PINNEY PURDUE AGRICULTURAL CENTER
RESEARCH AND DEMONSTRATION PROJECTS
2023

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The Pinney Purdue Ag Center conducted 113 total research projects during 2023.

Department of Agronomy

Potassium Budgets in Indiana Corn Production
Purpose: 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: Jim Camberato, Shaun Casteel, Alex Helms, Agronomy

Potassium Budgets in Indiana Soybean Production
Purpose: 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: Jim Camberato, Shaun Casteel, Alex Helms, Agronomy

Corn Planting Date, Hybrid Maturity, and Fungicide Trial
Purpose: Examine the yield effects and disease control of corn planting dates, hybrid maturity, and fungicide applications.
Contact: Dan Quinn, Darcy Telenko, Agronomy

Corn Response to Various Brandt Starter Fertilizer Products
Purpose: Industry funded research trail to examine different Brandt starter fertilizer products.
Contact: Dan Quinn, Erick Fuentes, Agronomy

Corn Yield Effects to Nutrien Granular Fertilizer
Purpose: Industry funded research trail to examine different granular Nitrogen fertilizer sources from Nutrien
Contact: Dan Quinn, Erick Fuentes, Agronomy

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Short Corn Hybrid Response to Row Spacing and Populations
Purpose: Graduate student research trial to examine the effects of row spacing and populations in new short corn hybrids
Contact: Dan Quinn, Erick Fuentes, Agronomy

Corn Yield Response to Nitrogen Fixation Products - PPAC
Purpose: Evaluate crop health and yield effects to applications of Nitrogen Fixation products.
Contact: Dan Quinn, Shaun Casteel, Agronomy

Soybean Yield Response to Nitrogen Fixation Products - PPAC
Purpose: Evaluate crop health and yield effects to applications of Nitrogen Fixation products
Contact: Dan Quinn, Shaun Casteel, Agronomy

Soybean Yield Response to Nitrogen Fixation Products – Mary S Rice Farm
Purpose: Evaluate crop health and yield effects to applications of Nitrogen Fixation products
Contact: Dan Quinn, Shaun Casteel, Agronomy

Corn response to Sulfur Application Source and Timing – Mary S. Rice Farm
Purpose: Evaluate corn response to sulfur fertilizer applied at planting or side-dress.
Contact: Bob Nielsen/Jim Camberato, Agronomy

Soybean Seeding Rate vs Planting Date Study
Purpose: Determine optimal soybean seeding rates for planting dates in May and June.
Contact: Shaun Casteel, Agronomy

Sulfur Applications and Timing Effects on Soybeans
Purpose: Evaluate the effects of sulfur applications before and after planting in soybeans
Contact: Shaun Casteel, Agronomy

Non-Rhizobial Nitrogen Products Effect on Soybeans
Purpose: Evaluate the yield effects of 5 non-rhizobial products.
Contact: Shaun Casteel, Agronomy

Non-Rhizobial Nitrogen Products Effect on Soybeans – Mary S. Rice Farm
Purpose: Evaluate the yield effects of 5 non-rhizobial products.
Contact: Shaun Casteel, Agronomy

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Sulfur Fertilizer Effects on Soybeans
Purpose: Evaluate effects of various sulfur fertilizer products and application management before and after planting
Contact: Shaun Casteel, Agronomy

Biological Shotgun Treatments on Soybeans – Sandy Loam Soil Type
Purpose: Evaluate effects of various biological products on soybeans
Contact: Shaun Casteel, Agronomy

Biological Shotgun Treatments on Soybeans – Heavy Loam Soil Type
Purpose: Evaluate effects of various biological products on soybeans
Contact: Shaun Casteel, Agronomy

Biological Shotgun Treatments on Soybeans – Mary S. Rice Farm
Purpose: Evaluate effects of various biological products on soybeans
Contact: Shaun Casteel, Agronomy

Biolevel Treatments on Soybeans – Sandy Loam Soil Type
Purpose: Evaluate crop growth, N supply and yield of soybeans treated with Biolevel products
Contact: Shaun Casteel, Agronomy

