

Northeast Purdue Ag Center Research and Demonstration Projects for 2025

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Department of Agronomy

Corn Yield Response to Application of Proven 400S, Nitrogen-Fixing Microbial Salute and Nitrogen-Fixing Microbial Envita

Evaluate corn response to applications of biologicals and nitrogen-fixing microbial.

Contact: Dan Quinn, Agronomy

Corn Yield Response and Disease Pressure to Application of Xyway LFR

Evaluate corn response on yield and disease pressure of Xyway LFR applications using two different methods: Treatment 1 applied at planting via 2x2 system, treatment 2 applied at side-dressing.

Contact: Dan Quinn, Agronomy

Corn Mycotoxin Risk to Hybrid, Harvest Timing, and Fungicide Application

Evaluate hybrid response to foliar fungicide application and the effect on mycotoxin disease pressure.

Contact: Dan Quinn, Agronomy

Soybean Response to cover crops, sulfur, and nitrogen fertilization

Evaluate soybean response to interactions of cereal rye, sulfur, and nitrogen combinations.

Contact: Shaun Casteel, Agronomy

Potassium Budgets in Indiana Corn and Soybean Production

Evaluate the agronomic efficiency of currently potassium (K) fertilizer rates and evaluate theoretically improved soil potassium tests for ability to predict soil K supply.

Contact: Dan Quinn, Shaun Casteel, Agronomy

Long-Term Impact of Cover Crops on Cash Crop Nutrient Uptake, Yield and N Application Rate and Products

Purpose: To elucidate barriers in cover crop inclusion, deepen our understanding of cover crop to affect the availability of manure and inorganic N to cash crops in multiple cropping systems.

Contact: Shalamar Armstrong, Agronomy

Department of Agronomy (Continued)

Biological Residue Digestors for Cornstalks

Study to determine the effectiveness of commercial biological residue breakdown products on corn stalks.

Contact: Mark Carter, Purdue Extension Blackford County – Dan Quinn, Agronomy

DIFM (Data-Intensive Farm Management Program) Study Testing Soybean Population

Trial to determine the optimum soybean planting rate using the DIFM program. The DIFM program uses precision agriculture technology to conduct large-scale, on farm “checkerboard field trials.

Contact: Shaun Casteel, Agronomy and Northeast Purdue Ag. Center

Purdue Automated Agricultural Weather Station (PAAWS)

Automated collection of weather data from this site is sent to the Indiana State Climate Office at Purdue University - data can be observed at: <http://climate.agry.purdue.edu>

Contact: Beth Hall, Agronomy

Department of Entomology

Corn Ear Worm Trapping

Monitor the presence of corn ear worm across Indiana

Contacts: John Obermeyer & Laura Ingwell, Entomology

SARE - Ecology of Organic Cropping Systems

Evaluate various organic cropping systems and their effect on weed, insect, and pathogen pressure on corn, soybeans, and other small grains

Contacts: Christian Krupke and Ashley Adair, Extension

Study of cover cropping systems on ant populations and the affect the on common pests

Investigation into what ant species present no-till and cover cropped corn/soy fields in Indiana. How they act as predators of common pests and weed seeds and whether the presence of a cover crop affects the ant populations.

Contacts: Christian Krupke and Sophia Marie Yager-Motl

Ants as a Model System for Island Biogeography in Isolated Forest Stands

Equilibrium Theory of Island Biogeography (ETIB), ecologists have attempted to apply island biogeography principles to isolated habitats other than oceanic islands. One such habitat is isolated forest stands within agricultural fields, which are understudied when it comes to their patterns of biodiversity. We investigated whether the principles of the ETIB apply to these isolated forest stands, using Formicidae as a model system.

Contacts: Layton Rosen and Dr. Grzegorz Buczkowski

Department of FNR

UAS Wildlife Inventory Method Testing

Purpose: Monitor activity of Northern Long-eared bats through various collection methods.

Contact: Tina Jackson, Dr. Patrick Zollner, Forest and Natural Resources

Department of Botany and Plant Pathology

Corn Yield Response to Fungicide Applications

Evaluate corn response to fungicide applications using spray drone technology and ground rig equipment.

Contacts: Darcy Telenko, Botany and Plant Pathology

Soybean Yield Response to Fungicide Applications

Evaluate soybean response to fungicide applications using spray drone technology and ground rig equipment.

Contacts: Darcy Telenko, Botany and Plant Pathology

Soybean Cyst Nematode response to various cropping systems, seed treatments, and Soybean genetic and production practice resistance to SCN

Evaluate SCN response to wheat cover crop, tillage and no-till; seed treated vs. non-treated with Ilevu; and Soybean variety SCN Resistance PI88788 and Peking

Contact: Darcy Telenko, Botany and Plant Pathology – Northeast Purdue Ag. Center

Collaborations and Extension Demonstrations

Soybean Aphid Suction Trap Network

A network of traps across the country to monitor soybean aphid's levels throughout the year.

Contact: Dave Voegtlin, National Soybean Research Center

Diagnostic Training Center (DTC)

Small plot demonstrations conducted by NEPAC staff to be used as talking points during workshops and field day events

Contacts: Chris Lake and Carl Emley, NEPAC

DIFM (Data-Intensive Farm Management Program) Study Testing the Optimal Fertilizer rate of AMS and MAP for Wheat Production

Trial to determine the optimum AMS and MAP fertilizer application rate in wheat production using the DIFM program. The DIFM program uses precision agriculture technology to conduct large-scale, on farm "checkerboard field trials.

Contact: Northeast Purdue Ag. Center

Collaborations and Extension Demonstration (continued)

Soybean Intensive Management study using AI tools compared to NEPAC standard practices

Trial to determine whether AI tools can improve soybean yields by comparing three treatment options: a no-cost AI-assisted treatment, a cost-factored AI-assisted treatment, and the standard treatment options recommended by NEPAC.

Contact: Northeast Purdue Ag. Center