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Sept. 2020



A collaboration between OMAFRA and the University of Guelph

Alliance Innovations

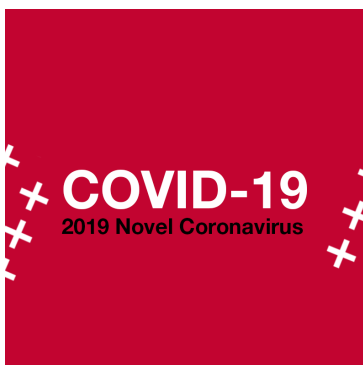
Stories of the Alliance people, places and programs generating impact in the agri-food sector in Ontario and around the world.

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In this issue:

- Celebrating 65 years of long-term rotation plot research with key findings available in infographic form;
- How one PhD researcher is digging up dirt on an onion fungus to help mount defensive strategies;
- Take a virtual tour of the Ontario Dairy Research Centre in Elora and see how it benefits the agri-food sector;
- Exciting new KTT events starting this fall; and
- News and publications.

What's New?



U of G Research Phase-In Framework for COVID-19



Tier 1 Funding Call: Apply for operating funding



Knowledge Translation and Transfer funding call

On Sep. 4 the Office of Research shared the Framework for Phasing-In Human Participant Face-to-Face Research at University of Guelph (Off Campus).

[Read more >](#)

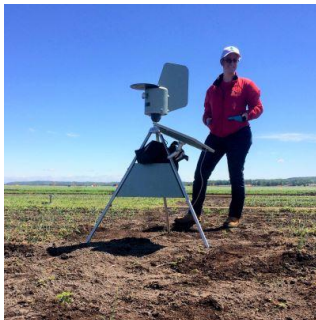
The 2020/21 Tier 1 Research Program will launch soon. Information about the Call and town hall will be posted and shared through a Research Alert.

[Read more >](#)

The 2020/21 KTT research funding call will launch on Oct. 14. A virtual town hall information session will be scheduled.

[Read more >](#)

Research and Program Highlights



Ontario onion attacker is in the weeds

A stubborn new fungus is attacking Ontario onions. Luckily, it does not cause foodborne illness, but it could make your onions smaller and more likely to sprout in storage, leading to potential lost revenues for growers and lower quality onions for consumers.

Researchers are a few steps closer to understanding the culprit, called *Stemphylium* leaf blight, thanks to research completed by PhD candidate Sara Stricker in the Department of Plant Agriculture.

Stricker's research, completed over several years at the [Bradford Muck Crops Research Station](#) and partially funded by the Ontario Agri-Food Innovation Alliance, aims to unearth information about *Stemphylium*'s lifecycle so farmers can better control the pathogen.

[Read the story >](#)

Crop Rotation Counts: Key Findings from Long-Term Rotation Plot Research

Some innovations take time. The Elora Research Station and Ridgetown Campus have housed applied long-term crop rotation, tillage system, and nitrogen experiments since 1980 and 1995, respectively, generating results that benefit the agri-food sector and farmers in Ontario and around the world.

Download the four brand-new "Crop Rotation Counts" infographics highlighting the latest research and recommendations stemming from work at these plots, created in partnership with Soils at Guelph.

Crop Rotation Counts

Higher yield
 Improve yield of corn and soybean by adding a small grain cereal (e.g., winter wheat) or a forage crop to your farm's corn-soybean rotation. Not only do you reap the benefits of improved yield, but research also shows that these rotations help ease the transition to reduced tillage and enable the inclusion of cover crops.

Benefits of adding a small grain cereal or forage crop to your corn-soybean rotation:

- Increases yield**
 Corn rotation diversity reduces the yield gap between plowed and reduced tillage systems.
 Corn: >15%
 Soybean: 13%
 Plowed System vs. Reduced tillage
- Makes the transition to reduced tillage easier**
 Crop rotation diversity reduces the yield gap between plowed and reduced tillage systems.
 System Yield vs. Reduced yield gap
- Facilitates inclusion of cover crops**
 Earlier harvest date of wheat provides more time for cover crop to grow before the winter.
 Crop harvested: July, August, September, October, November, December
 Length of growing season for cover crop: 100 days, 120 days, 140 days, 160 days, 180 days, 200 days

Want to dig deeper?
 Read the scientific papers, available at logquest.ohio-crop-rotation.org

Celebrating 65 years of long-term crop rotation field research
 Some innovations take time. Long-term crop and soil research generates the evidence farmers need to be confident and sustainable. The Ohio Research Station and Ridgeview Campus have focused applied, long-term crop rotation, tillage system and nitrogen management experiments since 1960 and 1965, respectively, generating results that benefit the agriculture sector and farmers in Ohio and around the world.

