



DEPARTMENT OF

# AGRONOMY



## Research Overview

The mission of the Department of Agronomy is use science and technology to improve plants, soils, and our predictive ability to anticipate the impact of the environment on production. The department is fully integrated across the teaching, Extension and research which allows us to address agriculture’s most pressing problems. Our students become agronomist who understand crop production, plant genetics, soil health, digital/precision agriculture, or landscape hydrology. They all have a goal of achieving efficient and sustainable agricultural production.



## Research Areas

### CROPS AND THE CHANGING ENVIRONMENT

*Helping Feed the World Population.* Gebisa Ejeta, Distinguished Professor of Agronomy, received the World Food Prize for developing drought- and parasitic weed- resistant sorghum varieties.

*Enhancing Nutritional Quality.* Hold promise to combat nutritional deficiency in developing countries and macular degeneration in the elderly. Agronomy plant scientists have helped to find a way to change nutritionally weak corn into corn that’s rich in provitamin A carotenoids which the body converts into vitamin A.

### SOIL AND LAND USE

*Helping Farmers Improve Soil Health.* Help famers improve soil health and resilience by integrating cover crops and no-till into their production systems. Such systems contribute to long-term sustainability.

*Creating Tools that Improve Land Use & Ecosystem Services.* Develop mapping, assessment and prediction tools to improve land use and increase crop yields, biomass productions, and community planning.



### WATER, AIR AND CLIMATE

*Helping to Improve Water Quality.* Conduct water-quality monitoring studies to assess contaminant sources and design best management and remediation tools.

*Saving Lives with Improved Weather Forecasting Technology.* The Indiana Climate Office is the state archive of official daily and hourly weather observations recorded throughout Indiana and works in a predictive manor by using historical data to create predictive tools for the future.



*Pictured at left from top: Dr. Dan Quinn, Dr. Laura Bowling, Dr. Eileen Kladivko, Dr. Gebisa Ejeta, and Dr. Ron Turco*

**RONALD TURCO**  
DEPARTMENT HEAD

[rturco@purdue.edu](mailto:rturco@purdue.edu) | 765.494.4773

915 Mitch Daniels Blvd, West Lafayette, IN 47907  
College of Agriculture, Purdue University

## Faculty by Research Area

### CROPS & THE CHANGING ENVIRONMENT

Joseph Anderson	janderson@purdue.edu
Shaun Casteel	scasteel@purdue.edu
Gebisa Ejeta	gejeta@purdue.edu
Bruce Erickson	berickso@purdue.edu
Corey Gerber	cgerber@purdue.edu
Yiwei Jiang	yjiang@purdue.edu
Keith Johnson	johnsonk@purdue.edu
Jianxin Ma	maj@purdue.edu
Mohsen Mohammadi	mohamm20@purdue.edu
Daniel Quinn	djquinn@purdue.edu
Katy Martin Rainey	krainey@purdue.edu
Torbert Rocheford	torbert@purdue.edu
Lee Schweitzer	lschweit@purdue.edu
Daniel Szymanski	dszyman@purdue.edu
Mitch Tuinstra	drmitch@purdue.edu
Jeffrey Volenec	jvolenec@purdue.edu
Tony Vyn	tvyn@purdue.edu
Diane Wang	drwang@purdue.edu
Roland Wilhelm	rcwilhelm@purdue.edu
Cankui Zhang	ckzhang@purdue.edu



*Dr. Jianxin Ma*



*Unmanned aerial vehicle*

### SOIL & LAND USE

Shalamar Armstrong	sarmstro@purdue.edu
Sylvie Brouder	sbrouder@purdue.edu
James Camberato	jcamberra@purdue.edu
Melba Crawford	melbac@purdue.edu
Cliff Johnston	clays@purdue.edu
Eileen Kladviko	kladviko@purdue.edu
Cindy Nakatsu	cnakatsu@purdue.edu
Siddhartho Paul	sspaul@purdue.edu
Yichao Rui	ruiy@purdue.edu
Darrell Schulze	dschulze@purdue.edu
Gary Steinhart	gsteinha@purdue.edu

### WATER, AIR & CLIMATE

Laura Bowling	bowling@purdue.edu
Richard Grant	rgrant@purdue.edu
Beth Hall	hall556@purdue.edu
Linda Lee	lslee@purdue.edu
Pratishtha Poudel	ppoudel@purdue.edu
Ronald Turco	rturco@purdue.edu
Quinlai Zhuang	qzhuang@purdue.edu