# Purdue Fruit and Vegetable Field Day

**THURSDAY, JULY 18, 2024**
Purdue Meigs Ag Center
9101 S 100 E, Lafayette, IN 47909

PURDUE UNIVERSITY | Extension

## SCHEDULE

**Registration: 8:00 – 9:00 am**

**Field Demonstrations: 9:00 am – 12:30 pm**

**Lunch: 12:30 – 1:30 pm**

## QUESTIONS? CONTACT


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## REGISTRATION

https://am.ticketmaster.com/purdue/fvfield

**or scan QR code**

## *Purdue Fruit & Vegetable Field Day 2024*

Coordinator: Petrus Langenhoven

Extension Staff: Lori Jolly-Brown, Jay Young, and Chloe Richard

## FIELD DEMONSTRATIONS / *Demo descriptions on page 2*

- ☐ Trap Crop System for Multi-generational Control of Flea Beetles in High Tunnel Brassica Crops
- ☐ Pollinators in High Tunnels vs. Open Field Production
- ☐ Evaluating the Impacts of Insect-Derived Soil Amendments on Crop Production
- ☐ Impact of Soil Fertility Amendments and Cover Cropping on Soil Health and Pepper Production
- ☐ A Comparison of Silage Tarping and Herbicides for Weed Control in Potato
- ☐ Evaluating the Use of Lasers as a Bird Control Strategy in the Vineyard
- ☐ Exploring the Use of Herbicide-Impregnated Fertilizer for Improved Crop Tolerance in Pumpkin
- ☐ Modern Apple Orchard Systems for Commercial and Backyard Growers

## SPONSORS

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# FIELD DEMONSTRATION DESCRIPTIONS


*Milena Agila*


*Wil Brown-Grimm*


*Josue Cerritos*


*Robert Grosdidier*


*Peter Hirst*


*Laura Ingwell*


*Ian Kaplan*


*Petrus Langenhoven*


*Steve Meyers*

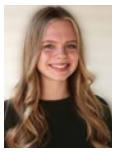

*Helen Nocito*


*Miranda Purcell*


*Chloe Richard*


*Nathan Shoaf*


*Carla Wagner*


*Julie Wooby*

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Country Folks Grower

### Trap Crop System for Multi-generational Control of Flea Beetles in High Tunnel Brassica Crops

*Julia Wooby, Ian Kaplan, and Laura Ingwell*

Management of flea beetles is made difficult by the high mobility of the adult life stage and overwintering habits, with few viable options for growers who use organic or low-input practices. Planting of a highly attractive trap crop can minimize pest populations on the cash crop, but multivoltine flea beetle species overwhelm cropping systems with the emergence of multiple generations of adult beetles which cause characteristic shotgun foliar damage. This stop will discuss combining a traditional trap cropping system with application of entomopathogenic nematodes (EPNs) to target soil-dwelling flea beetle larvae, reducing subsequent generations of the pest through biological control. *Crops: Collard Greens & Mustard trap crop*

### Pollinators in High Tunnels vs. Open Field Production

*Robert Grosdidier and Laura Ingwell*

The community composition and ecology of insect pollinators that visit crops in high tunnel growing systems is poorly understood. Understanding which pollinators visit crops in high tunnels can provide insights into which pollinators have the greatest impact on fruit set. This stop will discuss which pollinators are commonly found in high tunnels compared to field-grown crops, and how these patterns change in monoculture vs polyculture production. *Crops: Tomatoes, Long Beans, Zucchini, Strawberries*

### Evaluating the Impacts of Insect-Derived Soil Amendments on Crop Production

*Milena Agila and Laura Ingwell*

As the industry around insect-derived protein production grows, a new resource for soil amendments has become available – insect frass fertilizers. This includes cricket frass, black soldier fly compost and pupal casings. This stop will discuss the impact of three insect-derived soil amendments on two crops: bok choy and carrots. *Crops: Bok Choy, Carrots*

### Impact of Soil Fertility Amendments and Cover Cropping on Soil Health and Pepper Production

*Petrus Langenhoven and Nathan Shoaf*

What is the impact of soil management practices on soil health? Does increasing soil health mean reduced input, and does pepper variety performance differ according to soil health status? During this presentation, we will discuss the progress and results of an ongoing 4-year USDA-funded grant, Soil to Market, that was designed to help answer some of these questions. *Crop: Peppers*

