

THROCKMORTON-PURDUE AGRICULTURAL CENTER
(INCLUDING THE MEIGS FARM)
RESEARCH AND DEMONSTRATION PROJECTS
2019

Jay Young, Superintendent, Throckmorton-PAC
Tristan Tucker, Meigs Specialty Crops Systems Specialist
8343 South U.S. Highway 231
Lafayette, IN 47909
765-538-3422
jayyoung@purdue.edu
<https://ag.purdue.edu/arp/pac/Pages/tpac-home.aspx>

Department of Agricultural and Biological Engineering

TPAC/ABE/SMcMillan/Two-Stage Ditch Monitoring/2019

Purpose:

Contact: Sara McMillan, Mandy Limiac

TPAC/ABE/MGitau/Assessment of Phosphorus Fate and Transport through Subsurface Pathways

Purpose: Understanding the fate and transport of agricultural contaminants as impacted by current and alternative agricultural practices.

Contact: Margaret Gitau

Department of Agronomy

TPAC/AGRY/SCasteel/Sulfur PAC/2019

Purpose: Investigate ATS similar to burndown timing as well as AMS pre-plant, and foliar sprays. Potential for starter ATS with 30-in planter.

Contact: Shaun Casteel, Amanda Modglin

TPAC/AGRY/SCasteel/UAV Stand Assessments of Soybean (Seeding Rate x Plant Rate/2019

Purpose: Use UAV imagery to assess stand establishment as well as standard protocol for scouting of soybean early to late season. Using soybean variety/plant type x seed rate and various altitudes, overlaps etc. to determine the optimal arrangement for UAV.

Contact: Shaun Casteel, Amanda Modglin, Richards Smith

TPAC/AGRY/YJiang/Evaluation of Flowering Time in Switchgrass Population/2019

Purpose: Assessment of flowering time and biomass yield of switchgrass and identify mechanisms controlling flowering time.

Contact: Yiwei Jiang

Department of Agronomy (cont'd)

TPAC/AGRY/RNielsen/Corn Responses to Applied Boron/2019

Purpose: New field research to evaluate corn responses to sidedress-applied b include a blanket application of sulfur to avoid any confounding of possible B effects with S deficiencies blanket 5# S in starter and 10# S in sidedress using ATS.

Contact: Robert Nielsen, Jim Camberato

TPAC/AGRY/RNielsen/Corn Responses to Starter Fertilizer/2019

Purpose: Continuation of Starter Trial, we want to apply a blanket starter 5# S plus a blanket, Sidedress 10# S across entire field to eliminate S deficiency as a confounding factor.

Contact: Robert Nielsen Jim Camberato

TPAC/AGRY/GMacLeod/Impact of Japanese beetle grob Activity on Soil Aggregation/2019

Purpose: As has been shown with infestation by other scarabeid species, as well as lumbricus annelids, subterranean humivory by Japanese beetle grubs is suspected of promoting increased incorporation of carbon into stable soil aggregate structures, effectively making it less readily available to plant roots.

Contact: Gordon MacLeod, Doug Richmond and Tim Filley

TPAC/AGRY/GMacLeod/Impact of Japanese beetle grob Activity on Water Infiltration, Soluble Nutrient Dynamics, and Soil Mixing/2019

Purpose: This experiment will use lysimeters under two treatment (infested and uninfested) as mesocosms to look at the movement of soluble carbon and nitrogen in infested soil over multiple beetle life-cycles.

Contact: Gordon MacLeod, Doug Richmond and Tim Filley

Department of Biology

Department of Botany & Plant Pathology

TPAC/BTNY/KGibson/Weed Management in Hemp/2019

Purpose: Assess the effect of 7 weed densities on the growth and yields of seed and fiber varieties. This will help us understand the potential impact of weeds on hemp and the need for management to limit weed interference.

