

## The Best of the Best

People often speak anecdotally about being the best at one thing or another. But for the University of Guelph (U of G) and the Ontario Agricultural College (OAC), our claims are backed by official rankings. In this 2014 review publication, I am pleased to share that the U of G was ranked as the top agricultural university in Canada twice in the last year.

The leadership role that the OAC plays in supporting agriculture and food in Ontario, across Canada and globally, is second to none and is a key area of differentiation for the University of Guelph.

In September, Quacquarelli Symonds, an international education network that publishes annual World University Rankings, placed the U of G as the top Canadian agricultural and forestry school. The 2015 U.S. News & World Report "Best Global Universities," placed the U of G 12<sup>th</sup> globally, fifth in North America and first in Canada for agricultural sciences. This ranking was determined based on reputation and research in the field, including food science, nutrition, dairy science, horticulture and agronomy.

OAC's impact is showcased in these rankings, and I credit the quality and exceptional efforts of our faculty, staff and students. Their commitment, passion and dedication to identifying new innovations and discoveries that support the growth and significance of our agriculture and food sectors are the reasons for this global recognition. In the pages of this year-in-review document you will read about just some of these amazing people and their impactful research.

The strong partnerships we have, especially with the Ontario Ministry of Agriculture, Food and Rural Affairs, contribute to our success. You will read about just a fraction of these innovative collaborations on the back page.

Overall, I'm proud that our collective efforts and excellence over the past 140 years have been recognized. What better message to share with our stakeholders, government officials and alumni.

But I assure you that we won't rest on these laurels. We will continue to work extremely hard to further enhance the impact of our programs and look forward to even higher global rankings in years to come.



Robert Gordon  
Dean, Ontario Agricultural College  
Guelph • Alfred • Kemptville • Ridgetown



▲ Prof. Jay Subramanian with European plums. Photo by Martin Schwalbe.



▲ Students Jill Selby (left) and Amy Thatcher with a bio-composite flowerpot developed by the Bioproducts Discovery and Development Centre. Photo by Alexandra Sawatzky, SPARK.



▲ OAC alumni at our 140<sup>th</sup> Anniversary Celebration.

> **Vaccarino Chosen as Eighth President** | Following an international search, the U of G has appointed Prof. Franco Vaccarino as the University's eighth president and vice-chancellor. He joined the University officially on August 15, 2014. Previously Vaccarino was principal of the University of Toronto Scarborough and vice-president at the University of Toronto, a position he held since 2007.

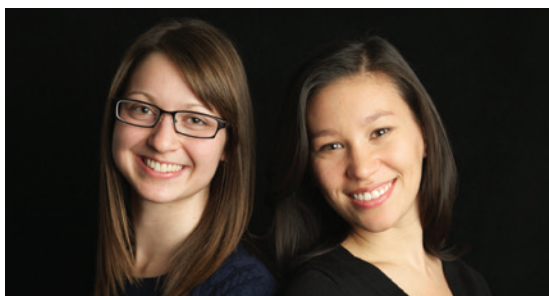


▲ **University of Guelph's President Vaccarino.**

> **Pollinator Conservation** | Prof. Nigel Raine joined OAC as the Rebanks Family Chair in Pollinator Conservation in May 2014. Raine is a leader in pollination conservation and ecology from Britain. Raine studies the impacts of pesticides on bees, insect behaviour and pollination ecology.

> **New chair for the Department of Food, Agricultural and Resource Economics** | Prof. John Cranfield was appointed as the new department chair. He has been an OAC faculty member since 2001 and is an alumnus of U of G and Purdue University.

> **Unusual Cookbook Authors** | Two recent graduates, Michelle Carkner and Michelle Arseneault, created an edible-weed cookbook with recipes that show how to turn unwanted plants into delicacies. Titled *The Good Season*, the book was developed after the students participated in the Undergraduate Student Experiential Learning program offered in partnership with the Agriculture Development Branch of the Ontario Ministry of Agriculture, Food and Rural Affairs.



▲ **Michelle Arseneault and Michelle Carkner, authors of *The Good Season*.**

> **OAC Prof Becomes Leader of UBC Faculty of Land and Food Systems** | Long time Dept. of Food Science professor Rickey Yada was appointed as Dean of the Faculty of Land and Food Systems at the University of British Columbia (UBC). His five-year term began on October 1, 2014. Yada will remain connected to U of G by continuing to serve as the scientific director of the Food Institute.

