A newsletter for Idaho crop producers

May 31, 2015 Issue No. 5

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

TOPICS:

<table>
<thead>
<tr>
<th>WHAT’S NEW?</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSU/UI Cereal Field Day, June 25, Parma</td>
<td>2</td>
</tr>
<tr>
<td>Introducing New Research Technician</td>
<td>3</td>
</tr>
<tr>
<td>Water &amp; Soil Conservation in Dry Beans</td>
<td>3</td>
</tr>
<tr>
<td>UI at Capital Farmers Market</td>
<td>4</td>
</tr>
<tr>
<td>UI Extension Partners with ID Food Producers - with Bob &amp; Cari Wagner</td>
<td>5</td>
</tr>
<tr>
<td>GUEST CONTRIBUTION</td>
<td></td>
</tr>
<tr>
<td>Biodynamics - by Kelli Belmont</td>
<td>7</td>
</tr>
<tr>
<td>GETTING TO KNOW ID AG</td>
<td></td>
</tr>
<tr>
<td>Thanks, Team!</td>
<td>9</td>
</tr>
</tbody>
</table>

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?

2015 OSU/UI Cereals Day

Parma Research & Extension Center
29603 U of I Lane Parma, ID 83660

June 25, 2015 12 noon to 4:30

A review of wheat and barley lines and cereal-related research.

AGENDA:

12:00 Noon: Registration
12:30 -1:00: Welcome and Lunch

Research and extension program:
1:15-1:30: Trial Implementation - Olga Walsh
1:30 - 1:45: Nitrogen and Water Use in Wheat - Olga Walsh/Arjun Pandey, U of I
1:45-2:00: Wheat - Based Cropping Systems - Xi Liang, U of I
2:15-2:45: Cereal pathology - Juliet Marshall, U of I

Breeding program:
2:55-3:25: Mike Flowers, OSU
3:30-4:00: Information from Jianli Chen, U of I
4:00-4:30: Discussion/Walking the plots

Thank you to Idaho Barley Commission and Idaho Wheat Commission for supporting cereal research and education and for sponsoring lunch!

The Oregon State University Extension Service engages the people of Oregon with research-based knowledge and education that strengthen communities and economies, sustain natural resources, and promote healthy families and individuals. The Extension Service offers its programs and materials equally to all people.

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***OSU Oregon Elite Yield Trial Results:
http://cropandsoil.oregonstate.edu/content/2014-oregon-elite-yield-trial-data

***U of I, Treasure Valley Small Grain Variety Performance:
Idaho Crops & Soils blog (http://idcrops.blogspot.com/)
Introducing New Research Technician

The Cropping Systems program at University of Idaho’s Parma Research & Extension Center is happy to introduce our newly hired Research Technician, Kelli Belmont.

Kelli received her Bachelor of Science degree in Biology from the University of Nevada-Reno. She conducted her graduate work on how weeds, insects and disease affect sugar beet yields and quality at University of Idaho, Kimberly Research & Extension Center. She obtained her Master of Science degree in Weed Science under guidance of Don Morishita.

Kelli will assist in coordinating research and extension program on sustainable production for crops important for Idaho economy. Her knowledge in production agriculture and weed science, and her excellent analytical skills will be a valuable asset to our Cropping Systems team.

We are excited about the possibilities of expanding our research and educational efforts in the SW Idaho and across the state.

Water & Soil Conservation in Dry Beans

A team of University of Idaho researchers and extension specialists led by Olga Walsh, Cropping Systems Agronomist, Parma R&E Center, have successfully partnered with the Idaho Bean Commission to secure funding for the collaborative project titled “Water and soil conservation and effective weed management for sustainable dry bean production”.

The multi-disciplinary team includes Don Morishita (Weed Science Specialist), Howard Neibling (Irrigation Specialist) Jerry Neufeld (Canyon County Educator), and Andi Wolf (Idaho Bean Commission’s Executive Director).

The funding from the Idaho State Department of Agriculture, Specialty Crop Block Grant Program, will enable us to conduct two field experiments to develop sustainable water and soil conservation and weed management strategies for dry bean production.

One study will focus on the effects of water management using subsurface drip irrigation versus furrow irrigation in two tillage systems: conventional and strip tillage. Weed response to these water and soil management
practices will be measured in addition to crop growth and yield.

The second study will focus on the effects of three tillage systems - conventional tillage, strip tillage, and direct seeding - and nine weed control treatments on dry bean growth and development. These experiments will be conducted at two locations in southwestern and southcentral Idaho and repeated over two years.

