THROCKMORTON-PURDUE AGRICULTURAL CENTER
(INCLUDING THE MEIGS FARM)
RESEARCH AND DEMONSTRATION PROJECTS
2020

Jay Young, Superintendent, Throckmorton-PAC
Tristand 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/M Gitau/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/S Casteel/Sulfur x PLANTING DATE/2020
Purpose: Explore the application timing of AMS, Early vs Late Planting.
Contact: Shaun Casteel, Amanda Modglin

TPAC/AGRY/S Casteel/UAV Stand Assessments of Soybean (Seeding Rate x Plant Rate/2020
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/S Casteel/UnderCover Sulfur/2020
Purpose: Evaluate if UnderCover applications correct deficiencies of non-mobile to nearly non-mobile plant nutrients like S and Mn.
Contact: Shaun Casteel

TPAC/AGRY/ S Casteel/UnderCover Manganese/2020
Purpose: Evaluate if UnderCover applications correct deficiencies of non-mobile to nearly non-mobile plant nutrients like S and Mn.
Contact: Shaun Casteel

TPAC/AGRY/G MaCleod/Impact of Japanese Beetle Grub Activity on Soil Aggregation, Carbon Sequestration, and Soil Mixing/2020
Purpose: Conform Japanese beetle grubs promote increased incorporation of carbon into stable soil aggregate structures, effectively making it less readily available to plant roots.
Contact: Gordon MacLeod, Prof. Doug Richmond, Prof. Tim Filey

TPAC/AGRY/ G MaCleod /Impact of Japanese Beetle Grub Activity on Water Infiltration, Soluble Nutrient Dynamics, and Soil Mixing/2020
Purpose: Conform Japanese beetle grubs increasing solubility and consequent leaching of stable carbon and nitrogen forms in soil.
Contact: Gordon MacLeod, Prof. Doug Richmond, Prof. Tim Filey

TPAC/AGRY/B Nielsen/Corn Responses to Applied Sulfur Fertilizers/2020
Purpose: Continuation of investigations of sulfur needs for corn around Indiana.
Contact: Bob Nielsen, Jim Camberato, Diana Salguero

TPAC/AGRY/T Rocheford/Organic Transitional Field/2020
Purpose: Corn and cover crop rotation to become certified organic acreage.
Contact: Torbert Rocheford, Marsha Kern, Tyler Lawson

TPAC/AGRY/T Rocheford/Conventional yield comparisons of commercial hybrids/2020
Purpose: Provide useful comparisons to organic hybrid performance by taking advantage of fill corn to do fly overs.
Contact: Torbert Rocheford, Marsha Kern, Tyler Lawson

TPAC/AGRY/X Zhou/Propagation of Garlic bulbs in Soil/2020
Purpose: Propagate garlic bulbs for research. Softneck garlic and hardneck cultivars.
Contact: Xiangjun Zhou, Cankui Zhang

Department of Biology

Department of Botany & Plant Pathology

TPAC/BTNY/J Beckerman/Use of Surfactants to Reduce Fungicide Inputs for the Control of Apple Disease/2020
Purpose: Evaluate the role surfactanst may play in reducing the rate and extending the interval of fungicide application.
Contact: Janna Beckerman, Peter Hirst, Rick Foster

TPAC/BTNY/J Beckerman/Industrial Hemp Demonstration Plot/2020
Purpose: Examine the performance of seed treated with biological, organically and when grown conventionally.
Contact: Janna Beckerman, Ron Turco

TPAC/BTNY/J Beckerman/Fungicide Trials on Ornamentals: Peonies and Botytis, Dogwood and Septoria, perennial Sunflowers and downy mildew, Goldenrod and Rust Spruce and Needlecasts
Purpose: Assess for both industry and IR4 trials/
Contact: Janna Beckerman, Megan Haas

TPAC/BTNY/K Gibson/OREI Planting Date/2020
Purpose: Assess the effect of cultivar and planting date on hemp yields.
Contact: Kevin Gibson, Andres Fonnegra, Josh Kraft

TPAC/BTNY/K Gibson/OREI Hemp Rotation/2020
Purpose: Assess the effect of hemp on subsequent crops.
Contact: Kevin Gibson, Andres Fonnegra, Josh Kraft

