

Small Farm Education Field Day

2022

Friday, July 29

In-person at the Purdue Student Farm



PRESENTED BY:

The Purdue
Student Farm
and



Horticulture and Landscape Architecture

Please join us for the
2022 Small Farm Education
Field Day!

The EMT food truck will be on site for those who would like to purchase lunch after the educational demonstrations end.



The Kona Ice truck will also be on site for a FREE cool summer treat for all attendees, thanks to our sponsor, SARE!



FIELD DAY LOCATION

Purdue Student Farm
1491 Cherry Lane
West Lafayette, IN 47906
[website](#)

Scan QR code for Field Day location and directions.



QUESTIONS? Contact ...

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**REGISTRATION
NOW OPEN!**

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2022 FIELD DAY SCHEDULE

Friday, July 29, 2022

Registration 8:00 am EST

Demonstrations at 9:00 am EST

Coordinator: Petrus Langenhoven

Extension Staff: Lori Jolly-Brown, Lais McCartney, and Patrick Williams

Demonstrations at the Field Day

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- BCS Roller Crimper Demonstration**
Ashley Adair, Chris Adair
- High Tunnel Table Grape Production**
Miranda Purcell
- Drip Irrigation**
Wenjing Guan, Liz Maynard, Emerson Espinoza
- High Tunnel Sweet Pepper Variety Selection and Production**
Petrus Langenhoven, Lian Duron, Eduardo Miranda
- Postharvest Food Safety Considerations/Packing Room Demonstration**
Amanda Deering, Scott Monroe, Tari Gary
- Use of Spray Equipment for Very Small Plots**
Dan Egel
- Black Soldier Fly Composting**
Laura Ingwell
- Efficacy of Organic Pesticides to Manage CPB on Potato**
Laura Ingwell, Sam Willden
- Efficacy of Organic Pesticides to Manage Caterpillars on Leafy Greens**
Laura Ingwell
- Reading Fertilizer Labels and Calculating Application Rates**
Liz Maynard
- The Pros and Cons of Herbicide Use on Small Farms**
Stephen Meyers, Luis Medina



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Demonstration Descriptions

BCS Roller Crimper Demonstration | Ashley Adair, Chris Adair

Roller crimpers are a popular tool for managing cover crop termination without tillage. Roller crimpers are steel cylinders fitted with crimping "blades" that mechanically pinch cover crop stems, ideally forming a straw-like layer of plant residue. While they are available in a variety of sizes, they are heavy devices that require tractors to operate, either front-mounted or rear-mounted with a 3-point hitch. Crimpers of greater size require more horsepower from the tractor. There are "miniature" versions available for walk-behind tractors, such as BCS tractors, which might be preferred for use in small beds or high tunnels. Are they effective enough to get the job done, and can the average farmer physically handle this implement? In this demonstration, a how-to on using the Student Farm's BCS roller-crimper will be presented and roller-crimper effectiveness on summer cover crops will be observed. In addition, other attachments for termination or mowing of cover crops will be demonstrated (flail-mower - BERTA, and a sickle bar mower).

High Tunnel Table Grape Production | Miranda Purcell

This study is testing the feasibility of growing two table grape varieties (Mars and Canadice) under the high tunnel in Indiana. A similar study done by the University of Arkansas showed promising results including significant yield increases, a reduction in disease pressure, and vines that come into bearing one to two years earlier than vines grown in the field. Results from this study will be used to determine if high tunnel table grape production is feasible in Indiana.

Drip Irrigation | Wenjing Guan, Liz Maynard, Emerson Espinoza

This demonstration features basics for drip irrigation management and scheduling, and fertigation systems for small-scale vegetable production.

High Tunnel Sweet Pepper Variety Selection and Production

Petrus Langenhoven, Lian Duron, Eduardo Miranda

Sweet pepper high tunnel variety trials have been conducted for the past four years at the Purdue Student Farm. Production techniques, variety selection, and variety performance will be discussed.

Postharvest Food Safety Considerations/Packing Room Demonstration

Amanda Deering, Scott Monroe, Tari Gary

This session will give participants an overview of good agricultural practices (GAPs) that should be followed during postharvest operations. Basic concepts of design, product flow, use of sanitizers, and other issues will be discussed. The Student Farm packing room will be used as a backdrop for the presentation. Design features of the packing room will be discussed. This presentation is for anyone with an interest in reducing the risk of contamination by a foodborne pathogen during postharvest handling of produce.

Use of Spray Equipment for Very Small Plots | Dan Egel

Vegetable growers who maintain small areas of production may need to apply fungicides or insecticides. However, the purchase and use of typical sprayers in such small areas often proves impractical. This demonstration will compare the advantages and disadvantages of backpack and garden sprayers for the spraying of pesticides on small acreage. A simple method of calibration will be discussed as well. An example of a backpack and garden sprayer will be available for inspection.

Black Soldier Fly Composting | Laura Ingwell

Compost is a popular amendment that can be made in your own backyard; however, it can take a long time to mature when using traditional aerobic or anaerobic methods. Vermicomposting has been shown to take less time to produce a mature compost and requires less pile turning. All of these methods also have constraints on the feed stocks that are placed into the compost stream; cooked foods, meat and manures can attract pests and pathogens and interfere with the process. The black soldier fly, *Hermetia illucens*, is an insect that feeds on a wide range of organic food, creates a high quality compost substrate in 18-25 days and can be easily incorporated into composting on any home garden or farm. We will be providing a how-to for composting with black soldier flies.

Efficacy of Organic Pesticides to Manage CPB on Potato | Laura Ingwell, Sam Willden

Colorado potato beetle is the most devastating pest on potato in Indiana. The adult and larval form of this pest feed on above ground portions of the plant, the pupae occur in the soil. Adults overwinter, can travel great distances, and have multiple generations per year that can inflict damage throughout the crop life cycle. We will be evaluating the efficacy of azadirachtin, *Beauveria bassiana*, *Isaria fumosorosea*, pyrethrins and spinosad organic pesticides to control CPB damage on organic potato production.

Efficacy of Organic Pesticides to Manage Caterpillars on Leafy Greens | Laura Ingwell

A number of troublesome foliar-feeding pests plague leafy greens production. In particular among the brassica crops is the brassica caterpillar complex consisting of diamondback moth, cabbage white, cabbage looper and the cross-striped cabbage worm. In addition are those pesky flea beetles turning your leafy greens into swiss cheese. The pressure from these pest complexes are present throughout the growing season and therefore management strategies involving pesticides need to consider the development of resistance. To alleviate this, we will be evaluating the efficacy of azadirachtin, *Bacillus thuringiensis*, pyrethrins, neem oil, and spinosad organic pesticides, in a variety of rotations, to control the caterpillar complex with some products also aimed at reducing flea beetle incidence.

Reading Fertilizer Labels and Calculating Application Rates | Liz Maynard

The presentation will provide examples of how to figure out how much organic fertilizer to apply and application methods for small areas.

The Pros and Cons of Herbicide Use on Small Farms | Stephen Meyers, Luis Medina

Herbicide use is common on large farms, but adoption of herbicides is often limited on small farms. At this stop you'll learn some of the potential benefits and drawbacks of including herbicides in your overall integrated weed management program. We'll also discuss how herbicides can be a labor and time-saving option for less competitive crops like bulbing onions.

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