Contact: Kevin Gibson, Andres Fonnegra

TPAC/BTNY/BJohnson/19S-TPAC-Corn-01/2019

Purpose: Demonstrate Anthem Maxx Herbicide Performance.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Corn-02/2019

Purpose: Sipcam Preemergence Corn Herbicide Efficacy Trials.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Corn-03/2019

Purpose: Bayer Corn Herbicides Demo.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Corn-04/2019

Purpose: Influence of IT-1402 with Glyphosate & Glufosinate in corn.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Corn-05/2019

Purpose: Corn Herbicide Showcase.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Corn-17/2019

Purpose: Influence of Atrazine on AMV5131.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/192-TPAC-Corn-19/2019

Purpose: Helm Crop Safety & Weed Efficacy Corn Trial.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Fallow-15/2019

Purpose: Engenia & Liberty vs 2,4-D on Fallow Ground.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Soy-06/2019

Purpose: Confidential.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Soy-07/2019

Purpose: Multiple MOA Soybean Preemergence Herbicides.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Soy-09/2019

Purpose: BASF Engenia, Engenia PRO & BAS872 in Xtend Soybean.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Soy-10/2019

Purpose: Influence of IT-1402 with Glyphosate & Glufosinate in Xtend & LL Soybeans.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Soy-11/2019

Purpose: Residual Herbicides in Enlist Soybeans.

Contact: Bill Johnson, Dustin Johnson

Department of Botany & Plant Pathology (cont'd)

TPAC/BTNY/BJohnson/19S-TPAC-Soy-12/2019

Purpose: Valent Herbicide Programs in LL Soybeans.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Soy-13/2019

Purpose: HT3 Crop Safety & efficacy with Dicamba & tank-Mix Combinations.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Soy-14/2019

Purpose: Herbicide Programs for Control of Giant Ragweed in Xtend Soybean.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Soy-16/2019

Purpose: Evaluation of Soybean Crop Tolerance to Tough applied EPOST.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/BJohnson/19S-TPAC-Soy-18/2019

Purpose: ISA Soybean Demos.

Contact: Bill Johnson, Dustin Johnson

TPAC/BTNY/DTelenko/Corn Sentinel Plots/2019

Purpose: Observe Crop diseases throughout the growing season.

Contact: Darcy E. P. Telenko, Jeffrey Ravellette

TPAC/BTNY/DTelenko/Soybean Sentinel Plots/2019

Purpose: Observe Crop diseases throughout the growing season.

Contact: Darcy E. P. Telenko, Jeffrey Ravellette

Department of Entomology

TPAC/ENTY/LBledsoe/Cooperative AG Pest Survey (CAPS) for Exotic Insect Pests of Soy, Corn, and Oak/2019

Purpose: Trap an array of exotic insect pests of soybean, corn and oak. This site supports a statewide survey network.

Contact: Larry Bledsoe

TPAC/ENTY/WGhanem/Reducing Yield Loss in High Tunnel Tomatoes/2019

Purpose: Reduce negative effects of monoculture intensive farming while maintaining yield and quality by manipulation of the microbial communities.

Contact: Wadih Ghanem

TPAC/ENTY/Lingwell/Bacterial Wilt Early Detection/2019

Purpose: Investigating spectrophotometry and e-nose technology to improve detection of bacterial wilt in cucurbit systems, prior to symptom development. Trap crop plot to collect cucumber beetles.

Contact: Laura Ingwell, Ian Kaplan, John Couture

TPAC/ENTY/Lingwell/ Bacterial Wilt Early Detection/2019

Purpose: Investigating spectrophotometry and e-nose technology to improve detection of bacterial wilt in cucurbit systems, prior to symptom development. Controlled inoculation and beetle densities in high tunnel.

Contact: Laura Ingwell, Ian Kaplan, John Couture

TPAC/ENTY/Lingwell/ Bacterial Wilt Early Detection/2019

Purpose: Investigating spectrophotometry and e-nose technology to improve detection of bacterial wilt in cucurbit systems, prior to symptom development. Experimental plots of cucumber to measure plants.

Contact: Laura Ingwell, Ian Kaplan, John Couture

TPAC/ENTY/CKrupke/Corn Rootworm Trap Crop/2019

Purpose: A late planted trap crop in 2019 to provide an enhanced test area in 2020.

Contact: Christian Krupke, Larry Bledsoe

TPAC/ENTY/CKrupke/Provide Planted Soy Rotation (30-inch row)/2019

Purpose: Provide planted soy rotation in Field 6E.

Contact: Christian Krupke, Larry Bledsoe

TPAC/ENTY/CKrupke/Efficacy of Commercial and Experimental Insecticides Used to Control Corn Insect/2019

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

Contact: Christian Krupke, Larry Bledsoe

TPAC/ENTY/CKrupke/Evaluate Neonic Residues and Effect on Secondary Pests on Continuous Corn/2019

Purpose: Study neonic residues and effect on secondary pests on continuous corn.

Contact: Christian Krupke, Larry Bledsoe

TPAC/ENTY/CKrupke/Corn Seed Dust Drift Study/2019

Purpose: Evaluate new products designed to reduce corn seed coating dust on a large scale.

