Department of Agronomy

**Soybean MG x Planting Date**
Purpose: Planting dates and variety selections are critical components of maximizing soybean yields. Hot and dry periods during reproductive growth often limit the yield potential in southern Indiana, so some growers are choosing earlier maturity groups to plant earlier. This study will aim to determine the yield impacts of planting early versus full maturing soybeans at various planting dates.
   Contacts: Shawn Casteel, Andrew Westfall, & Chuck Mansfield

**Bayer Seed Treatment Study**
Purpose: Evaluation of neonicotinoid and new SDS seed treatments
   Contacts: Shawn Casteel, Andrew Westfall & Chuck Mansfield

**Stewart Seeds Corn Nitrogen Study**
Purpose: To determine the interaction between corn hybrid population and nitrogen rate with fungicides.
   Contacts: Phil DeVillez & Bill Foster

**Purdue Crop Performance Trial**
Purpose: Non-glyphosate tolerant Ready Soybean Trial
   Contacts: Phil DeVillez & Bill Foster

**Purdue Crop Performance Trial**
Purpose: Glyphosate-Tolerant Soybean Trial
   Contacts: Phil DeVillez & Bill Foster

**Clean Air Status and Trends Network (CASNET)**
Purpose: The collection of weather data from this site in order to: 1) characterize geographic patterns and temporal trends in chemical atmospheric dry deposition; 2) support assessments of atmospherically-deposited nutrients (nitrogen and sulfur) influencing crop productivity and; 3) evaluating source/receptor relationships of air pollutants.
   Contact: Rich Grant

**Purdue Automated Agricultural Weather Station (PAAWS)**
Purpose: Automated collection of weather data from this site is sent to the Indiana State Climate Office at Purdue University - data can be observed at: [http://climate.agry.purdue.edu](http://climate.agry.purdue.edu)
   Contacts: Rich Grant & Ken Scheeringa
Department of Agronomy (Continued)

**National Atmospheric Deposition Program**
Purpose: The collection of rain water from this site in order to: 1) characterize geographic patterns and temporal trends in wet chemical (primarily nitrogen and sulfur) atmospheric deposition and; 2) Support assessments of atmospherically-deposited nutrients (nitrogen and sulfur) influencing crop productivity.
   Contact: Rich Grant

**National Weather Service Station (NWS)**
Purpose: Manual collection of daily weather observations from this site are sent to the NWS via a web-based application known as WxCoder.
   Contact: Rich Grant & SWPAC Staff

**Mercury Deposition Network**
Purpose: The collection of rain water from this site is made in order to characterize geographic patterns and temporal trends in wet chemical mercury deposition and support assessments of atmospherically-deposited mercury on the productivity of biological accumulators such as fish.
   Contact: Rich Grant

**Ammonia Monitoring Network**
Purpose: The measurement of gaseous ammonia from the site is made in order to 1) asses the long-term trends in ambient NH₃ concentrations and deposition, 2) better estimate total nitrogen inputs to ecosystems and 3) evaluate possible long-term climate effects due to the spatial and temporal trends of ammonia gas in the atmosphere
   Contact: Rich Grant

**National Winter Canola Variety Trial**
Purpose: Evaluate canola varieties to identify best adapted varieties for southwestern Indiana.
   Contacts: Charles Mansfield & Mike Stamm

**Effect of Row Width and Seeding Rate on Canola Production**
Purpose: Evaluate the effect of 3 different row widths and 3 planting populations on growth and development, disease and insect problems, reproductive growth, and grain yield of Canola.
   Contacts: Charles Mansfield & Brian Caldbeck

**Canola Herbicide Screen Study**
Purpose: Evaluate the effect of different pre-emergence and post emergence herbicides with different additives on growth and development, reproductive growth, and grain yield of Canola.
   Contacts: Charles Mansfield & Brian Caldbeck

**Canola Early Germplasm Screen Study**
Purpose: Evaluate early maturing canola entries for winter hardiness, standability, disease tolerance, and yield potential
   Contacts: Charles Mansfield & Brian Caldbeck

**Wheat Variety Improvement**
Purpose: To develop new winter wheat cultivars.
   Contact: Mohsen Mohammadi
Effect of Starter Zinc and Sulphur Fertilizer on yield of corn grown on a sandy soil
Purpose: Zinc and/or S deficiency are possible on sandy low Omin soils especially when pH is high. What is the potential yield increase of corn and how frequently will a yield increase occur.
   Contact: Jim Camberato & Bob Nielsen

Department of Botany & Plant Pathology

Downy Mildew Sentinel Plot
Purpose: To monitor the possible on-set of Downy Mildew in Indiana.
   Contact: Dan Egel

Tomato Early Blight Control Study
Purpose: To determine products for early blight control.
   Contact: Dan Egel

Tomato Plant Density and Disease Pressure in High Tunnels
Purpose: Researching different population densities by planting the plants at 5 different spacing intervals.
   Contact: Dan Egel

Management of Powdery Mildew of Pumpkins with Fungicides
Purpose: Testing of several products to manage powdery mildew of pumpkins.
   Contact: Dan Egel

