



# Pivotal Moments

A Quarterly Newsletter for  
Friends of HAREC



FALL 2017

## HERMISTON AGRICULTURAL RESEARCH & EXTENSION CENTER

### From the Director

#### Philip B. Hamm, Director Professor Emeritus, Plant Pathology

Welcome to Issue 2 of "Pivotal Moments", a quarterly newsletter from the Hermiston Agricultural Research and Extension Center (HAREC).

It's a busy time of year for everyone and HAREC is no exception. As you might expect, our grass and wheat research plots are long gone and now most of the corn is too. We still have about half of our potato plots awaiting harvest. Results & information from some of these experiments will be presented at the **Hermiston Farm Fair held this year Nov 29-Dec 1, at the Eastern Oregon Trade and Event Center.**

A thank you goes to Greg Juul with G2 Farming who loaned us equipment to work the ground where wheat once stood. This enabled us to get those areas prepped for fall in an effective and timely manner.

We have a number of building projects planned for the winter months.

**Each of these projects adds to the capacity of our programs and will ultimately equate to our faculty providing additional information to assist irrigated agriculture in our region.**

- A new greenhouse for Sagar and Ray (potato breeding & agronomy program respectively)
- An addition to Silvia's entomology lab facility

- An expansion of Ken's lab (Extension plant pathology).
- We are also adding a much-needed bathroom to Sagar's potato lab
- A head house to existing greenhouses

Incidentally, funds to do these buildings/remodels are coming from a large number of contributors and I am still seeking the funds needed. If you are interested in helping, please let me know.

We anticipate hosting "open labs" when the projects are completed. This will allow the researchers & staff to show the facility updates and discuss how the additions/buildings will help to advance each program, and to recognize those who contributed to improvements and expansions at the station.

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You may have heard about the proposed OSU service district. Once established, this will provide stable funding for OSU Extension and Research activities in Morrow and Umatilla County.

This is not new to Oregon; currently, 25 of the 36 counties in Oregon already have one. This service district would support both experiment stations (HAREC and CBARC) and both Extension offices in the two counties.

Our team (Mary Corp, Debbie Sutor, Julie Parker, Claire Sponseller and Phil Hamm) has been busy visiting with city councils in all incorporated cities in both counties (17) asking them pass a resolution so that members of each community could

Oregon County Map



have the opportunity to vote in the May 2018 election.

If you are interested in helping with this project, let me know and I will pass your name on. Mary and I, by law, cannot actively campaign to support this but we can provide factual information.

Lastly, I am reminded daily that HAREC has the greatest supporters and the best staff!

Hope your fall goes well.

Philip B. Hamm, Director



Director Phil Hamm leads Hydromania Summer Science Camp participants in a hands-on demonstration of how a pivot moves during a field visit to HAREC.

## Reflecting on the Past Helps Us See a Clearer Future



This 1961 aerial view of the station provides a glimpse into HAREC's past. The station's current location south of Hermiston was established by congressional act in 1931.

Many of the facilities that were originally built for feeding & housing livestock are now repurposed as laboratories used to conduct the many research projects at HAREC.

Center pivots have transformed the fields which once held side roll and hand line irrigation systems. HAREC currently has 15 center pivots.

**"And although we often think of our current times as being marked by change and special challenges, a historical perspective shows us that our time is not unique: change, and the challenges it brings with it, are truly the story of the human experience," Sandra J. DeBano, Ph.D., Associate Professor, Riparian & Terrestrial Ecologist at HAREC.**

Programs in potato varietal development, horticulture production, integrated pest management, potato nutrition, riparian and stream ecology, plant pathology and groundwater quality utilize the station's full resources while continuing to build on the station's past research endeavors. Additions of the Umatilla & Morrow County 4-H Latino Outreach and SNAP-Ed programs continue to further diversify HAREC's offerings.



**Umatilla County Fair Parade** HAREC’s 1942 Dodge truck was loaded up with frozen, 100% juice Otter Pops, which were a welcome treat for onlookers as temperatures soared into the high 90’s.

## HAREC Welcomes New Neighbor

Blue Mountain Community College recently unveiled their new **Precision Irrigated Agriculture Facility** located at HAREC.

