

PINNEY-PURDUE AGRICULTURAL CENTER RESEARCH AND DEMONSTRATION PROJECTS 2020

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Department of Agronomy

Potassium Budgets in Indiana Corn Production

Purpose: Evaluate the agronomic efficiency of currently recommended Potassium (K) fertilizer rates and evaluate theoretically improved soil potassium tests for ability to predict soil K supply. Contact: Sylvie Brouder, Shaun Casteel, and James Camberato, Agronomy

Potassium Budgets in Indiana Soybean Production

Purpose: Evaluate the agronomic efficiency of currently recommended Potassium (K) fertilizer rates and evaluate theoretically improved soil potassium tests for ability to predict soil K supply. Contact: Sylvie Brouder, Shaun Casteel, and James Camberato, Agronomy

Yield Component Response of Corn Hybrid to Sulfur Fertilizer – Mary Rice Farm

Purpose: Corn responses to 2x2 & side dress applications of Sulfur Fertilizer treatments. All plots eventually receiving same total amounts of nitrogen.
Contact: Bob Nielsen, Agronomy

Phosphorous (P) Response of Corn on a Low P Soil – Pinney C2

Purpose: To evaluate the response on low phosphorous soil on corn and soybean crops.
Contact: James Camberato, Agronomy

Soybean Genetics and Breeding AYT & PYT experiments

Advanced and preliminary trials from Purdue breeding program. Advanced lines will move forward to Northern Uniform Test.
Contact: Katherine Rainey, Agronomy

SoyQ Co-inoculation-PPAC I1

Purpose: Evaluate effect of co-inoculation (rhizobia, azosperillum) on soybean yield and quality (protein, amino acids).
Contact: Shaun Casteel, Agronomy

Nitrogen and Sulfur x Variety-PPAC I1

Purpose: Evaluate effect N and S management on soybean quality (protein, amino acids).
Contact: Shaun Casteel, Agronomy

Sulfur fertilizers – PPAC I3

Purpose: Evaluate AMS, MESZ, Tiger CR, Gypsum plus new formulations for soybean response to treatments.
Contact: Shaun Casteel, Agronomy

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Department of Agronomy (Continued)

SoyQ Fixation-PPAC I1

Purpose: Evaluate nodulating and non-nodulating soybeans.
Contact: Shaun Casteel, Agronomy

Sulfur Starters x Placement - Pinney Farm – I3

Purpose: Evaluate placement (single or dual 2” offset) on soybean response to sulfur fertilizer. Products to be considered ATS, KTS, K-fuse x 4 S rates.
Contact: Shaun Casteel, Agronomy

Sulfur Starters x Variety - Pinney Farm – I3

Purpose: Evaluate variety soybean response to sulfur fertilizer. Products to be considered ATS, KTS, K-fuse.
Contact: Shaun Casteel, Agronomy

Sulfur x Foliar protection- Pinney Farm – I1

Purpose: Evaluate early and late S applications and relationship with fungicide/insecticide applications on soybean response.
Contact: Shaun Casteel, Agronomy

UAV Stand Assessment of Soybean Seeding Rate x Plant Type Trial-PPAC I7

Purpose: Utilize UAV imagery to assess stand establishment and develop protocol for scouting early to late season.
Contact: Shaun Casteel, Agronomy

Undercover – Manganese & Sulfur– PPAC Fse

Purpose: Can undercover applications correct deficiencies of non-mobile to nearly non-mobile plant nutrients like Sulfur and Manganese.
Contact: Shaun Casteel, Agronomy

K Plots – PPAC L2

Purpose: Monitor yield levels of corn and soybeans. Soil samples to be taken and potash applied to re-establish a soil K gradient.
Contact: Shaun Casteel, Agronomy

Sulfur fertilizer products-Rice Farm

Purpose: Evaluate AMS, MESZ, Tiger CR, Gypsum plus new formulations for soybean response to treatments.
Contact: Shaun Casteel, Agronomy

Sulfur AMS Rate x Timing-Rice Farm

Purpose: AMS application at planting vs. split (planting + R1) applications.
Contact: Shaun Casteel, Agronomy

Sulfur Foliar Rate-Rice Farm

Purpose: Apply S at previously tested growth stages to confirm yield response.
Contact: Shaun Casteel, Agronomy

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Department of Agronomy (Continued)

Sulfur AMS x NPK-Rice Farm

Purpose: Determine synergies or limitations to blending AMS with N, P, or K at planting.

Contact: Shaun Casteel, Agronomy

Undercover Sulfur – Rice Farm

Purpose: Evaluate potential of sulfur applications to correct deficiency of S.

Contact: Shaun Casteel, Agronomy

Department of Entomology

Armyworm Trapping

Purpose: To monitor the presence of armyworm

Contact: Larry Bledsoe, Entomology

Black Cutworm Pheromone Trapping

Purpose: To monitor the presence of black cutworm.

Contact: John Obermeyer/Laura Ingwell, Entomology

Western Bean Cutworm Trapping

Purpose: To monitor the presence of western bean cutworm.