Project goals are: 1) To evaluate the efficacy of subsurface drip irrigation and reduced tillage on dry bean yield, quality, water use; 2) To develop effective weed management strategies for dry beans grown in reduced tillage under sprinkler irrigation; 3) To train 2 graduate students for 2 years (providing educational and employment opportunities)

Grower education via field demonstrations, annual Bean School, and educational materials will be important part of the project.

We would like to sincerely thank Andi Wolf, for her leadership, and the Bean Commission, in general, for their continued support, partnership, and substantial in-kind contribution.

**UI at Capital Farmers Market**

University of Idaho is a proud sponsor of the Capital City Public Market, in Boise this year! The market is taking place every Saturday, 9:30 am to 1:30 pm, until December. Location - 8th Street from Bannock to the Grove, and Idaho Street from Capitol to 9th.

The market has an average of 15,000 attendees each Saturday with dozens of vendors - producers and artisans at the market offer a wide variety of products.

Each Saturday, The University of Idaho has a booth at the market - which is a great way to showcase the great things the University does. Faculty and staff have an opportunity to volunteer at the booth and display the projects and programs they are involved in.
Joe Vandal is also by the booth from 10:30 am to 12:30 pm to greet the attendees and to take pictures with. Go Vandals!

With a little help from my daughter Willow Walsh, Vallivue High Freshman, I volunteered at the booth on June 30.

We had a blast! We were distributing educational materials pertaining to Idaho agriculture and sustainable crop production, promoting OSU/UI Cereal Field Day, answering questions about soil and crops grown in Idaho. We got many questions about 4-H programs, summer camps, and majors offered by the University of Idaho.

I will be volunteering at the booth again on July 18 and August 8. Come to the Boise’s Capital Market, sample some delicious Idaho-grown and produced foods, listen to some music and cheer for U of I.

Some of the UI programs participating in the event in the next a few weeks will be 4H Youth Development, Project WET (Water Education for Teachers), College of Education, McClure Center for Public Policy Research, Athletics, and College of Engineering.


UI Extension Partners with ID Food Producers
- with Bob & Cari Wagner

We’ve met Bob and Cari Wagner, Wagner’s Idaho Foods, at the Capital City Public Market, June 30. They were our booth neighbors with a wonderful display of artisan looking mustard. We got to chatting with them while we were setting up in the morning. They told us - “We owe so much to the U of I. If not for the U of I, we would not be here today”. It was great to witness our UI Extension at work! Below is the

![Image of Joe Vandal and Willow Walsh](image-url)
interview with Bob and Cari about their “mustard journey”.

✓ Tell us about your company and why did you choose to focus on mustard.
It was about five years ago, Bob says, my father was lamenting that the type of mustard he loves was getting almost impossible to find. I took it upon myself to order some mustard seed and started trying to come up with something good. Well, long story short, he loved it. He said it was better than the mustard he grew up with. We started giving it to friends, and they told us we needed to sell it. We got the permits and took the food safety course at the U of I Food Technology Center in Caldwell. We make our mustard there now.

✓ What entails “Idaho Preferred” and “Product of Idaho, USA” on your product?
We love Idaho. We source as many of our ingredients from Idaho as possible. We are proud members of Idaho Preferred and Buy Idaho - both programs have helped us immeasurably.

✓ Where the mustard seed you use comes from?
The mustard seed we use is Idaho grown. We think Idaho mustard seed is superior to other seed. Our seed comes from Fairfield and American Falls. Our growers have told us that mustard is really a “plant it and forget it” type of crop. They don’t use chemical pesticides or fertilizers. Some irrigate and some don’t. We met our first Idaho mustard grower through Idaho Preferred, and we met another by chance when doing a trade show.

✓ Tell us about what role UI played in your success?
Without the U of I we simply would not be in business. We have benefitted in so many ways from our partnership! I could never have afforded to build a production facility as a startup. The Food Tech Center has all of the equipment we need in a FDA approved facility.

Cini Baumhoff (Kitchen Supervisor, Caldwell Food Technology Center) is terrific! She has helped us locate ingredients, helped us with our labels, nutrition information, production techniques and how to streamline them, and so much more. She is knowledgeable, always teaching, and is an absolute delight.

✓ What was your Capital City Public Market experience like?
It was exciting and a bit overwhelming. It was wonderful to meet so many people who hadn’t heard of us before, and also very exciting to see so much enthusiasm for our products! We are at the Nampa and Caldwell Farmers markets every week, and our products are available in many stores in Idaho, or at our website, www.wagneridahofoods.com.
GUEST CONTRIBUTION

Biodynamics: Spirituality vs Science?

by Kelli Belmont, Research Technician, Cropping Systems Agronomy, University of Idaho, Parma Research & Extension Center.