The new facility features state-of-the-art learning classrooms and laboratories including a lab with a large bay door which will allow students to have hands-on experience with equipment and maintenance of systems associated with precision agriculture.



## HAREC SUMMER 2017



Front row: Silvia Rondon, Pahoua Yang, Sapinder Bali, Josephine Antwi, Olivia Hankel, Lora Sharkey, Raegan Alldred, Abigail Findley, Katie Arstingstall, Peggy Carr, Joanna Pavana, Benjamin Moore, Garrett Hall, Maria Montes De Oca, JoAnna Pihl, Sagar Sathuvalli, Ryan Graebner. Back row: Ken Frost, Sandy DeBano, Ira Thompson, Moises Aguilar, Graham Shaw, Dan Childs, Trask Werner, Scott Lukas, Wesley Marvin, Stan Li, Javier Almaguer, Tim Weinke, Phil Hamm, Nathan Clark, Cory Zita, Aymeric Goyer.

Not pictured: Sudeep Bag, Jessie Brazil, Anna Browne, Francis Brylski, Robert Cating, Karly Carlson, Stephanie Halferty, Mat Kolding, Ray Qin, Larissa Ritzer, Lilee Roggow, Bryce Robinson, Victoria Skillman, Lauren J. Smith, Angie Treadwell, Dave Wooster

## Student Researcher Gains Valuable Research & Extension Experience at HAREC

Samantha Roof began working at OSU HAREC in the summer of 2014, as part of the OSU Branch Experimental Station (BES) internship program. This program brings in OSU undergraduate students to work with faculty mentors stationed at OSU's 13 Branch Experimental Stations.



Samantha had just finished her freshman year in the Bioresource Research Program at OSU, and arrived at HAREC with no research or extension experience. At HAREC, Samantha joined Sandy DeBano and David Wooster in the Invertebrate Ecology Program.

Her experience at HAREC through the BES Program was a win-win situation for Samantha and the Invertebrate Ecology Program. Samantha gained four summers of

experience in research and extension, and the Program gained an excellent and productive member.

Samantha worked with Sandy and Dave and their graduate students on a variety of projects, most which focused on research related to enhancing native bees in agricultural and forested systems.

Samantha was particularly interested in understanding which flower species are used by native bees, and why certain species use certain flowers.

She also developed a fondness for a particular group of native bees, megachilids, which include several species used by farmers for pollination (e.g., leafcutters, orchard bees).

See highlights below of some of her accomplishments at OSU and HAREC:

- an undergraduate thesis
- one peer-reviewed publication
- one Tri-State Extension Publication
- numerous awards and grants (e.g., Best Undergraduate Presentation at the Annual Research Advances in Fisheries, Wildlife, and Ecology Symposium at OSU)
- two scholarships from the Oregon Seed Association
- an A.L. Strand Memorial Scholarship
- a grant from the Northwest Scientific Association



Four summers later, we are finally saying goodbye to Samantha, who graduated from OSU with her BS in Bioresource Research and a minor in Chemistry, and has headed off to Tanzania, where she'll be working in the Peace Corp for two years.

Even from afar, she continues to work on two other publications from her work at HAREC.



## Qin Leads HAREC Agronomy Program

By Ruijun Qin, Assistant Professor  
Agronomist



As an extension agronomist, I joined HAREC in September 2016 and lead the Agronomy program. I am working hard to make the Agronomy program a high-impacting program.

The Agronomy Lab is located in the Don Horneck Memorial Building at HAREC, which was dedicated in 2014.

**Our lab is carrying out extension and research programs in soil fertility/water management, irrigated high-value crop production (potatoes, cereals, alfalfa, grass seeds, peppermint, etc.), reuse of wastewater and by-products from local processing plants, environmental quality and soil health.**

We offer expertise on a wide range of topics to the public, growers, and fieldsmen in the area. Our primary concerns are profitability and environmental sustainability of local cropping systems and soil resources.