> **Wheat Breeding** |

Prof. Ali Navabi filled the Grain Farmers of Ontario Professorship in Wheat Breeding. The position is supported by a \$1-million investment involving the Grain Farmers of Ontario, SeCan and OAC. Navabi will focus his research on advancing plant breeding methodology and practice,

and creating novel wheat varieties with enhanced productivity, disease and pest resistance, and enhanced quality and utility in crop rotation systems in Ontario.

> **Winning Agri-Food Honours** | Students and faculty members of the Dept. of Food, Agricultural and Resource Economics won top research awards and honours from both the annual Canadian Agri-Food Policy Conference and the Canadian Agricultural Economics Society.

> **Student Service Centre Opened** | The new D.J. Pestell Student Service and Alumni Centre opened at Ridgetown Campus. The enhancement project saw the campus' main administration building expanded to better serve students. The new centre includes two new classrooms, two smaller study rooms, 15 professional staff offices, one community boardroom and an expanded main reception and central student services area.

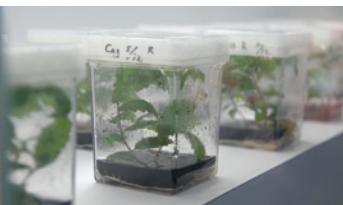
> **New Prof Preserves Endangered Plants** | The Gosling Research Institute for Plant Preservation (GRIPP) welcomed Prof. Max Jones into the new Integrated Plant Production Systems for Vegetatively Propagated Horticulture Species position. He will share in the mission of the institute to preserve endangered species through research, education and service with Prof. Praveen Saxena, director of GRIPP. This new position was made possible by another major gift from the Gosling Foundation.



▲ **Prof. Ali Navabi.**  
Photo courtesy of Grain Farmers of Ontario.



▲ To improve poultry welfare, Prof. Alexandra Harlander is studying alternative housing systems.



▲ The Gosling Research Institute for Plant Preservation (GRIPP)



▲ Researcher Jayne Bock. Photo by Alaina Osborne, SPARK.

- > **Sustainable Mining** | A joint project with University of Saskatchewan to protect natural resources and help one of Canada's largest industries, mining, received \$650,000 from the federal government. The research team led by Prof. Bev Hale will collect and analyze samples of contaminated soil from mining sites and develop new measurements of metal mixture impacts on soil microbes, invertebrates and plants; a critical need for the sector and regulatory agencies.
- > **Bio-products** | A \$1.125 million investment from Agriculture and Agri-Food Canada will support new research at the U of G Bioproducts Discovery and Development Centre. The centre aims to create renewable, eco-friendly alternatives to petroleum-based products and has collaborated with industry to create industrial and consumer products, including the first compostable coffee pod.
- > **New Seed Varieties** | Two professors received significant government and industry funds to support their seed variety research. More than \$1 million will be invested into the renowned asparagus breeding program led by Prof. David Wolyn. With increased demand for local Ontario asparagus, new seed varieties will help to meet the needs of an expanding industry. Prof. Istvan Rajcan received nearly \$2 million to improve Ontario's most valuable crop: soybeans. Rajcan uses state-of-the-art technology to pinpoint genetic markers to more quickly breed better varieties.
- > **Prunes Get a New Look** | Prunes (made from plums) offer many health benefits, such as improving eye sight, boosting metabolism and controlling blood pressure, but they are often undesirable to consumers. Prof. Jay Subramanian is developing new varieties of European plums that have a new look and a new colour, which will be more attractive to consumers.
- > **Smart Packaging Keeps Consumers Safe** | Food scientists, Prof. Loong-Tak Lim and post-doc Suramya Mihindukulasuriya, have developed nanotechnology to spin tiny fibres that encapsulate allylisoithiocyanate, a natural and potent anti-microbial that kills yeast and bacteria, into food packaging material. This "in-package technology" reduces food preservative requirements and lengthens shelf life without compromising food safety and quality.
- > **Rural Policy** | The University of Guelph is a partner in the \$2.5 million Rural Policy Learning Commons project to identify and analyze rural and northern policy options; evaluate options in the context of national and international policy innovations, and build leadership capacity among rural and northern planning professionals. Prof. John Devlin is serving as the Natural Resources Development Theme lead.
- > **Poultry Welfare and Behaviour** | Prof. Alexandra Harlander assumed the new Burnbrae Farms Professorship in Poultry Welfare position. The professorship, funded by Burnbrae Farms, the Poultry Industry Council, the Canadian Poultry Research Council and the Fleming family, will focus on research, teaching, industry service and educating farmers, retailers and consumers.
- > **Centre for Beneficial Insect Health** | A \$750,000 donation from Bayer CropScience Inc. will support and preserve pollinator health through sustainable pest management initiatives. The gift will go toward the creation of the Centre for Beneficial Insect Health intended to support sustainable pest management in agriculture.
- > **Deep Freezing Endangered Plants** | A cryopreservation facility, located at GRIPP and funded by a recent gift from the Gosling Foundation, opened allowing scientists to "deep freeze" living tissue from endangered plants. This state-of-the-art facility will help prevent the loss of plant diversity by banking tissue for future use, such as reintroducing disease-resistant plants into their natural environments.
- > **What To Do With Winter Wheat** | The federal government invested \$422,000 to conduct research on Ontario winter wheat. Jayne Bock, a Dept. of Food Science research associate, is leading the research. Her areas of expertise include grain quality, flour functionality, gluten structure and functionality, ingredient interactions, and baking science.
- > **New Light Bulb for Poultry** | A spectrum LED lighting system for poultry called the AgriLux™ light bulb was commercially launched because of the research of Prof. Gregoy Bedecarrats. The bulb significantly reduces energy consumption, promotes egg laying and reduces feed consumption without impacting health and welfare.