Organic Watermelon Variety Trials
Purpose: To grow a few commercial varieties in organic environment and compare to commercially grown of the same varieties.
   Contact: Dan Egel

Muskmelon Variety Trial
Purpose: Evaluate muskmelon varieties for production in southwest Indiana.
   Contact: Dan Egel

Triploid Watermelon Variety Trial
Purpose: Evaluate triploid watermelon varieties for production in Southwest Indiana
   Contact: Dan Egel

Cucumber Varietal Study in High Tunnels
Purpose: Evaluation of different cucumber types in high tunnel conditions
   Contact: Dan Egel

Comparison of Anthracnose resistance to Pollinizer Watermelon Varieties
Purpose: Testing of several pollinizer varieties and their resistance to anthracnose
   Contact: Dan Egel

Tomato Bacterial Spot Control Study
Purpose: To determine products for bacterial spot control
   Contact: Dan Egel
**Fusarium Fungicide Treatment Study**
Purpose: To evaluate the efficacy of different fungicides to combat fusarium wilt
Contact: Dan Egel

**Seminis Seeds Observation Trial**
Purpose: To observe some new varieties before they are released to the commercial growers
Contact: Dan Egel

**Syngenta Full Count Watermelon and Isabion Fungicide Study**
Purpose: to compare different methods of pollizer placement.
Contact: Dan Egel

**Evaluation of Early Application Fungicides on Disease Control and Yield in Corn**
Purpose: Examine efficacy and profitability of early fungicide applications in corn
Contacts: Kiersten Wise & Jeffrey Ravellette

**Fungicide Comparison in Winter Wheat**
Purpose: Determine the efficacy of foliar fungicide applications on disease control and yield
Contacts: Kiersten Wise & Jeffrey Ravellette

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**Department of Entomology**

**Best Management Practices Study for Striped Cucumber Beetles and Bacterial Wilt on Muskmelons**
Purpose: Practices will be studied to manage striped cucumber beetles and bacterial wilt with neonicotinoids causing minimal harm to honey bees
Contact: Rick Foster

**Susceptibility of Melon Varieties to Striped Cucumber Beetles and Bacterial Wilt**
Purpose: 10 varieties will be planted and populations of striped cucumber beetles, incidence of bacterial wilt, and yield components measured
Contact: Rick Foster

**Organic Management of Striped Cucumber Beetles and Bacterial Wilt on Muskmelons**
Purpose: Organic practices will be investigated
Contact: Rick Foster

**Indiana Cooperative Agricultural Pest Survey (CAPS) for Invasive Pests**
Purpose: Establish traps sites and sample areas needed to monitor for invasive insect species.
Contact: Larry Bledsoe

**Armyworm Pheromone Trapping**
Purpose: To monitor the presence of armyworm moths.
Contact: John Obermeyer, Entomology

**Corn Earworm Pheromone Trapping**
Purpose: To monitor the presence of corn earworms moths.
Contact: John Obermeyer, Entomology
Purdue Extension

**Southwest Indiana Crop Diagnostic Training Clinic**
Purpose: To demonstrate and teach timely agronomic information to crop consultants and growers.
   Contact: Valerie Clingerman & Chuck Mansfield

**Cover Crop Demonstration Plot Study**
Purpose: To demonstrate types of cover corps that can be planted in southwest Indiana
   Contact: Valerie Clingerman & Jon Neufelder

**Pumpkin Days for 1st Graders**
Purpose: To allow Knox County 1st graders an opportunity to see a pumpkin field and pick their own pumpkins
   Contact: Valerie Clingerman

**Day on the Farm for 3rd Graders**
Purpose: To allow Knox County 3rd graders an opportunity to plant a watermelon and visit a farm.
   Contact: Valerie Clingerman

**Effect of Soil remediation Techniques on Microbial Degradation Rates Following a Flooding Event.**
Purpose: Flood water may contain human pathogens. Flooding may deposit pathogens and other contaminants in production fields. Consequently, knowing behavior of foodborne pathogens in the soil and how quickly microbial levels decrease following a flood event will serve to inform growers as to what may be considered a “safe window” of time before they may replant flooded fields.
   Contact: Scott Monroe & Amanda Deering (Department of Food Science)

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 & Matt Kraushar

**Evaluating Neonicotinoid Exposure Risk in Wetland Communities**
Purpose: Understanding how the use of neonicotinoids as a seed-dressing to corn and soybeans influences the concentrations of clothianidin in Indiana surface waters and whether these concentrations pose a risk to aquatic organisms.
   Contact: Jessica Hue

Department of Horticulture & Landscape Architecture

**Evaluation of Grape Cultivars and Production Practices**
Purpose: Evaluate wine and table grape cultivars for climate and soils of Indiana.
   Contact: Bruce Bordelon
Department of Horticulture & Landscape Architecture (Continued)

**NE-1020 Vinifera Grape Cultivar Study**
Purpose: Multi-state evaluation of wine grape and production practices in an effort to improve the competitiveness of the industry in Indiana.
   Contact: Bruce Bordelon

**Chestnut Study**
Purpose: Evaluate Chestnut tree growth and nut production.
   Contact: Bruce Bordelon