An individual approached the University of Idaho booth at the Capital City Public market and noticing our “Crops & Soils News” newsletters on display started talking to us about a concept of biodynamics. He stated “this is the future of farming”, and we (agronomists) should forget about chemistry and physics, and science in general, and should attempt to get in touch with our spirituality and intuition. Then we can “healed” the earth. As we are always interested in learning something new, and we’ve never heard about biodynamics, we’ve asked our new research technician Kelli to “investigate” this concept. Here is what she has found out (Please bear with us 😊)

Biodynamics is a “spiritual-ethical-ecological approach” (Biodynamic Association) to food production and was first conceptualized by Rudolf Steiner in 1924. Steiner was not a scientist or a farmer, rather he was a philosopher.

Steiner suggested that farms were living organisms and suggested a connection between healthy farms and healthy food. When he created the practice of biodynamic farming, he believed food was no longer healthy and did not contain the energy it once had. Similar to organic farming, biodynamic agriculture does not utilize GMOs, synthetic fertilizers or chemicals. Biodynamics emphasizes the relationship of soil, plants, and animals in one unified system. A farm is viewed as a living organism with each component, such as the weeds, insect pest, diseases, soil, and water, functioning as an organ for the organism. The goal behind biodynamic agriculture is to have a farm self-sustaining.

Photo credit: CPFoodMarket.

The difference between organic practices and biodynamic practices include the use of “preparations” which are specific herbs or minerals, treated or fermented with animal organs to enhance the quality of water and/or soil (Pechrová 2014). After being agitated and incorporated into a solution, these preparations are generally applied as a field spray. For example, Preparation 500 is a humus mixture prepared by filling the
horn of a cow with cow manure and burying it in the ground (40–60 cm below the surface) in the fall and left to decompose during winter, which is then recovered for use the following spring.

Photo Credit: FLORILEGIUM

This Preparation 500 is mixed with crushed quartz and stuffed inside the cow horn. It is proposed to harvest “cosmic forces from the soil”.

Some biodynamic farms use astrological calendars and other cosmic indicators in order to determine farm practices such as planting and harvesting. The astrological calendar takes into consideration the phase of the moon and zodiacal constellation the moon is passing through, and considers the type of crop grown.

Similar to organic production, to be considered biodynamic a farm must undergo a certification process and meet the standards set by the group Demeter International. Demeter uses the USDA organic standards as a foundation and includes more beyond organic specifications. These include integration of livestock and crops on the farm and keeping a certain amount of land uncultivated to improve biodiversity. Additionally, to be certified in biodynamics, a farm must use the biodynamic preparations mentioned above. Organic certification can apply to one part of a farm, whereas biodynamic certification must involve the entire farm.

The research in biodynamic agriculture is limited. A study in 2013 found that there were statistically significant differences between biodynamic and organic farms with inefficiency levels at 58.09% and 28.60%, respectively. Critics of biodynamic agriculture characterize it as a pseudoscience since there is a lack of strong evidence on the efficacy of such practices.

John Reganold (Professor, Department of Crop and Soil Sciences, Washington State University, Pullman) conducted a survey of research that compared biodynamic practices with organic and traditional ag methodologies in the 1990’s. The survey showed that the biodynamic farms tend to have better soil quality, lower crop yields, and equal or higher net returns per hectare, compared to conventional farms.

Eden Olson, Scripps College, Claremont California (2014) writes: “If society hopes to combat daunting environmental issues such as global climate change, we have to start small-scale with systems such as biodynamic farming that systematically instigate ecological, economic, and ideological sustainability.”
GETTING TO KNOW ID AG

Thanks, Team!

The latest article I wrote for the CSA News Magazine (the official magazine for members of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America) which will come out in the July’15 issue, I focused on the research support staff and its’ importance.

For any research/extension program to succeed - a well-put-together team of energetic, dedicated, talented and hardworking people is an absolute requirement. The article is titled “Research Support Team – the Difference between “Make It and Break It”.

I thank my Cropping Systems Agronomy team for everything they do every day; their very special talent is to put up with my craziness, but keeping me sane.

Thank you, Jordan, Kelli, and Arjun!

Kelli Belmont, Research Technician
Arjun Pandey, Graduate Research Assistant
Jordan McClintick, Research Assistant

Come meet the team at our Cereal Feld Day!

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