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.

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

Admission Requirements

- 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.

Application Deadline:
Ongoing

Entry: Fall, Winter, Spring

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.

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:
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Graduate Program Assistant:
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UNIVERSITY of GUELPH

IMPROVE LIFE.

Departmental Graduate Faculty with Research Areas

Gale G. Bozzo
E.C. Bovey Building
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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
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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
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Turfgrass science; nematology

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

Elizabeth A. Lee
Crop Science Building
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Corn breeding & genetics

Lewis N. Lukens
Crop Science Building
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Bioinformatics, genetics of stress tolerance

Eric M. Lyons
E.C. Bovey Building
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Stress physiology; root biology of turfgrass species

Mary Ruth McDonald
Crop Science Building
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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
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Bio-based new materials & green nanotechnology

Amar Mohanty
Crop Science Building
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Bioeconomy related to biobased materials, biofuels & biorefinery

Joshua Nasielski
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Field crop agronomy and crop physiology, eastern and northern Ontario

Gopinadhan Paliyath
E.C. Bovey Building
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Postharvest biology; functional foods & nutraceuticals

K. Peter Pauls
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Tissue culture; molecular biology techniques to crop improvement

Manish N. Raizada
Crop Science Building
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Novel proteomics, genome & protein engineering technologies

Istvan Rajcan
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Soybean breeding & genetics; seed composition, bioproducts, yield stability, G x E, exotic germplasm

Darren E. Robinson
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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
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Weed management, field crops

Jayasankar Subramanian
Vineland Campus
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Tree fruit genetics, breeding & biotechnoloy & 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

Cheryl Trueman
Ridgetown Campus
ctrueman@uoguelph.ca
Vegetable disease management

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