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# Community & Collaboration



▲ Photo courtesy of Canadian Cheese Awards.



▲ howl, 2014, Robert Hengeveld. Photo credit: Dean Palmer.



▲ An Ice Cream Tech Course participant.

> **Artisan Cheese** | In February the Dept. of Food Science hosted the judging of the inaugural Canadian Cheese Awards. 10 experts judged 290 cheeses in 18 main categories.

> **Bee Chic** | Birks, Canada's leading jeweller, introduced three bee-themed collections to raise awareness of bee issues. The company also supported the U of G Honey Bee Research Centre through a corporate donation and presented researcher Ernesto Guzman with the Birks Canadian Diamond Award for his exceptional dedication to researching the causes of honey bee mortality and finding solutions to support healthy bee populations.



> **Ontario's Own Quinoa** | Quinoa, a crop that was once only grown in South America, is about to be grown a lot closer to home. Food science professor Massimo Marcone is partnering with Katan Kitchens to study the viability of Ontario-grown quinoa. The team is studying agronomic practices for growing several species of both experimental and commercial quinoa across Ontario.

> **Raw Milk** | The Dept. of Food Science hosted a Science to Policy Symposium to debate raw milk safety. The panel brought together food scientists, policy experts, raw milk proponents and industry representatives to discuss whether raw milk, which cannot now be sold in Canada, should be made available for sale.

> **100 Years of Ice Cream** | To commemorate the centennial year of the Dept. of Food Science's Ice Cream Technology Course a special public symposium was held in December. Guest speakers from various sectors of the ice cream industry reflected on achievements over the past 100 years and directions for the future.

> **The Art of Our Environment** | The School of Environmental Sciences' artist-in-residence, Robert Hengeveld, showed off his kinetic art installation *promised lands* at the Macdonald Stewart Art Centre. The exhibit ran from May until mid-July and sought to reveal the curiosities of the natural world and explore our understanding of and relationship to landscape.

> **Food Security** | Sponsored by the Food Institute of the U of G and in partnership with the University of Saskatchewan, the National Food Security Forum brought together Canadian academics, industry professionals and interested individuals to discuss and develop a white paper on food security and waste; global opportunities for the Canadian food industry; innovation for food security; and food system challenges and changes.

> **Rural Land Stewardship** | The Ontario Professional Planners Institute awarded the School of Environmental Design and Rural Development an Excellence in Planning Award for their "Rural Landowner Stewardship Guide for the Ontario Landscape". The Guide recognizes the challenges associated with making environmental improvements through regulation alone and provides an educational toolkit for planners and municipalities to mobilize landowners.

> **Growing Youth** | Rodger Tschanz, Dept. of Plant Agriculture research technician, partnered with a local charitable organization called the "Julien Project" and its unique horticultural therapy program. The partnership offers high school aged youth who are struggling in traditional classroom settings, the opportunity to take part in weekly programs that develop their horticultural skills.

> **Small Spaces, Big Ideas** | A project sponsored by the Guelph Downtown Neighbourhood Association called Small Spaces, Big Ideas asked 50 landscape architecture students to come up with an array of possibilities for neglected or underused public spaces in the city's core and hosted a public display of their ideas.

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Environment  
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