Contact: John Obermeyer/Laura Ingwell, Entomology

Corn Ear Worm Trapping

Purpose: To monitor the presence of corn earworm. Contact:

John Obermeyer/Laura Ingwell, Entomology

Corn Trap Crop

Purpose: A trap crop for corn rootworm eggs in 2018 to provide experimental area in 2019. Contact: Christian Krupke, Entomology

Evaluate neonicotinoid residues and effect on secondary pests on continuous corn

Purpose: Study neonicotinoid residues and effect on secondary pests on continuous corn. Contact: Christian Krupke, Larry Bledsoe, Entomology

Efficacy of Commercial and Experimental Insecticides Used to Control Corn Insects

Purpose: Evaluate new products and generate data for extension recommendations.

Contact: Christian Krupke, Entomology

Indiana Cooperative Agricultural Pest Survey (CAPS) for Invasive Pests

Purpose: Site for trap grid to monitor for invasive insect species.

Contact: Larry Bledsoe, Entomology

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Department of Entomology, (Continued)

Specialty Crops Research Initiative (SCRI)

Purpose: Impact of neonicotinoid insecticides on honeybee pollinators of melons.
Contact: Laura Ingwell, Jacob Pecenka, Christian Krupke, and Larry Bledsoe.
Entomology

Specialty Crops Research Initiative (SCRI)

Purpose: Evaluate insecticide effects on bee community vs melon yield. Contact:
Laura Ingwell, Jacob Pecenka, Christian Krupke, and Larry Bledsoe. Entomology

Department of Botany & Plant Pathology

14 trials - Weed Science Confidential Evaluation of Company Products/Technology under Development

Purpose: Determine the effectiveness of new adjuvants, herbicide, and/or equipment.
Contact: Julie Young, Botany & Plant Pathology

Herbicide Degradation under cover crops

Purpose: Study effects of herbicide degradation under multiple cover crops.
Contact: Julie Young, Botany & Plant Pathology

Field Day Herbicide Demonstration Plot

Purpose: Demonstrate weed control in soybean herbicide tolerance systems Xtend, Enlist, Liberty, Round-Up, and non-GMO.
Contact: Julie Young, Botany & Plant Pathology

Comparison for Tar Spot in Corn

Purpose: Efficacy of foliar fungicides in corn for tar spot control.
Contact: Darcy Telenko/Jeffrey Ravellette

Comparison for Tar Spot in Corn (Industry multi)

Purpose: Efficacy of foliar fungicides in corn for tar spot control.
Contact: Darcy Telenko/Jeffrey Ravellette

Fungicide timing for Tar Spot control in Corn

Purpose: Compare efficacy of foliar fungicide application timing in corn for tar spot control.
Contact: Darcy Telenko/Jeffrey Ravellette

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Department of Botany & Plant Pathology, (Continued)

Tillage x hybrid x foliar fungicides for Tar Spot in Corn

Purpose: Compare efficacy of foliar fungicides x tillage x hybrid for tar spot control in corn.

Contact: Darcy Telenko/Jeffrey Ravellette

Management strategies for tar spot control in corn.

Purpose: Compare strip tillage vs conventional tillage effects on tar spot in corn.

Contact: Darcy Telenko/Jeffrey Ravellette

Hybrid x foliar fungicides for Tar Spot in Corn (TARVAR)

Purpose: Compare efficacy of foliar fungicides x hybrid for tar spot control in corn.

Contact: Darcy Telenko/Jeffrey Ravellette

Comparison for Tar Spot in Corn (TARMI)

Purpose: Efficacy of foliar fungicides in corn for tar spot control.

Contact: Darcy Telenko/Jeffrey Ravellette

Comparison for Tar Spot in Corn (TARVAR2)

Purpose: Efficacy of foliar fungicides in corn for tar spot control.

Contact: Darcy Telenko/Jeffrey Ravellette

Fungicide Comparison for White Mold in Soybean

Purpose: Compare efficacy of foliar fungicides for white mold control in soybeans

Contact: Darcy Telenko/Jeffrey Ravellette

SDS management in Soybean

Purpose: Evaluate SDS management in soybeans.

Contact: Darcy Telenko/Jeffrey Ravellette

Evaluation of seed treatment, in-furrow, and foliar fungicides for management of SDS in Soybean

Purpose: Evaluate commercial products for SDS management.

Contact: Darcy Telenko/Jeffrey Ravellette

IPM SDS management in Soybean

Purpose: Evaluate the integration of seed treatment, cultivar selection, and seeding rate in order to determine how these effects root, SDS, and yield. SDS management in soybeans.

Contact: Darcy Telenko/Jeffrey Ravellette

Foliar fungicide in Soybean (industry multi)

Purpose: Compare efficacy of foliar fungicides in soybeans.

Contact: Darcy Telenko/Jeffrey Ravellette

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Department of Botany & Plant Pathology, (Continued)

Foliar fungicide in Soybean (industry)

Purpose: Compare efficacy of foliar fungicides in soybeans.

