

FANCY FRUIT

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A Newsletter for Commercial and Advanced Amateur fruit growers.

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Crop conditions at Purdue Meigs Horticulture Farm

(Chloe Rose Henscheid, richa267@purdue.edu)

Everything here at the Meigs Horticulture Farm in Lafayette, Indiana seems to be off to a great start of fruit development. We have had an abundance of Strawberries the last two weeks and will for the next few weeks. We were able to find a handful of peaches on our trees.. no more than a handful. We will plant Watermelons next week.



Strawberries: Third week of harvest



Black Currant: Fruit Development



Blackberry: Green Fruit



Aronia: Fruit Development



Apple (Pixie Crunch): Fruit Development



Plum: Fruit Development



Peach: Fruit Development



Apple (Rosalee): Fruit Development



Pear: Fruit Development



Grapes: Full Bloom/ Buckshot



Paw Paw: Fruit Development

How long with this wet period last?

(Beth Hall, hall556@purdue.edu)

I have been seeing a lot of reports around the state about overly wet conditions with impacts such as running field tiles, high-leveled lakes and streams, field ponding, and difficulty getting into the fields for planting. It certainly feels like it has been raining a lot around the West Lafayette area. Figure 1 shows how much rain has fallen since April 1st and indeed amounts over 10 inches seem high! To put this into climatological perspective, Figures 2 and 3 compare these amounts to the 1991-2020 period where most of the state has received 2 to 5 more inches of rain (125%-175% of normal) than what is typical for this time of year! The good news is this has kept Indiana clear of any drought or abnormally dry areas for several weeks, but a bit of drying out would be nice. Unfortunately, the 7-day precipitation forecast is predicting a more rain to come our way - particularly early next week

(Figure 4). However, according to the national Climate Prediction Center, the climate outlook beyond that (for May 28 - June 5) is favoring near normal to possibly below-normal precipitation. I am hoping things return to “normal”, since our climate patterns over the past few decades seem defy “normal” and instead swing wildly from too much rain to too little in a relatively short period of time. We certainly do not want to see another rapid intensification of drought (i.e., “flash drought”) developing this summer!

Regarding temperatures, it is likely no surprise that conditions have been warmer than normal. Figure 5 illustrates how the average daily temperatures in May have been 4 to 7 degrees Fahrenheit above normal across much of the state (May 1 - 22). This has been well reflected in the accumulated modified growing degree-day maps since April 1st (Figures 6 and 7).

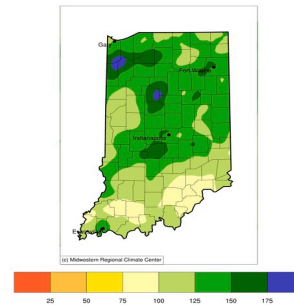


Figure 3. Percent of normal (1991-2020) precipitation from April 1 through May 22, 2024.



Figure 4. Forecasted precipitation amounts (inches) for May 23-30, 2024.

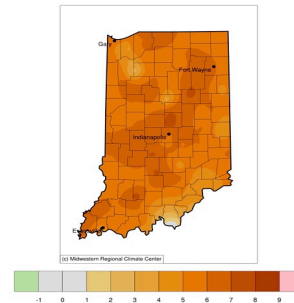


Figure 5. Average daily temperature departure (degrees Fahrenheit) from normal (1991-2020 period) for May 1-22, 2024.

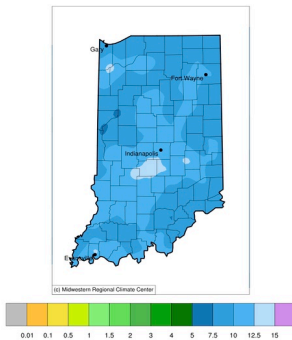


Figure 1. Total precipitation (inches) from April 1 through May 22, 2024.

