smut gall growing on it, the entire ear will be rejected. Currently, no chemical controls exist for common smut. Head smut damage to sweet corn can be kept to a minimum by planting resistant sweet corn varieties, planting corn in non-infested fields, and the use of seed treatment fungicides. Head smut is characterized by gall formations in ears and tassels. The galls are initially covered with a thin membrane that ruptures to expose dry, powdery masses of spores. If the tassel is infected, all the ears on that plant will be smutted or aborted. **CONTROL** Carboxin (Vitavax): Applied as a seed treatment to less than 5% of the sweet corn seed to control head smut.”

Source: [https://ipmdata.ipmcenters.org/documents/cropprofiles/IDsweetcorn.pdf](https://ipmdata.ipmcenters.org/documents/cropprofiles/IDsweetcorn.pdf)
GUEST CONTRIBUTION

Precision Agriculture and 4R Nutrient Stewardship

With Dr. Steve Phillips, Director, North American Program, International Plant Nutrition Institute

Since we did not have any guest contributions for this issue, I decided to share the most recent information published by the International Plant Nutrition Institute’s Dr. Steve Phillips in Plant Nutrition Today (2016 ISSUE 3, NO.2), http://www.ipni.net/publication/pnt-na.nsf/0/029D2E8ABE186E9B85258027005ED2AE/$FILE/PNT-2016-Fall-02.pdf.

“...the basic questions regarding N fertilizer management have been the same for centuries: What source do I apply? What rate do I apply? What time in the growing season do I apply it? and What placement method do I use?”. Precision ag continues to provide more efficient management methodologies. However - “Precision agriculture and 4R Nutrient Stewardship are critical components for meeting sustainability goals and management objectives on the farm. However, technology and data are not silver bullets. Unless precision agriculture is practiced within the context of a science-based decision framework like 4R Nutrient Stewardship, it can create more confusion and frustration than solutions.”
The 2016 annual Nitrogen Use Efficiency conference was a great success, with over 60 attendees from more than 20 research institutions from all over U.S.

First Annual Marvin Stone Memorial Poster Competition for Graduate Students

First place: Calli Feland - impact of nitrogen type, timing, and additives on grain protein in hard red spring week.
Second place: Curtis Ransom - Field-scale nitrogen recommendation tools for improving a canopy reflectance sensor algorithm.
Third place: Maryam Shahrtash - Silicon and nitrogen fertilization effects on nitrogen use efficiency of wheat under biotic stress.
Our sponsors’ profiles

The J.R. Simplot Company, Boise, ID
The J.R. Simplot Company is one of the largest privately held food and agribusiness companies in the nation, though at heart we are as small as a single farmer. We pioneer innovations in plant nutrition and food processing, research new ways to feed animals and sustain ecosystems, and strive to feed a growing global population. At Simplot, we’re in the business of Bringing Earth’s Resources to Life.
http://simplot.com/

JC Watson Packing Company, Parma, ID
Established in 1912, JC Watson Company is one of the oldest family owned and operated companies in the produce industry. JC Watson Company has gained trust and respect for generations by delivering superior products and customer service. While our roots run deep in the produce industry, it is our new product innovations, solid partner relationships, and company morale that continue to make us a global leader in growing, packing, and shipping fresh onions year-round.
http://www.soobrand.com/

The Mosaic Company, Plymouth, MN
At Mosaic, our mission is to help the world grow the food it needs - and customer relationships are central to this mission. We are known for our tradition of excellent service and have built a strong foundation of trust with our customers. From crop nutrition and animal feed to industrial and premium products, our goal is to consistently deliver the superior products and value-added services that our customers have come to expect from us. http://www.mosaicco.com/

Brian Arnall’s Precision Agriculture Extension program, Oklahoma State University, Stillwater, OK
Brian Arnall, Associate Professor, Nutrients for Life Foundation Professorship of Soil & Food Crop Nutrition. Precision Nutrient Management. Dr. Arnall’s extension, teaching, and research efforts are focused on precision technologies and nutrient management in all of Oklahoma’s cropping systems with an emphasis in site specific techniques. He works closely with extension educators and industry personnel to improve nutrient management practices in Oklahoma that will lead to increased profitability of Oklahoma producers. Dr. Arnall has been involved in sensor based technologies, remote sensing and variable rate application for more than ten years. He currently has several ongoing studies focused precision technologies including the developed of methods to use sensor based technologies in canola production and ground truthing the use of sensors and VRT technologies in wheat, corn and sorghum production. Dr. Arnall teaches SOIL 4234 Soil Nutrient Management in the fall and SOIL 4213 Precision Ag in the spring semester. https://osunpk.com/

Bill Raun’s Soil Fertility program, Oklahoma State University, Stillwater, OK
William R. Raun, Regents Professor, Walter R. Sittlington Chair in Agriculture, Precision Agriculture/Soil Science. Project leader in nutrient management. Annually have 10 graduate students working in a variety of precision agriculture research projects. New
work includes the development of pocket sensors, alternative planters for third world farmers, by-plant N fertilization equipment and algorithms, international collaboration with CIMMYT on a variety of projects, and improved nitrogen use efficiency in crops worldwide. Teaching includes “Soil Plant Nutrient Cycling and Environmental Quality SOIL 5813, Research Methods, SOIL 5111, and Precision Agriculture, SOIL 4213.” [http://nue.okstate.edu/](http://nue.okstate.edu/)

**University of Idaho Extension, Moscow, ID**
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![Image](image_url)

**Dr. Jim Barbour**, IPM Specialist and Superintendent, UI Parma R&E Center, discussing mint and hops production practices and IPM methodologies.
Dr. Jacob Blauer, J.R. Simplot Company, showcased precision phenotyping in potatoes.

Tom Elias, Pomology & Viticulture Research Assistant, UI Parma R&E Center, gave a tour of Parma orchard.
Dr. Duke Bulanon, Assistant Professor, Mechanical Engineering, Northwest Nazarene University, has demonstrated precision aerial data collection using UAVs (drones) in specialty crops in Idaho.

Dr. Bryan Hopkins, Professor, Brigham Young University, was one of 15 invited speakers at the 2016 NUE conference. He presented a talk on Aerial Assessment Strategies for improving NUE in potatoes and cereal grain production.