Contact: Darcy Telenko/Jeffrey Ravellette

Foliar fungicide in Soybean (industry2)

Purpose: Compare efficacy of foliar fungicides in soybeans.

Contact: Darcy Telenko/Jeffrey Ravellette

Preparation for 2021 white mold research in Soybean

Purpose: Establish field plot area in sunflower production to promote white mold pathogen.

Contact: Darcy Telenko/Jeffrey Ravellette

BioFung x biofoliar in Soybean

Purpose: Study interaction of biofungicides and foliar fungicides in soybeans.

Contact: Darcy Telenko/Jeffrey Ravellette

BioFung x herbicide in Soybean

Purpose: Study interaction of biofungicide and herbicide in soybeans.

Contact: Darcy Telenko/Jeffrey Ravellette

**Department of Horticulture & Landscape
Architecture**

Cucurbit and Basil Downy Mildew Sentinel Plot

Purpose: Monitor for presence of downy mildew in cooperative trial with NCSU.

Contact: Elizabeth Maynard, Horticulture

No-till Pumpkin into winter rye

Purpose: Demonstrate no-till pumpkin production in winter rye cover crop terminated by rolling and herbicide application in comparison to conventional tillage.

Contact: Elizabeth Maynard, Horticulture

No-till Sweet Corn into winter rye

Purpose: Demonstrate no-till sweet corn production in winter rye cover crop terminated by rolling and herbicide application in comparison to conventional tillage.

Contact: Elizabeth Maynard, Horticulture

Reflex herbicide screen in summer squash

Determine influence of 5 Reflex herbicide rates on crop response, yield, and quality.

Contact: Steve Meyers, Horticulture

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Department of Horticulture & Landscape Architecture (Continued)

Reflex herbicide screen in pumpkin

Determine influence of 5 Reflex herbicide rates on crop response, yield, and quality.

Contact: Steve Meyers, Horticulture

Department of Forestry & Natural Resources

Assessing Poplar Species Suitability and Productivity in Indiana

Purpose: Testing of Poplar trees for biofuel production from cellulosic feedstock.

Contact: Rick Meilan, Associate Professor, 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: Jim McKenna, Brian Beheler, and Don Carlson, Forestry & Natural Resources

2009 Black Cherry progeny test

Purpose: One of a series of progeny tests of various cherry families from a grafted seed orchard.

Contact: Jim McKenna, Brian Beheler, and Don Carlson, USDA-ARS and Department of Forestry & Natural Resources

2009 Containerized Stock Test

Purpose: Compare Red Oak and Walnut grown in two different sized containers vs. bare rootstock.

Contact: Jim McKenna, Brian Beheler, and Don Carlson, USDA-ARS and Department of Forestry & Natural Resources

2011 MOG Butternut Study

Purpose: Compare hybrid and pure Butternut in relation to Black Walnut and Red Oak.

Contact: Jim McKenna, Brian Beheler, and Don Carlson, Forestry & Natural Resources

2011 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: Jim McKenna, Brian Beheler, and Don Carlson, USDA-ARS and Forestry & Natural Resources

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Department of Forestry & Natural Resources (Continued)

Collaborative Forestry Research Study

Purpose: Study the Competition, coexistence and community structure: Identifying the mechanisms that structure Indiana forests.

Contact: Dr. Brady Hardiman

Continuous Forest Inventory

Purpose: Monitor and document forest species present in woodland community.

Contact: Don Carlson, Forestry & Natural Resources.

Natural Resources Demonstration Area Initiation

Purpose: To establish a natural resources demonstration area at Pinney-PAC.

Contact: Don Carlson, Jarred Brooke, Lenny Farlee, Brian Beheler - Forestry & Natural Resources. Phil Woolery, ANR

United States Department of Agriculture-ARS

USDA-ARS Northern Regional Soybean Trials

Purpose: Evaluating United States Department of Agriculture-Agricultural Research Service (USDA-ARS) Northern Soybean Tests cultivars grouped by maturity for comparison.

Contact: Guohong Cai, USDA-ARS

Other Cooperating Units or Areas

Corn production under cover crop, no-till, and conventional systems.

Purpose: Demonstrate corn production under three tillage systems.

Contact: Phil Woolery, Nikky Witkowski, Bob Yoder - Area X Extension Educators

Soybean production under cover crop, no-till, and conventional systems.

Purpose: Demonstrate soybean production under three tillage systems.

Contact: Phil Woolery, Nikky Witkowski, Bob Yoder - Area X Extension Educators

Soybean Aphid Suction Trapping

Purpose: Monitor the presence of soybean aphid.

Contact: Dave Voegtlin, National Soybean Research Center

National Weather Service Manual Read Station

Purpose: Provide daily weather information to the National Weather Service.

Contact: Pinney-Purdue Ag Center Staff

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Other Cooperating Units or Areas (Continued)

Purdue Automatic Weather Station (PAWS)

Purpose: Automated collection of weather data from this site sent to a data base at the Indiana State Climate Office, which can be observed at <http://climate.agry.purdue.edu>.

Contact: Beth Hall, Agronomy