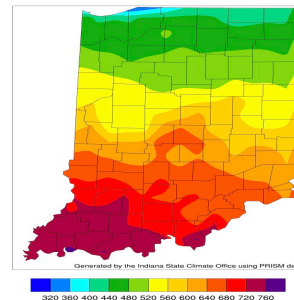


Figure 6. Modified growing degree day (50°F / 86°F) accumulation from April 1 - May 21, 2024.

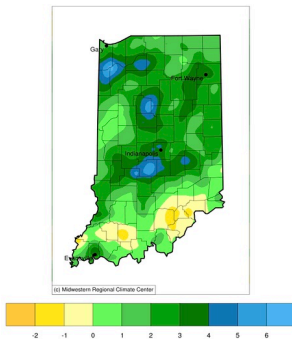


Figure 2. Precipitation departure from normal (1991-2020 period) in inches for April 1 through May 22, 2024.

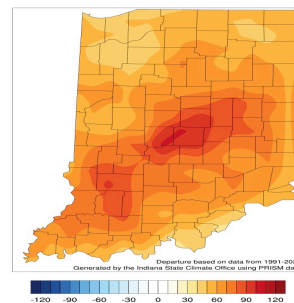


Figure 7. Modified growing degree day (50°F / 86°F) accumulation from April 1-May 21, 2024, represented as the departure from the 1991-2020 climatological average.

Indiana Strawberry Production Census

(Wenjing Guan, guan40@purdue.edu)

According to the newly released [2022 Census of Agriculture](#), Indiana has 248 farms growing strawberries, a 25% increase from 2017 when there were 199 such farms. This rise is particularly notable because the number of strawberry farms had decreased from 250 to 199 between 2012 and 2017.

Despite the increase in the number of farms over the past five years, the total strawberry acreage has remained similar. This indicates that more farms are growing strawberries on relatively smaller acreages in Indiana. Separating bearing age and nonbearing age crops, the increase was primarily in bearing age crops, both in terms of acreage and the number of farms, while the number of farms and acres for nonbearing age crops decreased over the past five years. Below is the Indiana strawberry data in the past three Ag Census.

Table 1. Indiana strawberry production in the past three Ag Census

Year	Total		Bearing age		Nonbearing age	
	Farm	Acre	Farm	Acre	Farm	Acre
2022	248	262	223	220	47	41
2017	199	254	150	204	78	50
2012	250	285	200	218	80	67

I have also included data on blackberries and raspberries for those who are interested.

Table 2. Indiana blackberry production in the past three Ag Census

Year	Total		Bearing age		Nonbearing age	
	Farm	Acre	Farm	Acre	Farm	Acre
2022	188	120	183	113	21	6
2017	234	175	184	152	78	23
2012	133	72	104	48	38	24

Table 3. Indiana raspberry production in the past three Ag Census.

Year	Total		Bearing age		Nonbearing age	
	Farm	Acre	Farm	Acre	Farm	Acre
2022	138	72	128	62	19	10
2017	160	77	121	60	56	16
2012	112	66	77	48	44	18

They're baaaaack: Rare double brood emergence of periodical cicadas this year

(Elizabeth Yim Long, long132@purdue.edu)



Figure 1. An adult periodical cicada on my arm ☐.

Many readers will remember when a massive brood of periodical cicadas (Brood X) emerged throughout Indiana back in 2021. With their dark bodies, red eyes, and orange wings, these insects look like something straight out of the X-files, am I right?? There was lots of noise (male cicadas singing for the females!), lots of cast cicada “skins” (molted off exoskeletons), and plenty of cicada “snacks” to go around for birds, chipmunks, squirrels, and even your family pets –

apparently periodical cicadas are both a natural wonder and a delicacy!

This year, in a very rare event, two broods of periodical cicadas, Brood 13 (XIII) and Brood 19 (XIX), will emerge at the same time, *for the first time since the 1800's!* In fact, some readers may already see and/or hear these periodical cicadas emerging in their area. Importantly, for those who may be concerned about young fruit trees, nursery trees and woody shrubs, this year's double brood emergence will not reach levels that we saw in 2021 in most of the state. If you'd like a refresher on what to do to protect young trees and woody shrubs from female cicada egg-laying, please visit my [Facts for Fancy Fruit article from 2021](#).