Biolevel Treatments on Soybeans – Heavy Loam Soil Type
Purpose: Evaluate the growth development, N supply and yield of soybeans treated with Biolevel products
Contact: Shaun Casteel, Agronomy

Biological Seed Treatments on Soybeans
Purpose: Evaluate the growth development and yield of soybeans treated with various Biological seed treatments
Contact: Shaun Casteel, Agronomy

Sulfur-NPK vs Variety (Cl Includer and Cl Intermediate) on Soybeans
Purpose: Evaluate the yield effects of applying high rates of potash close to planting in multiple soybean varieties
Contact: Shaun Casteel, Agronomy

Sulfur-NPK vs Variety (Cl Includer and Cl Intermediate) on Soybeans – Mary S. Rice Farm
Purpose: Evaluate the yield effects of applying high rates of potash close to planting in multiple soybean varieties
Contact: Shaun Casteel, Agronomy

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Sulfur Fertilizer vs Fungicide on Soybeans
Purpose: Evaluate the yield effects of a preplant sulfur fertilizer applications followed by a fungicide application at R3
Contact: Shaun Casteel, Agronomy

Sulfur Fertilizer vs Fungicide on Soybeans – Mary S. Rice Farm
Purpose: Evaluate the yield effects of a preplant sulfur fertilizer applications followed by a fungicide application at R3
Contact: Shaun Casteel, Agronomy

Sulfur Fertilizer Rate vs Timing on Soybeans – Mary S. Rice Farm
Purpose: Evaluate the yield effects of a preplant sulfur application vs an in-season application
Contact: Shaun Casteel, Agronomy

Evaluation of Sorghum Forage and Grain Hybrids
Purpose: Evaluate environmental effects on variety traits in sorghum hybrids.
Contact: Keith Johnson, Nathan Bowser, Agronomy

Low Nitrogen Tolerance in Perennial Ryegrass Germplasm
Purpose: Evaluate nitrogen levels in ryegrass.
Contact: Yiwei Jiang, Agronomy

Department of Entomology

Black Cutworm Pheromone Trapping
Purpose: Monitor the presence of black cutworm.
Contact: John Obermeyer/Laura Ingwell, Entomology

Western Bean Cutworm Trapping
Purpose: Monitor the presence of western bean cutworm.
Contact: John Obermeyer/Laura Ingwell, Entomology

Corn Ear Worm Trapping
Purpose: Monitor the presence of corn earworm.
Contact: John Obermeyer/Laura Ingwell, Entomology

Indiana Cooperative Agricultural Pest Survey (CAPS) for Invasive Pests
Purpose: Site for trap grid to monitor for invasive insect species.
Contact: Alicia Kelley, Entomology

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Department of Botany & Plant Pathology

8 Trials - Weed Science Confidential Evaluation of Company Products and/or Technology
Purpose: Determine the effectiveness of new chemicals, adjuvants, rates, nozzles, or equipment on soybeans.
Contact: Julie Young, Botany & Plant Pathology

Herbicide Carry Over Effects on Sandy Loam Soils
Purpose: Determine rotational crop tolerance to sequential applications of HPPD-inhibiting herbicides in corn.
Contact: Julie Young, Botany & Plant Pathology

2 Trials - AMVAC Enlist Corn and Soybean Effects
Purpose: Study the effects of Enlist herbicides in corn and soybean crops.
Contact: Lucas Maia, Julie Young, Botany & Plant Pathology

7 Trials – Precision Labs Adjuvants With Various Tank Mixes
Purpose: Study the effects of herbicide applications with Precision Labs Adjuvants.
Contact: Julie Young, Botany & Plant Pathology

Residual Effects on Early Planted Soybeans
Purpose: Evaluate the effects of residual herbicide applications on very early planted soybeans (March – May).
Contact: Julie Young, Botany & Plant Pathology

Long Term Cover Crop Usage
Purpose: Evaluate the effect of long-term cover crop systems in corn and soybeans
Contact: Julie Young, Lucas Maia, Botany & Plant Pathology

