

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.

uoguelph.ca/PlantAgMScPhD

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:

Dr. Istvan Rajcan
519-824-4120 ext 53564
irajcan@uoguelph.ca

Graduate Program Assistant:

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

Departmental Graduate Faculty with Research Areas

Isabelle Aicklen

Ridgetown Campus
iaicklen@uoguelph.ca
Weed management,
field crops, herbicide
physiology & resistance

Helen Booker

Crop Science Building
hbooker@uoguelph.ca
Wheat breeding & 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

Adrian A. Correndo

Crop Science Building
acorrend@uoguelph.ca
Agronomy, soil fertility & crop
nutrition, data science

Hugh J. Earl

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

Mehrzad (Milad) Eskandari

Ridgetown Campus
meskanda@uoguelph.ca
Soybean breeding & genetics

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

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

Gursahib Singh

Ridgetown Campus
gsingh98@uoguelph.ca
Field crop pathology
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

Mohsen Yoosefzadeh Najafabadi

Crop Science Building
myoosefz@uoguelph.ca
Dry bean breeding,
computational biology,
quantitative genetics,
bioinformatics & multi-omics-
based breeding