TPAC/BTNY/B Johnson/20S-MGS-Corn-11/2020
Purpose: Tough with Callisto and BCP1312.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-MGS-Corn-12/2020
Purpose: Shieldex in corn.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-01/2020
Purpose: See and spray.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-02/2020
Purpose: Liberty & Engenia on XtendFlex soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-03/2020
Purpose: Residual comparisons of group 15 herbicides.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-04/2020
Purpose: Tough in Xtend soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-05/2020
Purpose: Tough in Enlist soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-06/2020
Purpose: Authority programs in Enlist soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-07/2020
Purpose: Tavium - Pre.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-08/2020
Purpose: Ultra Blazer in soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-09/2020
Purpose: Valent Actives in Liberty Link soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-15/2020
Purpose: Valent Actives in Burndown Xtend system.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-16/2020
Purpose: Valent Actives in Burndown enlist system.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-17/2020
Purpose: Panther MTX in No-till Glufosinate Tolerant soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-18/2020
Purpose: Elevore in Enlist Weed Control systems.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-Soy-19/2020
Purpose: Syngenta soybean herbicide in an Elist E3 system.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-01/2020
Purpose: Corn tolerance to Glu-L formulations.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-02/2020
Purpose: Evaluation of impact core.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-03/2020
Purpose: Bayer Corn portfolio
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-04/2020
Purpose: Corn weed control and safety with herbicide premixes.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-05/2020
Purpose: Two-pass systems in corn.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-06/2020
Purpose: Efficacy of Parallax in corn.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-07/2020
Purpose: Rosen's Adjuvants with Status and PowerMax in corn.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-08/2020
Purpose: Corn PRE Herbicide Trial.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-09/2020
Purpose: Biostimulants in Corn Production.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-10/2020
Purpose: Acetochlor/tolpyralate premix in corn.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Corn-11/2020
Purpose: Acuron GT: Evaluation of weed control, crop tolerance and yield ir.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Soy-13/2020
Purpose: Expanding residual with Alite 27.
Contacts: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Soy-14/2020
Purpose: Engenia Prime vs Competitors.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Soy-15/2020
Purpose: Warrant/Xtend POST safety to soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Soy-16/2020
Purpose: Dicamba/glyphosate premix with adjuvants in XtendFlex soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Soy-17/2020
Purpose: Competitive soybean systems comparison.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTYN/B Johnson/20S-TPAC-Soy-18/2020
Purpose: Soybean tolerance to experimental Tough formulation.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Soy-19/2020
Purpose: Authority programs in Xtend soybean.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Soy-20/2020
Purpose: Biostimulants in soybean production.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Soy-21/2020
Purpose: S-MOC + Metribuzin +Cloransulam efficacy and
Crop safety in soy.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/B Johnson/20S-TPAC-Soy-22/2020
Purpose: Valent actives in conventional tillage Xtend system.
Contact: Bill Johnson, Brent Mansfield

TPAC/BTNY/G McNickle/Annual Plant Population and Community Dynamics/2020
Purpose: Understand root traits important for yield.
Contact: Gordon McNickle

TPAC/BTNY/ G McNickle /SoyNAM Parent Population and Increase/2020
Purpose: Understand the consequences of species diversity. How populations grow, how plant traits respond through plasticity, and how all of this shapes species interactions and coexistence.
Contac: Gordon McNickle

TPAC/BTNY/PTelenko/Cor20-Sentinel/2020
Purpose: Observe crop diseases throughout the growing season.
Contact: Darcy E.P. Telenko, Jeffrey Ravellette

TPAC/BTNY/ PTelenko /SOY20-Sentinel/2020
Purpose: Observe crop diseases throughout the growing season.
Contact: Darcy E.P. Telenko, Jeffrey Ravellette

Department of Entomology

TPAC/ENTY/W Ghanem/Reducing Yield Loss in High Tunnel Tomatoes/2020
Purpose: Reduce negative effects of monoculture intensive farming while maintaining yield and quality by manipulation of the microbial communities.
Contact: Wadih Ghanem

TPAC/ENTY/L Ingwell/Demonstration Plot/2020
Purpose: Examining the efficacy of black soldier fly larvae as a compost-producer for urban farming. First year plot to introduce the concept, will expand in year two to evaluate the compost on three focal crops; carrots, cucumbers and tomatoes.
Contact: Laura Ingwell

TPAC/ENTY/L Ingwell/Miticide Efficacy trial in Watermelon/2020
Purpose: To provide growers with information on the efficacy of miticides, so they can make the least amount of applications to control this pest. Request came from the Southwest Indiana Melon Winter 2019 meeting.
Contact: Laura Ingwell

TPAC/ENTY/L Ingwell/Corn Earworm Trapping Network/2020
Purpose: Monitor CEW populations in Harstack traps to report online for informed grower decision making. Additional traps will be added to hemp plots to monitor movement in this crop as well.
Contact: Laura Ingwell

TPAC/ENTY/L Ingwell/ Strawberry Variety Trial in High Tunnels/2020
Purpose: Collaboration with Wenjing Guan evaluate 8 different strawberry varieties in high tunnel. Studying plant performance and insect pest dynamics.
Contact: Laura Ingwell

TPAC/ENTY/L Ingwell/ Sweet Corn Insecticide Efficacy Trial/ 2020
Purpose: Examining three different planting dates all with the same cultivar to evaluate the efficacy of 4 different insecticide spray schedules.
Contact: Laura Ingwell

TPAC/ENTY/A Leach /Maximize Pest Management and Pollination Visitation/2020
Purpose: Examine field insecticide programs that differ in Product, Timing of Application, & Pest threshold in which they are applied.
Contact: Ashley Leach, Ian Kaplan

