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August 2022



Alliance Innovations

A collaboration between OMAFRA and the University of Guelph

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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Enjoying the summer bounty? Thank a farmer and a U of G breeder!





Photo courtesy of Fox Seeds

Have you enjoyed Ontario asparagus or strawberries this season?

You may have been eating a crop variety developed and bred at the University of Guelph by researchers supported by Alliance funding. But, did you know that it can take decades to get that new variety in your hands?

Delivering new crop varieties takes time. Breeding new varieties, selecting for beneficial traits, and conducting variety trials can take up to 25 years and requires collaboration across industry, academia, and producer organizations. The final phase includes licensing the variety for commercial use.

Through the Ontario Agri-Food Innovation Alliance, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) invests in breeding and genetics research to support Ontario's agri-food sector. Long-term investment is essential to breeding programs.

Over the last 30 years, there has been a 50% increase in the productivity of major agricultural crops in Canada. Plant breeding has contributed significantly to these gains by delivering varieties with higher yields and improved agronomic traits, such as disease resistance and stress tolerance.

Explore four crop varieties developed at U of G that many of us enjoy every summer...



3 new "Guelph" asparagus



6 new peach varieties

varieties released since 2000

U of G asparagus varieties now dominate the marketplace. In 2020 they accounted for more than 90% of Ontario asparagus patches.

Photo: Dr. David Wolyn, professor, Department of Plant Agriculture, U of G



Day-neutral strawberries account for 20% of production in Ontario

U of G researcher Dr. Adam Dale tested these U.S.-bred varieties to select berries that would work in Ontario's soils and climate and be "fruitful" for Ontario growers.

released by Dr. Jay Subramanian since 2003

The Vee Blush peach variety now accounts for 20% of the early market peaches grown in Ontario

Photo: Dr. Jay Subramanian, professor, Department of Plant Agriculture, U of G



The Yukon Gold potato was created at U of G and released in 1981

Yukon Gold was named one of the top five university-developed innovations from the past 100 years by the Council of Ontario Universities.

When you bite into that juicy peach or campfire-roasted potato, take a moment to thank a farmer and a breeding and genetics researcher who possibly dedicated decades of work to bring Ontario's summer bounty to our tables.

Learn more in our [Breeding and Genetics Impact Case Study](#)

Plant breeding at the Ontario Crops Research Centre - Simcoe





Ontario's network of agri-food research centres is a key platform for honing the next generation of field-tested innovations. This network offers plant breeders access to consistent, stable environments for the detailed work of breeding.

The Ontario Crops Research Centre in Simcoe is home to crops such as apples, asparagus, potatoes, peaches, cucumbers, cherries, hazelnuts, quinoa and more.

The diversity of crops highlights the possibilities of the centre's location in the Norfolk sand plain; a biodiversity hotspot in Canada with sandy loam soils that make it optimal for growing crops.

The centre has been open since 1961, providing a long-term, stable space for plant breeding, and has a mission to help strengthen the fruit and vegetable industries in the potentially highly productive zone along the north shore of Lake Erie.

“Without the research station availability and the Alliance funding, there would be no asparagus breeding program.”

—Dr. David Wolyn,
professor, Department of
Plant Agriculture, U of G

Learn more about the Ontario Crops Research Centre - Simcoe

The Ontario Crops Research Centre - Simcoe is owned by the Agricultural Research Institute of Ontario, and operated and managed by the University of Guelph through the Ontario Agri-Food Innovation Alliance.

Media

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

Space agriculture boldly grows food where no one has grown before (July 11, The Conversation)

Ajwal Dsouza, PhD student, and Dr. Thomas Graham, School of Environmental Sciences, at the University of Guelph discuss how agriculture has been improved significantly through the application of space-based advances to terrestrial challenges.

Climate solutions found in genes (July 8, Farmtario)

Alliance-funded researcher Praveen Saxena, professor of plant agriculture at the University of Guelph and director of the Gosling Institute for Plant Preservation, discusses

fundamental aspects of plant development and using new tools like micropropagation to accelerate plant breeding and save species that are dying due to disease or climate challenges. He's been working to introduce cold tolerance into Ontario hazelnut trees.

Farmer mental health in Canada worsened during pandemic, U of G research finds (Jun. 30, U of G News)

The mental health of farmers is worse than it was five years ago and worse than that of the general population in almost every way, finds a new survey from University of Guelph researchers.

Perinatal broiler feeding research project (Jun. 30, Canadian Poultry Magazine)

Alliance-funded researcher Dr. Elijah Kiarie speaks to Canadian Poultry about new ways to make a bird's digestive system stronger and faster – using a protein that is commonly found in milk.

Events

Ontario Bean Growers present: Research Day, Plot Tour & BBQ

Wednesday, August 24, 1:00 - 7:00 pm
Huron Research Station

Join the Ontario Bean Growers for their annual research day, plot tour and BBQ. The day begins with research presentations at 1pm. At 4pm, Dr. Peter Sikkema and Chris Gillard will lead a tour of the plots at the Huron Research Station and the day ends with a steak BBQ.



Click to register

U of G Bean Breeding & Genetics Program Open House

Thursday, August 25, 1:00pm
Ontario Crops Research Centre - Elora

Join the team for lunch and an in-person tour of the U of G dry bean breeding and genetics research program.

To help plan for lunch, please RSVP to
Lyndsay Schram at lschram@uoguelph.ca



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