The Ohio and Ridgeview Research Stations are two of 18 agricultural research stations across the province that are owned by the Agricultural Research Institute of Ontario and managed by the University of Guelph through the Ontario Agricultural Research Station, a collaboration between the government of Ontario and the University of Guelph.

Infographics created by the Ontario-Agricultural Research Station in collaboration with SCAG AG Guelph

Ontario

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Full 2020

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Focus ON: Ontario's Agricultural Research Stations

A world-class network of research stations across the province, owned by the Agricultural Research Institute of Ontario (ARIO) and operated and managed by the University of Guelph, enable multidisciplinary research that powers innovation in Ontario.

Ontario Dairy Research Centre at the Elora Research Station



It takes time, labour, specialized staff training, and several hundred cows to conduct the kind of research that goes on at the Ontario Dairy Research Centre in Elora, Ont. Created to replicate a traditional dairy operation—but optimized with modern technology—this 175,000-square-foot research and teaching facility provides a one-of-a-kind environment

for faculty and students while operating as a fully functional dairy.

Construction of this facility was completed in 2015 under a collaboration among ARIO, the University of Guelph, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the Ontario dairy industry, represented by the Dairy Farmers of Ontario.

Supporting essential dairy research to benefit the sector



The Ontario Dairy Research Centre can accommodate research that is critically important to the dairy sector, including animal health and welfare, genetics and genomics, animal nutrition, dairy management and technology, and product development.

For example, [ongoing projects at the station](#) include a study that aims to improve feed conversion toward increased milk production and reduce methane emissions, a project examining different planes of nutrition on healing after disbudding, and a genetic assessment of stress resilience in dairy cattle and sheep.

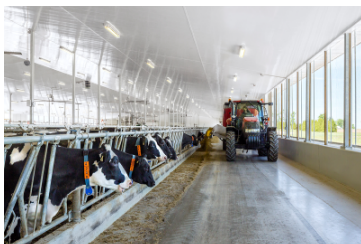
Explore [ongoing research projects at the Ontario Dairy Research Centre](#), available on the Alliance website.

Questions about the studies listed or about ongoing research projects at the research stations?

Contact:
researchstation.info@uoguelph.ca



[Visit our website >](#)



Photos: Richard Seck

“The facility presents a unique opportunity to control our experimental designs in such a way that we can apply treatments at a cow level and have full individual animal measurements when it comes to their food consumption,

production, behaviour, and metabolic responses.”

