

REGISTRATION

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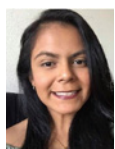
Ashley Adair



Milena Agila



Jeanine Arana



Leslie Aviles



Josue Cerritos



Emmanuel Cooper



Laura Ingwell



Petrus Langenhoven



Elizabeth Long



Steve Meyers



Chloe Richard



Nathan Shoaf



Dennis Gustavo Toc Mo



Sam Willden



Allison Zablah

Demonstration Descriptions

Sweet Corn Pest Management Updates | *Laura Ingwell*

Dr. Ingwell will provide updates on the corn earworm trapping efforts and research evaluating the efficacy of a reduced spray program incorporating biopesticides. Water-sensitive cards will be available for demonstration to show you how to evaluate the coverage of your current spray equipment.

Silage Tarps for Weed Management in Potatoes | *Josue Cerritos and Steve Meyers*

Small farms have adopted silage tarps to create stale seedbeds and provide early-season weed control. But can they be used to provide weed control between potato planting and emergence, and can their use reduce the herbicide inputs throughout the potato production cycle? We'll share results comparing planting herbicides and silage tarping in an overall weed management program for potatoes.

Watermelon Weed Management | *Emmanuel Cooper and Steve Meyers*

Season-long weed management is difficult to achieve in vining crops, including watermelon. For those using chemical weed control, identifying the proper herbicide(s) and application timing(s) are critical. Most of the herbicides that are labeled on cucurbits are for preemergence (PRE) applications, with a limited offer of postemergence (POST) herbicides. The use of these POST herbicides can result in improved weed control, but timing could be a determining factor. At this stop we'll explore the products available to watermelon growers and discuss the current research to integrate newly registered herbicides prior to transplanting and at layby to improve the spectrum and duration of weed control in plasticulture-grown triploid watermelons.

Summer 2023 Collard Insect Management Trial | *Elizabeth Long*

This demonstration will highlight the efficacy of organic and synthetic insecticides when used against common caterpillar, flea beetle, and thrips pests on collard varieties champion, top bunch, and flash. The insecticides tested in this trial can be purchased by growers who do not have a pesticide applicator's license. We will compare marketability and yield for each collard variety and untreated versus insecticide-treated plants at the end of the season.

Black Soldier Fly Composting and Specialty Crop Production

Milena Agila, Allison Zablah and Laura Ingwell

Black soldier flies are native to the neotropics and migrate into Indiana each year. The larvae are economically important as they can be grown for food and feed on a variety of organic waste streams. Additionally, the digestate created from their feeding and the pupal cases remaining after adult emergence show promise as a soil amendment. This work will demonstrate the effects of BSF-generated compost and the application of their pupal cases (a source of chitin) as soil amendments in the production of specialty crops. We will also discuss the rearing process and how you can use food waste and other organic waste streams to generate the flies and their by-products.

Two-year Plasticulture Strawberry Research Update | *Jeanine Arana and Steve Meyers*

Purdue Horticulture Crops Weed Science Lab members will discuss their research and findings from a USDA Specialty Crop Block Grant-funded plasticulture strawberry project. Topics include variety selection, black versus white plastic mulch, and chemical and non-chemical weed management methods.

High Tunnel Diversification and Biological Control | *Leslie Aviles, Sam Willden, and Laura Ingwell*

Diversifying the plant community under high tunnels and integrating biological control into IPM programs are topics of great interest to high tunnel growers. Companion planting can diversify high tunnels while also supporting natural enemies and pollinators in many focal crops. However, like some weeds, companion plants may also be reservoirs for arthropod pests. In contrast, weeds could also serve as companion plants if they provide nectar, pollen, and supplemental prey that support diverse insect communities. The goal of this research is to determine the cost or benefit of common companion plants vs. weeds in terms of pollinator, natural enemy, and pest recruitment on high tunnel tomato. A second high tunnel project is aimed specifically at managing twospotted spider mites on high tunnel cucumber crops. This research will discuss the efficacy of a variety of biopesticides and compatibility with predatory mites that are effective in high tunnel production systems.

Does Increasing Soil Health Improve Pepper Yield?

Petrus Langenhoven, Nathan Shoaf and Dennis Gustavo Toc Mo

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.

Unmanned Aerial Vehicle Demonstration | *Ashley Adair and Chloe Richard*

Growers and researchers alike use drones for many purposes around the farm. In this demonstration, Ashley Adair, Organic Agriculture Specialist, and Chloe Richard, Horticulture Crops Research Manager, will fly different types of imaging and spray drones and discuss their purpose on the farm and in Purdue research.