### A Comparison of Silage Tarping and Herbicides for Weed Control in Potato

*Josue Cerritos and Stephen Meyers*

While much research has centered on weed management in large-scale agriculture, small farms play a crucial role in local food systems. Innovative tools like silage tarps offer valuable solutions. These reusable plastics or fabrics help create a stale seedbed or facilitate the emergence of slow-germinating crops such as potatoes. This year a field study is being performed to compare the use of silage tarping and herbicides for weed management in potato production. Join us for a field demonstration on silage tarps for early-season weed management and explore how integrating tarping into small-scale systems enhances weed control. We'll also be comparing tarping with traditional herbicide use, offering insights into sustainable weed management. *Crop: Potatoes*

### Evaluating the Use of Lasers as a Bird Control Strategy in the Vineyard

*Miranda Purcell and Carla Wagner*

Bird control is one of the largest issues that grape growers in Indiana deal with. At this point, it seems the best strategy is to use a combination of deterrents, and lasers are one of the up-and-coming strategies that are showing a lot of promise. In this trial, we are evaluating the effectiveness of lasers vs. bird netting on total grapevine yield, % damage to fruit and frequency of birds in the treatment area. *Crop: Grapes*

### Exploring the Use of Herbicide-Impregnated Fertilizer for Improved Crop Tolerance in Pumpkin

*Helen Nocito and Stephen Meyers*

We'll talk about methods and results from an IR-4 funded trial exploring improved crop tolerance through herbicide-impregnated AMS and compare it to traditional broadcast applications. *Crop: Pumpkins*

### Modern Apple Orchard Systems for Commercial and Backyard Growers

*Peter Hirst*

Modern apple orchards, whether a few trees or thousands of trees depend on dwarfing rootstocks. These rootstocks not only keep the trees smaller and easier to reach, but also produce more fruit and higher quality fruit. But when the rootstocks is changed, many other aspects of orchard management also need to be changed. This includes factors such as planting distance, tree staking or support, and pruning style. We will discuss all aspects of management of trees of dwarfing rootstocks. *Crop: Apples*

USDA + FEMI AT PURDUE

# ARE YOU A PRODUCER WITH A GREAT FOOD OR BEVERAGE IDEA?

## Join our program for agricultural producers wanting to make value-added products from their commodities!

The Agriculture Innovation Center (AIC) is a USDA funded program that has been awarded to Purdue University to help agricultural producers in Indiana create value-added products from their commodities.

**WHAT IS A VALUE ADDED FOOD PRODUCT?**
Products must meet at least one of the following requirements:

- Has undergone a change in physical state
- Is produced in a manner that enhances the value of the agricultural commodity
- Is physically segregated in a manner that results in the enhancement of the value of the agricultural commodity
- Is aggregated and marketed as a locally-produced agricultural food product

**Program Overview:**
**Phase 1 - Online Course Learning**
Six asynchronous online courses* for learning about food safety and formulation, and business planning and financing essentials.
* Accommodations are available for those who cannot do the courses online.

**Phase 2 - Food Product and Production Environmental Testing Workshop**
This in-person workshop at Purdue University focuses on learning about the product and environmental testing that helps keep food and beverages safe, Good Manufacturing Practices, and Good Agricultural Practices.

**Phase 3 - Product Formulation and Development**
This individualized project opportunity involves working with FEMI and Agricultural Economics faculty and staff to solve the problems your product and/or business is facing.

**SUMMARY OF GRANT ELIGIBILITY:**

- Must grow/raise at least 51% of the ingredients in the value added product
- Must be a food product fit for human consumption
- Must be a resident of Indiana
- Cannot include controlled substances such as alcohol and/or drugs

**To Learn More and Apply:**
**Visit Our Website Through the Link or Scan the QR Code:**
**https://ag.purdue.edu/department/foodsci/femi/aic-grant.html**

**Questions?**
**Email:** Madison Mehringer at mmehrin@purdue.edu
**Address:** Nelson Hall 1257, 745 Agriculture Mall Drive
West Lafayette, IN 47907

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