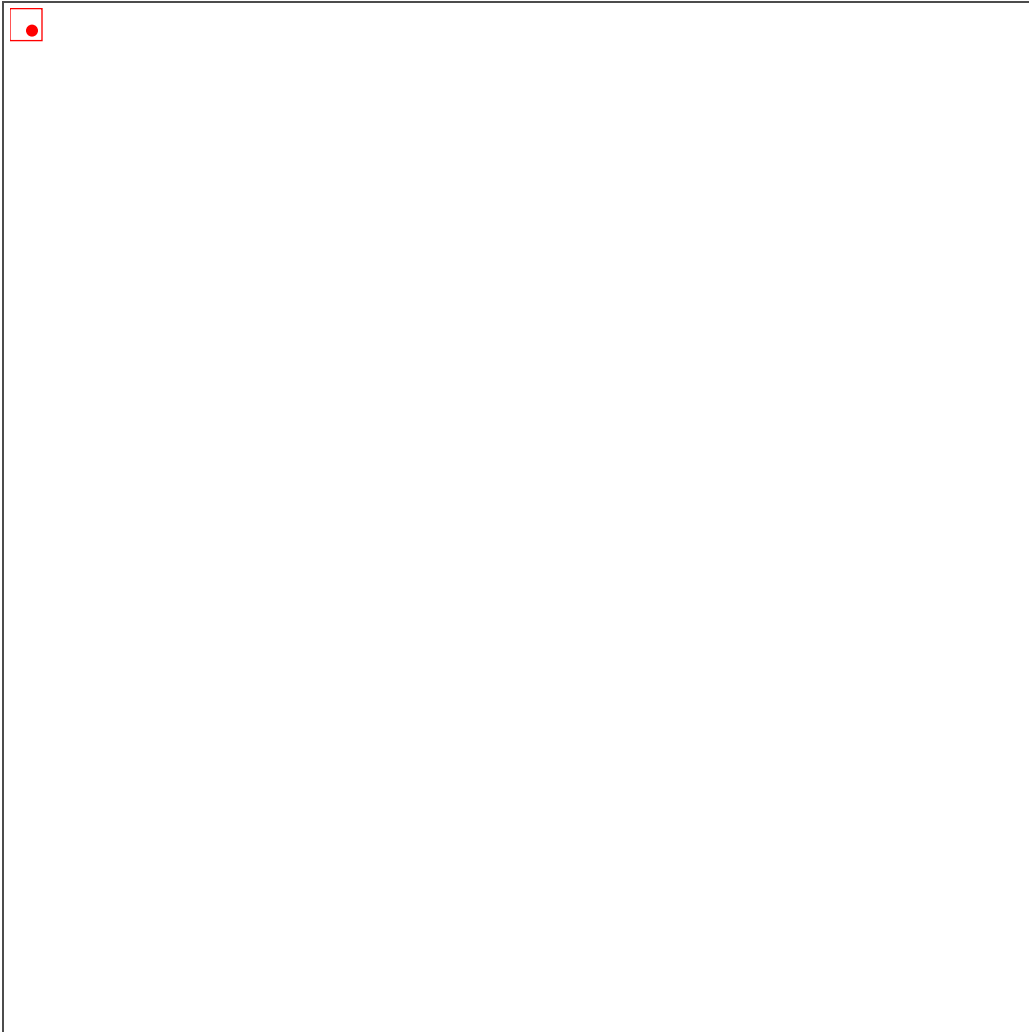
– Prof. Trevor DeVries

Take a tour of the Ontario Dairy Research Centre

We look forward to welcoming guests interested in dairy research to the facility when COVID-19 enhanced biosecurity protocols are lifted.

In 2019, we hosted 47 tours for more than 1,250 guests.

Until then, you can tour the Ontario Dairy Research Centre virtually via an interactive 360° facility tour. Explore the robotic milking system, maternity and special needs pens, lactation cow housing, rotary parlour, and see the calf nursery in action.



Ontario Dairy Research Centre 360° Tour

An interactive virtual tour of this world-class facility in Elora, Ontario.

[Take a virtual tour >](#)

Publications

A selection of Alliance people, places and programs cited in popular and trade media

1. [New research to better understand M. bovis disease development in cattle](#) (Aug. 2020 issue of *Ontario Beef* magazine, page 18)
2. [GrainTALK webinar: Rotation impacts on soil health and microbes](#) (Aug. 6)
3. [Pain reduction during calf disbudding](#) (*Dairy at Guelph* research summary)
4. [When to start calves on automated milk feeders](#) (*Dairy at Guelph* research summary)
5. [Adding water to dry cow feed improves cow health](#) (*Dairy at Guelph* research summary)
6. [Malting barley: A new crop for the north?](#) (*Ontario Grain Farmer* magazine, August)

Events



Skills for Research Impact workshop series starting Sept. 29

Join us on Sept. 29 for the first free session in the series on Planning for Research Impact, or "knowledge mobilization 101".

[Learn more >](#)



Research station webinar series launches with focus on Simcoe Research Station

Explore research at the [Simcoe Research Station](#) with Prof. Praveen Saxena and Barbara Yates from Ferrero Rocher at the first of four webinar events.

[Learn more >](#)



Advancing the Science of KTT in Agri-Food

The University of Guelph and OMAFRA will co-host a digital event on Oct. 28 to discuss evidence-based agriculture and the importance of KTT research in the agri-food sector.

[Learn more >](#)

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