

**PINNEY-PURDUE AGRICULTURAL CENTER
RESEARCH AND DEMONSTRATION PROJECTS
2019**

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Department of Agronomy

Soybean Variety Performance Trial

Purpose: State variety performance trials.
Contact: Phil DeVillez and Bill Foster, Agronomy

Specialty Soybean Study

Purpose: Evaluate Specialty variety performance trials.
Contact: Phil DeVillez and Bill Foster, Agronomy

BASF RR Soybean Study

Purpose: Evaluate BASF variety performance trials.
Contact: Phil DeVillez and Bill Foster, Agronomy

Corn Hybrid Glyphosate Tolerant Performance Trial

Purpose: State hybrid performance trials.
Contact: Phil DeVillez and Bill Foster, Agronomy

Corn Hybrid Conventional Performance Trial

Purpose: State hybrid performance trials.
Contact: Phil DeVillez and Bill Foster, Agronomy

Specialty Corn Study

Purpose: Evaluate Specialty Hybrid performance trials.
Contact: Phil DeVillez and Bill Foster, Agronomy

Indigenous Soil Potassium Supply

Fertilizer Potassium Use Efficiency

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

Department of Agronomy (Continued)

Corn Response to Starter Fertilizer PLUS Plant Population Trial – Pinney B4

Purpose: Corn response to Starter Fertilizer and Plant Populations.

Contact: Bob Nielsen & Jim Camberato, Agronomy

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

Purpose: Corn responses to in-furrow & side dress applications of Sulfur Fertilizer treatments. All plots eventually receiving same total amounts of nitrogen.

Contact: Bob Nielsen, Agronomy

Yield Component Response of Corn Hybrid to Applied Boron – Pinney C4

Purpose: Corn responses to starter & side dress applications of Sulfur Fertilizer treatments. All plots eventually receiving same total amounts of nitrogen.

Contact: Bob Nielsen, Agronomy

Effects on Soybean Growth and Yield of Previous. Long-Term Variable N Rates to Corn

Purpose: Bulk seeding of soybeans in a soybean/corn rotation.

Contact: Bob Nielsen & Jim Camberato, Agronomy

Sulphur effects on yield in corn/soybean rotation – Mary Rice Farm

Evaluate yield response to sulfur treatments applied to corn and soybeans in crop rotation.

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

Plant Population Effects on Continuous Corn

Purpose: To evaluate plant population effects in continuous corn.

Contact: James Camberato, Agronomy

Industry Supported Irrigation Nitrogen Rate and Timing Study for Corn

Purpose: Evaluate corn performance as influenced by nitrogen rate, nitrogen timing, and irrigation at the Rice Farm.

Contact: Tony Vyn, Agronomy

Fertilizer Rate and Tillage System Study for Corn

Purpose: Evaluate fertilizer rates and tillage systems in corn.

Contact: Tony Vyn, Agronomy

Sulfur Sources-Pinney Farm – I5

Purpose: Company interest in supplying Sulfur needs through dry fertilizer application early planting season. Products to be considered AMS, MESZ, Tiger CR, and Gypsum.

Contact: Shaun Casteel, Agronomy

Sulfur Starters x Placement - Pinney Farm – I5

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

Department of Agronomy (Continued)

Sulfur Starters x Planting date- Pinney Farm – I5

Purpose: Evaluate planting date (late April, early June) on soybean response to sulfur fertilizer. Products to be considered ATS, KTS, K-fuse x 2 S rates.

Contact: Shaun Casteel, Agronomy

Sulfur Starters x Foliar protection- Pinney Farm – I5

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 I6

Purpose: Utilize UAV imagery to assess stand establishment and develop protocol for scouting early to late season.

Contact: Shaun Casteel, Agronomy

Undercover – Manganese & Sulfur-Rice Farm– PPAC Fne

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 reestablish a soil K gradient.

Contact: Shaun Casteel, Agronomy

Phosphorous in-furrow management-PPAC E4

Purpose: Evaluate potential for in-furrow Helena ortho-phosphate proportions to enhance soybean yield and quality.

Contact: Shaun Casteel, Agronomy

Helena Synergy management-PPAC E4

Purpose: Evaluate interactions of intensive management of fertility and protection in-furrow and foliarly applied.

Contact: Shaun Casteel, Agronomy

Product Evaluations-PPAC E4

Purpose: Evaluate products targeting seed treatments, in-furrow applications, and foliar treatments across varieties.