Contact: Christian Krupke, Larry Bledsoe

TPAC/ENTY/JPecenka/Navigating the Trade-Off Between Pest Management and Pollinator Conservation in Cucurbits/2019

Purpose: Manipulate the insecticide inputs and determine how insecticides alter pest/yield dynamics as well as the pollinator community.

Contact: Jacob Pecenka, Laura Ingwell, Ian Kaplan

Department of Entomology(cont'd)

TPAC/ENTY/CShee/Cucumber Beetle Host Plant-Pathogen Interactions/2019

Purpose:

Contact Christie Shee, Ian Kaplan

TPAC/ENTY/SShepherd/Specialty Crop Research Initiative Impact of Neonicotinoid Insecticides on Honey Bee Pollinators/ 2019

Purpose: Explore the impact of neonicotinoid insecticides and fungicides on honey bee colony health using an attractive food source.

Contact: Sebastian Shepherd, Christian Krupke, Larry Bledsoe

TPAC/ENTY/SYaninek/ Ecosystem Services Assessment in Watermelon and Corn Ecosystems/2019

Purpose: Assess the insect community within watermelon and corn production systems and determine the ecosystem services that predator insects are having on pest population.

Contact: Steve Yaninek, Amanda Skidmore, Ivan Grijalva

Department of Forestry and Natural Resources

TPAC/FNR/JMcKeena/Walnut Oak Improvement 2019

Purpose: Ongoing progeny testing lasting 15 years, so far 11 years.

Contact: Jim McKenna

Department of Horticulture and Landscape Architecture

TPAC/HORT/BBordelon/Wine Grape Research/2019

Purpose: Replicated variety and advanced selection trial, advanced selection observations, a few bulk rows for miscellaneous studies (Ripe Rot, SWD management, leaf phylloxera control, frost damage mitigation etc.)

Contacts: Bruce Bordelon, Paul Howard

TPAC/HORT/BBordelon/Small Fruit Observation and Demonstration Trails/2019

Purpose: Planting primarily used as teaching block for HORT 318. Observations of winter injury, plant phenology, disease and insect incidence. Master Gardeners and others use the block as demonstration and in field days.

Contact: Bruce Bordelon, Paul Howard

TPAC/HORT/BBordelon/Paw Paw Regional Variety Trial/2019

Purpose: This planting is one of 13 regional variety trials established in 1999. Many of those since have been removed, but ours is still in good condition. No data being collected, Originator of project has been requesting scion wood the past two years. The trial is also a popular stop for visitors to the farm. Paw paws are a novelty fruit.

Contact: Bruce Bordelon, Paul Howard

TPAC/HORT/BBordelon/Hort 318 Field Production Horticulture Crops Experiential Laboratory/2019

Purpose: Vegetable plantings for experiential learning for the class. Pepper and Eggplant planted for summer crop. Cabbage, Broccoli, Peas, etc., planted by the class early in semester. Specifics yet to be determined. Spot at west end of G1 worked well last year
Contact: Bruce Bordelon, Petrus Langenhoven, Kyle Daniel

TPAC/HORT/JJANICK/Coop and Elite selections Planting/2019

Purpose: Fill in missing Coops 11,22,24, & 30.
Contact: Jules Janick, Anna Whipkey

TPAC/HORT/PLangenhoven/ISDA Specialty Crop Block Grant Diversification of The Indiana Fresh Market Cantaloupe Industry/2019

Purpose: Long term initiative is to increase planted acreage, Farm Productivity and profit margins. Short term, address the demand for smaller high-quality fruit by evaluating a selection of melon types and test new production technology to increase yield.
Contact: Petrus Langenhoven

Department of USDA-ARS-NSERL/Agronomy

TPAC/USDA/JGonzalez/Long Term Erosion Study/2019

Purpose: Quantify effects of tillage and crop rotation on yield and soil quality.
Contact: Dr. Javier Gonzalez, Brenda Hofmann

TPAC/USDA/JGonzalez/Long Term Phosphorus Stratification/2019

Purpose: Quantify effects of phosphorus products and crop rotation on yield and soil quality.
Contact: Dr. Javier Gonzalez, Brenda Hofmann

TPAC/USDA/JGonzalez/Legacy Phosphorus Study/2019

Purpose: Evaluate soil phosphorus levels under different applications rates.
Contact: Dr. Javier Gonzalez, Brenda Hofmann