

Plant Breeding

Plant Breeding is the genetic improvement of crop plants through the study and application of genetics, statistics, agronomy, plant pathology, entomology, and related sciences. Crop plants included are **Maize, Soybean, conjunction with the North Central Regional Plant Introduction Station.**

An advanced degree in plant breeding offers tremendous job opportunities including, **management and operation of public and private plant breeding programs, research on plant breeding methodologies, bio-techr improve breeding efficiency and effectiveness, cultivar development.**

Learning Goals

Demonstrate

Demonstrate comprehensive understanding of scholarly literature in the area of study, i.e., plant breeding.

Hypothesize

Form testable hypotheses and articulate research objectives that, when met, will lead to significant contributions to the field of study.

Conduct

Conduct original research via appropriate data acquisition, analysis, and reporting of data.

Interpret

Interpret research results appropriately, integrating them into the existing knowledge in the discipline.

Communicate

Clearly and accurately communicate research findings orally and in writing, and appropriate use of display items (tables, figures, and other appropriate types of presentation), electronic or other forms of media.

Scholarship

Conduct scholarship, in teams or with independence, in ways that consistently demonstrate ethical practice and professionalism.

[Apply Now](#)

[Graduate Program Info](#)

[Course Catalog](#)

[Online Masters in Plant Breeding](#)

Plant Breeding Experts

Dr. Madan Bhattacharyya

PROFESSOR



Office:
G303 Agronomy 716 Farm House Ln

Phone:
(515) 294-2505 and (515) 708-3453

Email:
mbhattac@iastate.edu

Dr. Steven Cannon

AFFILIATE ASSOCIATE PROFESSOR



Office:
1017 Crop Genome Lab 819 Wallace Rd
Phone:
(515) 294-6971
Email:
scannon@iastate.edu

Dr. Jode Edwards

AFFILIATE ASSOCIATE PROFESSOR



Office:
1503 Agronomy 716 Farm House Ln
Phone:
(515) 294-7607
Email:
jode@iastate.edu

Dr. Shuizhang Fei

PROFESSOR



Office:
257 Horticulture 2206 Osborn Dr
Phone:
(515) 294-5119
Email:
sfei@iastate.edu

Ursula Frei

SCIENTIST I



Office:
1218 Agronomy 716 Farm House Ln
Phone:
(515) 294-2756
Email:
ufrei@iastate.edu

Dr. Candice Gardner

AFFILIATE ASSISTANT PROFESSOR



Office:
G212 Agronomy 716 Farm House Ln
Phone:
(515) 294-7967
Email:
gardnerc@iastate.edu

Dr. Michelle Graham

AFFILIATE ASSISTANT PROFESSOR



Office:
1565 Agronomy 716 Farm House Ln
Phone:
(515) 294-3626
Email:
magraham@iastate.edu

Dr. David Grant

AFFILIATE ASSOCIATE PROFESSOR



Office:
G304 Agronomy 716 Farm House Ln
Phone:
(515) 294-1205
Email:
dgrant@iastate.edu

Dr. Kendall Lamkey

PROFESSOR



Office:
103 Curtiss
Phone:
(515) 231-1191
Email:
krlamkey@iastate.edu

Dr. Michael Lee

EMERITUS PROFESSOR



Office:
1553 Agronomy 716 Farm House Ln
Phone:
(515) 294-7951
Email:
mlee@iastate.edu

Dr. Thomas Lübberstedt

PROFESSOR



Office:
1204 Agronomy 716 Farm House Ln
Phone:
(515) 294-5356
Email:
thomasl@iastate.edu

Dr. Jamie O'Rourke

AFFILIATE ASSISTANT PROFESSOR



Office:
1567 Agronomy 716 Farm House Ln
Phone:
(515) 294-7824

Email:
jorourke@iastate.edu

Dr. Maria G Salas-Fernandez

ASSOCIATE PROFESSOR



Office:
1208 Agronomy 716 Farm House Ln

Phone:
(515) 294-9563

Email:
mgsalas@iastate.edu

Dr. Patrick Schnable

DISTINGUISHED PROFESSOR



Office:
2035b Carver Co-Lab 1111 WOI Rd

Phone:
(515) 294-0975

Email:
schnable@iastate.edu

Dr. Paul Scott

AFFILIATE PROFESSOR, DEPT OF AGRONOMY



Office:
1407 Agronomy 716 Farm House Ln

Phone:
(515) 294-7825

Email:
pscott@iastate.edu

Dr. Arti Singh

ASSOCIATE PROFESSOR



Office:
1559 Agronomy 716 Farm House Ln

Phone:
(515) 294-0948

Email:
arti@iastate.edu

Dr. Asheesh K Singh

PROFESSOR



Office:
1501 Agronomy Hall, 716 Farm House Ln

Phone:
(515) 294-3268

Email:
singhak@iastate.edu

Adam Vanous

AFFILIATE ASSISTANT PROFESSOR



Email:
adamv@iastate.edu

Dr. Kan Wang
PROFESSOR



Office:
G405 Agronomy 716 Farm House Ln
Phone:
(515) 294-4429
Email:
kanwang@iastate.edu

Dr. Jianming Yu
PROFESSOR



Office:
1569 Agronomy, 716 Farm House Ln
Phone:
(515) 294-2757
Email:
jmyu@iastate.edu

Featured News

Student's Research in Maize Germplasm Leads to Honduras

March 19, 2024

Andrew Hokanson, a senior in agronomy, recently returned from a research trip to Honduras. He received project funding through the CALS Office for Academic Innovation and the Office for Research

[Read More](#)

Related Projects

- RII Track-2 FEC: Genome Engineering to Sustain Crop Improvement (GETSCI)
- Breeding of plant based protein crops (mung bean and urd bean) using USDA germplasm
- FACT: International workshop on Machine Learning for Cyber-Agricultural Systems
- RESEARCH-PGR: A Genome-level Approach to Balancing the Vitamin Content of Maize Grain
- Plant architecture
- Photosynthesis in sorghum under non-stress, cold and drought stress
- Sorghum breeding program for biofuel production
- "Transgenic Approaches In Managing Sudden Death Syndrome In Soybean"
- Parallel Algorithms and Software for High-Throughput Sequence Assembly
- NRT-DESE: P3 – Predictive Phenomics of Plants
- Hierarchical Modeling and Parallelized Bayesian Inference for the Analysis of RNAseq Data
- Genetic networks regulating structure and function of the maize shoot apical meristem
- Low-cost nitrate sensors to populate genotype-informed yield prediction models for next generation breeders
- Development and Evaluation of Improved Strategies for Genomic Selection Via Simulations and Empirical Testing

Plant Breeding Groups

Raymond F. Baker Plant Breeding Center

Raymond F. Baker Plant Symposium

Double Haploid Facility

Plant Sciences Institute

Shared Labs Website

Agricultural Meteorology

Crop Production & Physiology

Plant Breeding

Soil Science

Department of Agronomy

2104 Agronomy Hall
716 Farm House Lane
Ames, IA 50011-1051

Email: agron@iastate.edu
Phone: 515-294-1360
Fax: 515-294-3163

Office Hours: Monday – Friday 8 am to 4:30 pm
Building Hours: Monday – Friday 7 am to 7 pm

[Non-discrimination Policy](#)
[Privacy Policy](#)
[Digital Access & Accessibility](#)



Department of Agronomy

Login

Copyright © 2022, Iowa State University of Science and Technology.