20 Trials - Industry Confidential Evaluations
Purpose: Determine the effectiveness of new chemicals, adjuvants, rates, nozzles, technology, and/or equipment on corn and soybeans.
Contact: Darcy Telenko, Botany & Plant Pathology

United Soybean Board Trial - Seed Treatment on Early Planted Soybeans
Purpose: Evaluate the effect of seed treatments with early planted soybeans
Contact: Darcy Telenko, Christian Krupke, Steven Brand, Botany & Plant Pathology

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Uniform Seed Treatment Applications for SDS in Soybeans
Contact: Darcy Telenko

Studying the Effects of Foliar White Mold Products in Soybeans
Contact: Darcy Telenko

Evaluating the Uniformity of White Mold Applications in Soybeans
Contact: Darcy Telenko

Evaluating White Mold Disease in Organic Soybeans
Contact: Darcy Telenko

Fungicide Timing and Application for Tar Spot in Corn
Contact: Darcy Telenko

Fungicide Uniformity for Tar Spot in Corn
Contact: Darcy Telenko

Fungicide Applications for Tar Spot in Organic Corn
Contact: Darcy Telenko

Disease Monitoring in Various Corn Hybrids for Tar Spot
Contact: Darcy Telenko

ICMC Small Plot Trial for Tar Spot in Corn
Contact: Darcy Telenko

Evaluating Various Fungicides for Tar Spot in Corn
Contact: Darcy Telenko

Evaluating Various Equipment for Fungicide Applications (Sprayer vs Drone)
Contact: Darcy Telenko

Irrigation Effects on Tar Spot in Corn
Contact: Darcy Telenko

Plant Disease Monitoring for Tar Spot and Gray Leaf Spot – Rice Farm
Purpose: Monitoring disease pressure and corn development to create tools that will assist in disease management and grain yield prediction
Contact: Christian Cruz, Brenden Lane, Botany & Plant Pathology

Plant Disease Monitoring for Tar Spot and Gray Leaf Spot – PPAC
Purpose: Monitoring disease pressure and corn development to create tools that will assist in disease management and grain yield prediction
Contact: Christian Cruz, Brenden Lane, Botany & Plant Pathology

Corn Hybrid Variety Testing for Tar Spot Resistance and Susceptibility
Purpose: Evaluating the effect of tar spot disease on various corn hybrids.
Contact: Gurmukh Johal, Sendi Mejia, Botany and Plant Pathology

Department of Horticulture & Landscape Architecture

Screen Brassica Crops for Bolting
Purpose: This trial will evaluate a variety of crops/cultivars to determine how planting date and use of row cover influence flowering and bolting.
Contact: Liz Maynard, Horticulture and Landscape Architecture

High Tunnel Soil Fertility
Purpose: This project will demonstrate how different composts influence crop performance and insect populations in high tunnel tomato and cucumber production.
Contact: Liz Maynard, Horticulture and Landscape Architecture

High Tunnel Cover Crop Demo
Purpose: This project will demonstrate cover crop planting in the high tunnel footprints where no crop is planned.
Contact: Liz Maynard, Horticulture and Landscape Architecture

No-till Sweet Corn after Winter Rye
Purpose: Investigate stand establishment and crop performance of
sweet corn planted into a winter rye cover crop in comparison to conventional tillage.
Contact: Liz Maynard, Horticulture and Landscape Architecture

Row-middle Cover Crops in Pumpkins
Purpose: Evaluate cover crops that might be suitable for pumpkin production.
Contact: Liz Maynard, Horticulture and Landscape Architecture

Arugula Seed Increase
Purpose: Increase seed inventory of 'Adagio' arugula
Contact: Liz Maynard, Horticulture and Landscape Architecture

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Dry Edible Beans Vareity Trial
Purpose: Evaluate the differences between various edible bean varieties
Contact: Ashley Adair, Extension Organic Agricutlure Specialist

Burndown Herbicide Trial in Pumpkin
Purpose: Determine weed control and jack o' lantern pumpkin tolerance to currently registered and potential postemergence herbicides
Contact: Stephen Meyers, Horticulture and Landscape Architecture

