



HERMISTON AGRICULTURAL RESEARCH & EXTENSION CENTER

From the Director

By Clive Kaiser, Professor

It has been 4 months since I took over the reins at the Hermiston Agricultural Research & Extension Center as the Interim Director and it's been quite a ride.

The first two months were rocky, but the next two have been enjoyable. Budget issues and teething problems being the new guy were top of the list, but after visiting multiple times with faculty, staff, HAREC advisory committee members and other stakeholders, I feel like things are under control.

I also partook in my first Farm Fair and it was there that I was reminded of exactly why I chose the career I did. Seeing the outstanding work being done by colleagues both near and far and the opportunities for implementing

that work locally made me swell with pride to know that I am a part of a Land Grant University that has been delivering applied results pertinent to stakeholders for more than a century.

Agricultural systems have continued to evolve and new cropping systems have constantly been emerging - hemp being a new one in relative terms to the USA. Due to federal regulations, OSU still has restrictions on what research can be done on hemp, which has resulted in an industry being ahead of academia.

I have confidence in the abilities of colleagues at HAREC and transferability of knowledge to know that as soon as the current hurdles are cleared that we will be well positioned to serve the hemp industries of the Inland Northwest. Interest at the inaugural hemp

session points towards a strong local industry.

Existing crop sessions were also very well attended, which demonstrates commitment and engagement with stakeholders and faculty research foci are on target and that we are blessed at HAREC with great support staff.

I'd like to pause and reflect on this year and wish everyone a peaceful holiday season and hope that everyone gets to spend time with loved ones. I would also be remiss if I did not take a moment to cherish the memories of those no longer with us.

May 2020 bring good things to you and yours and the challenges that lie ahead be learning experiences that leave us all stronger.

With very best wishes
Clive Kaiser

Pivotal Moments

A Quarterly Newsletter for
Friends of HAREC



WINTER 2020

Horticulture Update

By Logan Clark
Horticulture Biological Science
Research Technician

This past season we performed experiments in evaluating soil moisture and nitrate leaching using drip irrigation in onion production, yield and fruit quality of grafted watermelons, and heat tolerance of broccoli varieties for regional selection.

Thanks to our team of interns and collaborators we had a successful harvest and have presented our research at Pacific Northwest Vegetable Association (PNVA), Farm Fair, and OSU's Experiment Expo.

One of our BES interns, Jared Farber, even won "Best Branch Experiment Station Poster Award" at the experiment expo in Corvallis for his research in



quantifying the economic value of drip irrigation vs. center pivot irrigation in onion production.

We wish him the best of luck as he moves to Washington DC to pursue a career in developmental economics.

Our program director, Dr. Scott Lukas, has big plans for 2020. This winter we begin preparations for a multi-year research project in organic soil acidification in blueberry production for which we are currently scouting graduate students for fall 2020.

As our program continues to grow, we are also searching for a post-doctoral researcher to lead a new multi-year re-use water quality-monitoring project for the Columbia Basin. We are certainly shaping up for a large team in 2020.

Looking into 2020 we also hope to develop projects to establish regional grower recommendations for hemp production as well as continuing our watermelon, onion, and broccoli research. Our goal is to provide the region's growers with data-driven recommendations for sustainable field production of high-value irrigated crops.

Everything we do in the horticulture program focuses on optimizing crop production and reducing environmental impacts, particularly involving water use.

To learn more about what we do, our results from current or previous experiments, or how we can help, please feel to give us a

call or stop by our lab at HAREC. We are always interested in how we can best serve our local growers.

Spring planting will be here before we know it, so enjoy some "down-time" in the meantime and stay warm this winter season. We are excited to see what comes from the new year and new research!



