

Plant Agriculture: MSc, PhD

Plants provide food, raw materials, and a healthy environment, and are the cornerstone for life on earth. Plant Science is key to understanding and enhancing plant life. Research in the Department of Plant Agriculture is divided into four areas: Plant Biochemistry and Physiology, Plant Breeding and Genetics, Crop Production Systems, and Bioproducts.

plant.uoguelph.ca

Program

Plant Agriculture is strongly rooted in crop science and horticultural science but we now encompass applied bioinformatics; molecular genetics; genomics; field, horticultural and greenhouse crops; plant breeding; turf and grassland studies; environmental sustainability; weed science/ecology; and the use of plant materials for health, fibres and industrial products. Furthermore, we recognize that society's expectations of agriculture are changing to include a wide range of health and environmental services such as producing food with nutraceuticals, protecting biodiversity, mitigating climate change and providing alternative energy sources.

Admission Requirements

As a part of the application package, applicants are required to secure a faculty advisor to supervise their program.

- The MSc requires a Baccalaureate degree in an honours plant science/ biology program, or equivalent, from a recognized university or college with at least a B average over the last two years of full-time study (or equivalent).
- The PhD requires a MSc degree by thesis in a field appropriate to the proposed area of specialization with a minimum B average.



We offer an interdisciplinary research environment in modern, well-equipped laboratories and research stations to provide excellence in graduate education and training.

Research Fields

- Plant Biochemistry & Physiology
- Plant Breeding & Genetics
- Crop Production Systems
- Bioproducts

Our Faculty

Faculty have modern labs with state-of-the-art equipment and access to controlled environment growth facilities and numerous field sites distributed over Ontario. Faculty are located on four campuses affording a variety of opportunities and experiences for our students. Our faculty are internationally recognized as leaders in their scholarly activities. Support for research is obtained from a variety of sources including federal, provincial, international, industrial and grower sponsors.

Application Deadline:

Ongoing
Entry: Fall, Winter, Spring

ARE YOU INTERESTED IN:

- Increasing plant production efficiency
- Developing new varieties
- Understanding plant growth and development
- Weed control
- Plant-environment interactions
- Discovering new environmentally friendly industrial materials

CAREER OPPORTUNITIES:

- Crop Consultant
- Breeder/Geneticist
- Plant Physiologist
- R&D Bio-Based Plastics

CONTACT INFORMATION

Graduate Program Coordinator:

(until May 2023)
Dr. Andrew Jones
519-824-4120 ext 53016
amjones@uoguelph.ca

Graduate Program Assistant:

Tara Israel
519-824-4120 ext 56077
pagrad@uoguelph.ca

Departmental Graduate Faculty with Research Areas**Helen Booker**

Crop Science Building
 hbooker@uoguelph.ca
Wheat breeding and genetics

Gale G. Bozzo

E.C. Bovey Building
 gbozzo@uoguelph.ca
*Postharvest physiology &
 secondary metabolism*

John A. Cline

Simcoe and Vineland Campus
 jcline@uoguelph.ca
*Fruit tree physiology &
 management*

Hugh J. Earl

Crop Science Building
 hjearl@uoguelph.ca
Oilseed physiology & agronomy

Mehrzad (Milad) Eskandari

Ridgetown Campus
 meskanda@uoguelph.ca
Soybean breeding & genetics

Chris L. Gillard

Ridgetown Campus
 cgillard@uoguelph.ca
*Dry bean agronomy &
 pest management*

Bernard Grodzinski

E.C. Bovey Building
 bgrodzin@uoguelph.ca
*Photosynthesis, carbon
 partitioning and productivity,
 manned space program*

David C. Hooker

Ridgetown Campus
 dhooker@uoguelph.ca
Field crop agronomy

A. Max P. Jones

E.C. Bovey Building
 amjones@uoguelph.ca
*Plant propagation and
 in vitro conservation*

Katerina S. Jordan

E.C. Bovey Building
 kjordan@uoguelph.ca
Turfgrass science; nematology

Melanie Kalischuk

E.C. Bovey Building
 mkalisch@uoguelph.ca
*Genomics, pathology,
 specialty crop improvement*

Elizabeth A. Lee

Crop Science Building
 lizlee@uoguelph.ca
Corn breeding & genetics

Lewis N. Lukens

Crop Science Building
 llukens@uoguelph.ca
*Bioinformatics, genetics of
 stress tolerance*

Eric M. Lyons

E.C. Bovey Building
 elyons@uoguelph.ca
*Stress physiology; root biology
 of turfgrass species*

Mary Ruth McDonald

Crop Science Building
 mrmcdona@uoguelph.ca
*Diseases & integrated crop
 management of vegetables*

Barry J. Micallef

Crop Science Building
 bmicalle@uoguelph.ca
*Physiology & genetics of
 vegetable crops*

Manjusri Misra

Crop Science Building
 mmisra@uoguelph.ca
*Bio-based new materials &
 green nanotechnology*

Amar Mohanty

Crop Science Building
 mohanty@uoguelph.ca
*Bioeconomy related to biobased
 materials, biofuels & biorefinery*

Joshua Nasielski

Crop Science Building
 nasielsk@uoguelph.ca
*Field crop agronomy and crop
 physiology, eastern and
 northern Ontario*

K. Peter Pauls

Crop Science Building
 ppauls@uoguelph.ca
*Tissue culture; molecular biology
 techniques to crop improvement*

Manish N. Raizada

Crop Science Building
 raizada@uoguelph.ca
*Novel proteomics, genome &
 protein engineering technologies*

Istvan Rajcan

Crop Science Building
 irajcan@uoguelph.ca
*Soybean breeding & genetics;
 seed composition, bioproducts,
 yield stability, G x E, exotic
 germplasm*

Darren E. Robinson

Ridgetown Campus
 drobinso@uoguelph.ca
*Weed management &
 horticultural crops*

Praveen K. Saxena

E.C. Bovey Building
 psaxena@uoguelph.ca
*Plant morphogenesis;
 conservation; medicinal
 plant biology*

Kimberley Schneider

Crop Science Building
 kschne01@uoguelph.ca
*Forage and service crops,
 nutrient cycling,
 sustainable agriculture*

Peter H. Sikkema

Ridgetown Campus
 psikkema@uoguelph.ca
*Weed management,
 field crops*

Jayasankar Subramanian

Vineland Campus
 jsubrama@uoguelph.ca
*Tree fruit genetics, breeding &
 biotechnology & biotechnology*

John Sulik

Crop Science Building
 jsulik@uoguelph.ca
*Precision Agriculture, cropping
 systems, remote sensing &
 geographic information systems*

Francois Tardif

Crop Science Building
 ftardif@uoguelph.ca
*Physiology, ecology & molecular
 biology of herbicide resistance*

Rene C. Van Acker

Johnston Hall
 vanacker@uoguelph.ca
*Weed biology & ecology;
 biosafety & novel trait
 confinement; agronomy*

David J. Wolyn

E.C. Bovey Building
 dwolyn@uoguelph.ca
*Plant genetics; plant
 breeding; tissue culture;
 molecular genetics*