Contact: Shaun Casteel, Agronomy

SoyQ Inoculation Timing x variety-PPAC E4

Purpose: Evaluate effect of inoculation timing (seed, V4, R1) on yield and quality (protein, amino acids).

Contact: Shaun Casteel, Agronomy

SoyQ N:S x Variety-PPAC E4

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

Contact: Shaun Casteel, Agronomy

Department of Agronomy (Continued)

SoyQ cO-inoculation-PPAC F4

Purpose: Evaluate effect of co-inoculation (rhizobia, azospirillum) on soybean yield and quality (protein, amino acids).

Contact: Shaun Casteel, Agronomy

Sulfur and Quality: x Irrigation and Dryland-PPAC M1

Purpose: Evaluate standard sulfur treatments, ATS at burndown, gypsum, and foliar spray S.

Contact: Shaun Casteel, Agronomy

Sulfur Foliar Rate and Timing-Rice Farm

Purpose: S application at planting, followed by V4 and R3 applications.

Contact: Shaun Casteel, Agronomy

Sulfur fertilizers – Rice Farm

Purpose: Evaluate AMS, MESZ, Tiger CR, Gypsum plus new formulations from Nutrien, Northern fertility for soybean response to treatments.

Contact: Shaun Casteel, Agronomy

Sulfur AMS Rate x Timing-Rice Farm

Purpose: Determine optimal timing of AMS application (planting vs split: planting & R1), and rate (5,10,20,30 lb. S/ac).

Contact: Shaun Casteel, Agronomy

Undercover Sulfur – Rice Farm

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

Contact: Shaun Casteel, Agronomy

Sulfur Timing-Rice Farm

Purpose: Evaluate ATS application at burndown, pre-plant, starter, and foliar applications.

Contact: Shaun Casteel, Agronomy

Purdue Automatic Weather Station (PAAWS)

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

Contact: Rich Grant and Ken Scheeringa

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

Department of Entomology (continued)

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 neonic residues and effect on secondary pests on continuous corn

Purpose: Study neonic 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

Specialty Crops Research Initiative (SCRI)

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

Department of Botany & Plant Pathology

10 trials - Weed Science Confidential Company Products for Evaluation

Purpose: Determine the effectiveness of company products
Contact: Julie Young, Botany & Plant Pathology

Evaluate adjuvants with AMV5131

Purpose: multispecies w/ black bean, foxtail millet, wheat and soy
Contact: Julie Young, Botany & Plant Pathology

Comparison of AMV5122E vs Impact with Adjuvants

Purpose: multispecies w/ black bean, foxtail millet, wheat and soy
Contact: Julie Young, Botany & Plant Pathology

Adjuvant evaluation with Enlist One

Contact: Julie Young, Botany & Plant Pathology

Adjuvant evaluation with Xtendimax

Contact: Julie Young, Botany & Plant Pathology

Adjuvant evaluation with Liberty

Purpose: non crop
Contact: Julie Young, Botany & Plant Pathology

Department of Botany & Plant Pathology (continued)

Evaluation of Precision Labs Adjuvants with Enlist

Purpose: ATV trial

Contact: Julie Young, Botany & Plant Pathology

Evaluation of Precision Labs Adjuvants with Glufosinate

Purpose: ATV trial

Contact: Julie Young, Botany & Plant Pathology

Evaluation of Precision Labs adjuvants with Clethodim

Purpose: plant corn as a weed, seed grasses

Contact: Julie Young, Botany & Plant Pathology

Evaluation of Adjuvants with Soil Applied Herbicides

Purpose: non crop

Contact: Julie Young, Botany & Plant Pathology

Evaluation of Precision Labs Adjuvants with Xtendimax Tank Mixes

Purpose: ATV trial, target 300 ppm hard water

Contact: Julie Young, Botany & Plant Pathology

ISA soybean demos

Contact: Julie Young, Botany & Plant Pathology

Wilbur-Ellis Adjuvants with Enlist

Purpose: blanket Vaquero 6oz + Renegade 1% for grass control

Contact: Julie Young, Botany & Plant Pathology

Fungicide Comparison for White Mold in Soybean

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

Contact: Darcy Telenko/Jeffrey Ravellette

Phytophthora Management Soybean

Purpose: Evaluate variety genetics and seed treatment for management of phytophthora root rot.