Healthy recipes with fresh ingredients can be found at:
<https://foodhero.org/>



Greetings from the Entomology Program

By Silvia I. Rondon, Professor & Extension Entomology Specialist

We are now in the midst of the holiday season. This time of year is potentially stressful, with reports, grants, winter meetings coming up, etc., however, we would like to share some highlights of the entomology program. Overall, 2019 was a great year for the Irrigated Agricultural Entomology Program (IAEP). Two new scientists joined me this year: Drs. Govinda Shrestha and Tiziana Oppedisano.



Fig. 1 Govinda Shrestha

Govinda joined my program in January 2019, and he immediately developed an extensive research project working on Landscape Ecology trying to provide answers to how insects' movement affect distribution and management of pests; more specifically related to Lygus bugs (Fig. 1).

Tiziana joined us in March; her work started as she landed for the

first time in the USA all the way from southern Italy. She developed an ambitious project working on phytoplasma distribution in various crops and vectors, specially focusing on leafhoppers and Hemipterans. Both have made good progress on their respective research projects,



Fig. 2 Tiziana Oppedisano

which they presented at our annual Farm Fair. They also presented at the Annual Entomological Society of America Meeting held in St. Louis Missouri, where I was honored with the National ESA Integrated Pest Management Award. A great honor for me, since my mentor, Dr. Michael Gray, from the University of Illinois, received the same award many years back (Fig. 3).

I also was honored to be invited to deliver a key note at the Peruvian Society of America in Ica Peru. This invitation came after 25 years of landing in the USA. It was a great opportunity to see "old"



Fig. 3 Michael Gray and Silvia

friends and colleagues, and to meet the talented new generation of Peruvian scientists (Fig. 4).

Fig. 4 Peruvian scientists



The year ended great with my Master student, Pahoua Yang, completing her Master degree (Fig. 5).



Fig. 5 Left to right: D. Ross, SI Rondon, V. Walton, P. Yang, B. Charlton, A. Hulting

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We wish Pahoua a rewarding future career!!!!



Fig. 6 2019 IAEP Rondon Crew

I would like to end this brief summary, by thanking Ira Thompson, my “right and left hand”, also all the students that helped during the 2019 season (Fig. 6).

Stay tuned for information we will be presenting this coming winter season. I would love to hear your comments/feedback. We are here to help you. Happy Holidays!

Agronomy Program Progress

By Ruijun Qin, Assistant Professor, Agronomist

In the year 2019, the Agronomy Program carried out the following projects, mainly through field trials:

- Potassium requirements for main potato varieties in the Columbia Basin region. The varieties are Alturas Russet, Castle Russet, Clearwater Russet,

Echo Russet, Russet Burbank, and Umatilla Russet.

- Nitrogen requirements for main potato varieties in the Columbia Basin region.
- The application of plant growth regulators on the winter wheat growth and production.
- The application of plant growth regulators and nitrogen application on the lodging, growth, and seed production of bluegrass (Midnight, Mercury, and Bluecoat).
- The adaptability of adzuki bean and mung bean introduction in irrigated fields.
- Effects of mixing or intercropping between alfalfa and grasses on forage production, hay quality, and weevil control.
- The evaluation of different crops (grass, legume, and brassica family) during the post-harvest season.
- The evaluation of hemp growth in irrigated fields.



Adzuki Bean Field

The agronomy program also organized or co-organized HAREC’s Irrigated Wheat Field Day, the Hermiston Farm Fair Cereal Session, Core Program and three pesticide training classes.



Student Interns and Assistants at HAREC gain valuable hands-on experience working in a potato field.

If you are interested in the details of the Agronomy program, please contact e-mail, call or stop by my agronomy lab at HAREC.

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Thank you to the 2019 sponsors, vendors, speakers and attendees of the **Hermiston Farm Fair Seminars & Tradeshow** held on December 4-6th. Contact us to be notified of upcoming events or visit our HAREC website.



Umatilla County 4-H Enrollment Reminder
Enrollment Deadline for 2020 is **January 31st for show eligibility.**

Explore 4-H Opportunities:

<https://extension.oregonstate.edu/4h>



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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.



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