



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

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Faculty by Research Area

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Dr. Jianxin Ma



Unmanned aerial vehicle

SOIL & LAND USE

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WATER, AIR & CLIMATE

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