TPAC/ENTY/ A Leach /Beetle Damage and Pollination Visitation on Watermelon Yield/2020
Purpose: examine factorial with differing levels of cucumber beetle damage and bee visitation on watermelon yield.
Contact: Ashley Leach, Ian Kaplan

TPAC/ENTY/E Long/Carrot Variety Demonstration Trial/2020
Purpose: Evaluate differences in insect abundance and damage.
Contact Elizabeth Long, Emily Justus

TPAC/ENTY/J Pecenka/Navigating the Trade-Off Between Pest Management and Pollinator Conservation in Cucurbits/2020
Purpose: Manipulate the insecticide inputs and determine how insecticides alter pest/yield dynamics as well as the pollinator community using managed honey bees, managed bumble bees, and the native wild bee community.
Contact: Jacob Pecenka, Laura Ingwell, Ian Kaplan

TPAC/ENTY/C Shee/Striped Cucumber Beetle Host Plant-Interactions/2020
Purpose: Request a trap crop of mixed squash to collect cucumber beetles for lab experiments
Contact Christie Shee, Ian Kaplan

TPAC/ENTY/S Shepherd/Specialty Crop Research (SCRI) Impact of Neonicotinoid Insecticides on Honey Bee Pollinators/ 2020
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

Department of Horticulture and Landscape Architecture

TPAC/HORT/B Bordelon/Wine Grape Research/2020
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/B Bordelon/Small Fruit Observation and Demonstration Trails/2020
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/B Bordelon/Paw Paw Regional Variety Trial/2020
Purpose: Identify the decline issue working with PPDL.
Contact: Bruce Bordelon

TPAC/HORT/K Daniel/Hort 318 Field Lab/Measuring N Content Using Sensor Technology/2020
Purpose: Project will be placed in the shade house.
Contact: Kyle Daniel

TPAC/HORT/J Janick/Coop and Elite selections Planting/2020
Purpose: Fill in missing Coops 11,22,24, & 30.
Contact: Jules Janick, Anna Whipkey

TPAC/HORT/S Meyers/Reflex Herbicide Screen in Pepper, Summer Squash and Watermelon/2020
Purpose: Determine the influence of 4 Reflex herbicide rates on crop response, yield, and quality. Reflex is labeled in MI for numerous crops. Data is needed to register the product in IN.
Contact: Stephen Meyers

TPAC/HORT/S Meyers/Dicamba Residue Screening in Processing Tomato/2020
Purpose: Determine the influence of 6 simulated dicamba drift rates on the ability to detect and quantify dicamba residue on plant tissues.
Contact: Stephen Meyers

TPAC/HORT/S Meyers/Morningglory interference in Processing Tomato/2020
Purpose: Determine the influence of 7 season-long morning-glory densities on processing tomato yield and quality.
Contact: Stephen Meyers

TPAC/HORT/S Meyers/Organic Sweet potato Cultivation Trial/2020
Purpose: Investigate the role of cultivar shoot architecture and between-row frequency on weed control.
Contact: Stephen Meyers

TPAC/HORT/S Meyers/Organic Sweet potato Plant Spacing Trial/2020
Purpose: Investigate the role of cultivar shoot architecture and in-row plant spacing on weed control.
Contact: Stephen Meyers

TPAC/HORT/S Meyers/Morningglory interference in Watermelon/2020
Purpose: Determine the influence of 6 season-long morning-glory densities on watermelon yield and quality.
Contact: Stephen Meyers

TPAC/HORT/P Langenhoven/Propagation Methods on Field Establishment/2020
Purpose: Develop propagation standards for the indoor production of CBD hemp clones. Effect of propagation protocols on the field establishment, growth and production of CBD Hemp.
Contact: Petrus Langenhoven

TPAC/HORT/P Langenhoven/ISDA Specialty Crop Block Grant Diversification of The Indiana Fresh Market Cantaloupe Industry/2020
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

TPAC/HORT/E Tronson/Tolerance Among Tomato Wild Relatives/2020
Purpose: Examine domesticated and wild tomato relative' tolerance to herbivory by the tobacco hornworm. Examine differences in soil microbial communities between cultivars and infestation treatments.
Contact: Emily Tronson, Ian Kaplan, Laramy Enders

Department of USDA-ARS-NSERL/Agronomy

TPAC/USDA/J Gonzalez/Long Term Erosion Study/2020
Purpose: Quantify effects of tillage and crop rotation on yield and soil quality.
Contact: Dr. Javier Gonzalez, Brenda Hofmann

TPAC/USDA/J Gonzalez/Legacy Phosphorus Study/2020
Purpose: Evaluate soil phosphorus levels under different applications rates.
Contact: Dr. Javier Gonzalez, Brenda Hofmann

TPAC/USDA/C Penn/Long Term Phosphorus Stratification/2020
Purpose: Quantify effects of phosphorus products and crop rotation on yield and soil quality.
Contact: Dr. Javier Gonzalez, Brenda Hofmann

Throckmorton Purdue Agriculture Center

TPAC/MEIGS/T Tucker/Pumpkin Variety Observation/2020
Purpose:
Contact Tristand Tucker