We carried out the following projects with assistance this summer from

two Oregon State University Branch Experiment Station (BES) interns, Nathan Clark and Abigail Findley:

- Nitrogen requirement for new potato varieties for the Southern Columbia Basin of Oregon and Washington. The objective of this study is to develop nutrient management guideline for the promising potato varieties. The research findings will be important for growers in the region towards economical and sustainable crop production.
- Industry funded field studies on determining potato response to new potassium fertilizer compared to Muriate of Potash (MOP) and MOP balanced fertilizers in Oregon.
- Agricultural Research Foundation & industry funded projects on evaluating the effect of biochar and organic manure on crop productivity, soil quality, and nitrogen/water use efficiency through a long-term field trial. In the first year, the tested crop is corn.
- Field-tests to study new rotational crops (Adzuki bean, quinoa, and oat) under different irrigation methods.
- Industry funded field trials on evaluating blue-grass varieties.
- A collaborative project with WSU to study nitrogen requirement for teff grass, which is a forage crop for equine, under irrigated conditions in eastern Oregon.

For more detailed information on the projects of our Agronomy program, please stop by my lab at HAREC.

You may also call me at 509-820-9298 or E-mail me: [ruijun.qin@oregonstate.edu](mailto:ruijun.qin@oregonstate.edu).

### Rotational Crops used in Dr. Qin's field trials.

#### Adzuki Bean



#### Oats



#### Quinoa



**Need answers?****We have great online resources available.**Ask an Expert: <http://extension.oregonstate.edu/extension-ask-an-expert>OSU Extension Publications: <https://catalog.extension.oregonstate.edu/>Please visit & like our Facebook™ site for up-to-date events, pictures and stories:  
<https://www.facebook.com/OSU.HAREC/>

Contact our office to receive e-mails for field days &amp; other events of interest.

**Upcoming Events****OCTOBER**

1<sup>st</sup> 4-H Open Enrollment for 2017-18  
 3<sup>rd</sup> Tri-state Potato Development Program  
 Selection Tour, 8:30 AM, HAREC  
 Contact: [vidyasagar@oregonstate.edu](mailto:vidyasagar@oregonstate.edu)  
 17<sup>th</sup> OSU College of Ag Sciences Experiential Expo  
 Corvallis, Contact: [katie.gabel@oregonstate.edu](mailto:katie.gabel@oregonstate.edu)

**NOVEMBER**

10<sup>th</sup> Office Closed Veterans Day  
 23<sup>rd</sup> & 24<sup>th</sup> Thanksgiving Holiday, Office Closed  
 28<sup>th</sup> PNW Vegetable Assoc. Quarantine Workshop  
 12 PM, BMCC Conf. Rm at HAREC  
 Contact: [silvia.rondon@oregonstate.edu](mailto:silvia.rondon@oregonstate.edu)  
 29<sup>th</sup> Farm Fair – EOTEC, Hermiston  
 30<sup>th</sup> Farm Fair – EOTEC, Hermiston

**DECEMBER**

1<sup>st</sup> Farm Fair – EOTEC, Hermiston  
 25<sup>th</sup> Christmas Day, Office Closed

**FDA Food Safety Hotline**

1-888-723-3366

Monday thru Wednesday &amp; Friday

7 AM – 1 PM PST

**USDA Meat & Poultry Hotline**

1-888-674-6854

Monday thru Friday

7 AM – 1 PM, PST

**Food Safety Fact Sheets & Information:**<http://extension.oregonstate.edu/fch/food-safety>**Canning app:**<https://catalog.extension.oregonstate.edu/pnw689>**Pivotal Moments***A Quarterly Publication**Hermiston Agricultural Research & Extension Center**2121 South First Street**Hermiston OR 97838**541-567-8321*<http://oregonstate.edu/dept/hermiston/>**Hermiston Agricultural Research & Extension Center  
Mission Statement**

To advance scientific knowledge in agriculture, natural resources and biofortified crops, and support and educate our diverse local clientele and community in the areas of irrigated agriculture, plant breeding, natural resources, human health and youth development.



**Oregon State University**  
**Hermiston Agricultural**  
**Research and Extension Center**

***Become a HAREC Supporter!***

*Contact our office to find out how you can contribute to the research, programs and growth of HAREC.*