POST-Directed Herbicide Trial in Pumpkin
Purpose: To compare jack o' lantern pumpkin response from postemergence, row middle herbicides currently registered to glufosinate.
Contact: Stephen Meyers, Horticulture and Landscape Architecture

Understanding the Integration of Production, Food Safety, and Profitability on the Farm
Purpose: Contribute to knowledge of cultural practices, crop quality, production capacity, soil health, and food safety expectations.
Contact: Petrus Langenhoven, Horticulture

Department of Forestry & Natural Resources

2005 Black Cherry Coppice Trial
Purpose: To test the effect of coppicing cherry trees after four years of growth on timber form and quality.
Contact: Don Carlson, Brian Beheler, Department of FNR, Phil O'Connor, IN-DNR Forestry

2009 Black Cherry Progeny Test
Purpose: One of a series of progeny tests of various cherry families from a grafted seed orchard.
Contact: Don Carlson, Caleb Kell, and Brian Beheler - Department of FNR

2009 Containerized Stock Test
Purpose: Compare Red Oak and Walnut grown in two different sized containers vs. bare rootstock.
Contact: Don Carlson, Caleb Kell, Lenny Farlee, and Brian Beheler - Department of FNR

2011 MOG Butternut Study
Purpose: Compare hybrid and pure Butternut in relation to Black Walnut and Red Oak.
Contact: Don Carlson, Caleb Kell, Brian Beheler, and Doug Jacobs - Department of FNR

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2011-2013 Advanced Butternut Seed Orchard
Purpose: A grafted seed orchard with new selections that have proven resistant to Butternut Canker fungus in screening tests at Purdue University.
Contact: Don Carlson, Caleb Kell, and Brian Beheler - Department of Forestry & Natural

Collaborative Forestry Research Study
Purpose: Study the Competition, coexistence and community structure: Identifying the mechanisms that structure Indiana forests.
Contact: Dr. Brady Hardiman

Natural Resources Demonstration Area
Purpose: Demonstration area maintained since 2002. The site was developed to provide a consolidated location with a wide range of natural resource research and management examples to allow efficient use during educational field days, workshops for the general public, as well as training and applied research opportunities for future FNR students.
Contact: Don Carlson, Jarred Brooke, Phil Woolery, Lenny Farlee, and Brian Beheler, Forestry & Natural Resources

United States Department of Agriculture (USDA)

USDA-ARS Regional Soybean Trials
Purpose: Evaluating soybean varieties grouped by maturity for comparison.
Contact: Adam Brock, USDA-ARS

USDA-ARS Phenotypic Assessment of Corn NAM Populations Under Phyllachora Maydis Infection (tar spot)
Purpose: Evaluating the effect of tar spot disease on various corn hybrids.
Contact: Raksha Singh, Stephen B Goodwin, USDA-ARS

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Other Cooperating Agencies and Purdue Extension

Area X Extension Demonstrations Plots – Corn Production in Various Cropping Systems
Purpose: Demonstrate corn production in tillage, no-till, and cover crop envireonments.
Contact: Phil Woolery, Nikky Witkowski

Area X Extension Demonstrations Plots – Soybean Production in Various Cropping Systems
Purpose: Demonstrate soybean production in tillage, no-till and cover crop environments.
Contact: Phil Woolery, Nikky Witkowski

Porter County SWCD Demonstrations Plots
Purpose: Demonstrate corn and soybean production practices in tillage and no-till with cover crop environments.
Contact: Stephen Boyer, Porter County SWCD Board

Soybean Aphid Suction Trapping
Purpose: Monitor the presence of soybean aphid.
Contact: Doris Lagos-Kutz, USDA-ARS, University of Illinois

National Weather Service Station
Purpose: Provide daily weather information to the National Weather Service.
Contact: Stephen Boyer, PPAC Superintendent

Purdue Automatic Weather Station (Purdue Mesonet)
Purpose: Automated collection of weather data
Contact: Beth Hall, Agronomy