Contact: Darcy Telenko/Jeffrey Ravellette

Evaluate Potential Herbicide Interactions with seed rot and stand loss.

Purpose: Evaluate potential interaction between herbicide and seed rot.

Contact: Darcy Telenko/Jeffrey Ravellette

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

Purpose: Evaluate new and commercial products for SDS management.

Contact: Darcy Telenko/Jeffrey Ravellette

Evaluation efficacy Department of Botany & Plant Pathology (continued)

Evaluate efficacy of nematicides, seed treatments for SDS and SCN management in Soybean

Purpose: Evaluate new and commercial products for SDS and SCN management.
Contact: Darcy Telenko/Jeffrey Ravellette

Evaluate efficacy of nematicides, seed treatments against SDS and SCN

Purpose: Evaluate integration of seed treatment, cultivar selection, and planting date management options on root rot, SDS, and yield in soybean.
Contact: Darcy Telenko/Jeffrey Ravellette

Field Scale Fungicide Timing in Soybeans

Purpose: Fungicide application timing x disease monitoring.
Contact: Darcy Telenko/Jeffrey Ravellette

Fungicide Comparison in Soybeans

Purpose: Efficacy of foliar fungicides on soybean diseases.
Contact: Darcy Telenko/Jeffrey Ravellette

Uniform Fungicide Comparison for Tar Spot in Corn

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

Fungicide Timing and Model Variation for Tar Spot in Corn

Purpose: Compare foliar fungicide timing and model prediction for tar spot control in corn.
Contact: Darcy Telenko/Jeffrey Ravellette

Tillage, Variety, Fungicide Evaluation for Tar Spot in Corn

Purpose: Compare foliar fungicide timing and model prediction for tar spot control in corn.
Contact: Darcy Telenko/Jeffrey Ravellette

Germplasm Evaluation for Tar Spot Susceptibility in Corn

Purpose: Compare corn germplasm for resistance to tar spot.
Contact: Darcy Telenko/Jeffrey Ravellette

Field Scale Fungicide Timing in Corn

Purpose: Evaluate timing of fungicide applications and observation of corn diseases.
Contact: Darcy Telenko/Jeffrey Ravellette

Fungicide Comparison in Corn

Purpose: Efficacy of foliar fungicides on corn diseases.
Contact: Darcy Telenko/Jeffrey Ravellette

Department of Horticulture & Landscape Architecture

Growing Media for Organic Transplants - Tomato

Purpose: Evaluation of transplant establishment and growth for tomato seedlings grown in various growing media.

Contact: Elizabeth Maynard, Horticulture

Growing Media for Organic Transplants – Lettuce and Spinach

Purpose: Evaluation of transplant establishment and growth for lettuce and spinach seedlings grown in various growing media. Contact: Elizabeth Maynard, Horticulture

No-Till Pumpkin

Purpose: Demonstrate no-till pumpkin production after cover crop.

Contact: Elizabeth Maynard, Horticulture

Cucurbit and Basil Downy Mildew Sentinel Plot

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

Contact: Elizabeth Maynard, Horticulture

Sugar enhanced and synergistic Sweet Corn Variety Evaluation

Purpose: Evaluate performance of sugar enhanced and synergistic sweet corn varieties.

Contact: Elizabeth Maynard, Horticulture

sh2 Sweet Corn Variety Evaluation

Purpose: Evaluate performance of sh2 sweet corn varieties.

Contact: Elizabeth Maynard, 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

Department of Forestry & Natural Resources (continued)

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

Understanding Habitat Needs of Northern Long Eared Bats in Northern Indiana Landscapes

Purpose: Predictive maps of landscape level habitat needs of Northern Long Eared Bats in Northern Indiana developed based upon historic records and observations collected during fieldwork completed during the summers of 2017 and 2018.

Contact: Dr. Patrick Zollner, Cheyenne Gerdes

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 Initiation

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

Contact: Don Carlson, Forestry & Natural Resources

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: Gary Knowling, USDA-ARS

Other Cooperating Units or Areas

Soybean Aphid Suction Trapping

Purpose: To monitor the presence of soybean aphid.

Contact: Dave Voegtlin, National Soybean Research Center

National Weather Service Manual Read Station

Purpose: To provide daily weather information to the National Weather Service.

Contact: Pinney-PAC Staff