If you're an enthusiast and want to experience the 'magic' again, you'll want to make plans to visit Illinois, where the emergence will be a grand event, and you can get a front seat to the action. However, if you're hoping to experience this event in Indiana and you're in forested areas of Posey, Warrick, Newton, or Jasper Counties, you may be in the right spot to see Brood 19. If you live in forested areas of Lake, Porter, or LaPorte counties in Indiana, you're in an extra special spot to see adults of BOTH Brood 13 and Brood 19 periodical cicadas, as these are the counties where both broods are anticipated to overlap in their emergence.

Although some may find these insects a bit spooky, you've got to admit that it's pretty amazing that they can live underground for 13 to 17 years, sipping sap from the roots of trees, and when they emerge to live as adults for just a short time to mate and then die, they leave behind valuable nutrients for our wildlife and forests, the latter of which the cicadas and us humans cannot survive without!

Donating Produce to Food Banks and Food Rescue Organizations in Indiana

(Liz Maynard, emaynard@purdue.edu) & (Sarah Hanson, sspeedy@purdue.edu)

Donating Produce to Food Banks and Food Rescue Organizations in Indiana

Many produce farmers donate food to various organizations around the area. At a time when food pantries are seeing high numbers of people coming for assistance with food insecurity, the fact that farmers can help out is wonderful. My goal is to give you more information so that donating is even easier. Let's briefly start with understanding the difference between a food bank and a food pantry. Food *banks* are usually large organizations collecting food that they will distribute to food pantries, shelters, etc. They often have the ability to store great quantities of food. Food *pantries* are the individual sites where people can go to receive boxes/bags of food. Some food banks are also open to the public. Since food banks are larger, they offer purchasing power that is passed on to pantries. So if families are struggling to buy food, ideally a visit to the food pantry results in them receiving nutritious food. This is where your produce comes into the story. Your produce can be picked up by some large Indiana organizations that have cold storage and trucks. Other organizations have access to volunteers that can glean a field. Either way, it is possible for excess produce (or things that didn't meet size / cosmetic grades) to go home with people in need of healthy food. Visit Feeding America's website to find food banks near you:

<https://www.feedingamerica.org/find-your-local-foodbank>.

We have talked with Cultivate Food Rescue in South Bend, IN who will be getting new cooling

infrastructure. **They are looking for more donors of nutritious, fresh food.** They pick up 7 days per week and prefer pallets of produce, but can handle boxes also. They offer a range of trucking options to meet your needs and do everything possible to make the process seamless and easy for the donor. It is ideal if you can provide advance notice of 1-2 weeks, but they will do everything possible to work within your schedule. Feel free to reach out to Bob Hebert with Cultivate Food Rescue at 269-479-9553 or bobh@cultivatefoodrescue.com. For more information about Cultivate's programs, you can also check out their website at <https://cultivatefoodrescue.com/>.

I realize that if you are a produce farmer reading this, you might be thinking about some of the possible downsides to this. "This will take extra time (and maybe labor)". Yes, those are potential issues that you might run into. You may also worry about liability. Food donations are protected by federal law. In fact, protections were recently expanded under the Food Donation Improvement Act of 2022. The Food Law and Policy Clinic at Harvard Law School provides a summary of these limited liability protections here:

<https://chlpi.org/wp-content/uploads/2023/03/Emerson-Fact-Sheet.pdf> Additionally, the federal government recognizes the importance of food donation and provides tax incentives to encourage businesses to donate food. With this information now in your pocket, I leave the decision to you since you know what is best for your situation.

Written by Liz Maynard and Sarah Hanson (Purdue Extension) with contributions from employees of Cultivate Food Rescue.

Indiana Food Vision survey

(Sarah Hanson, sspeedy@purdue.edu)

Take the Indiana Food Vision survey!

<https://www.indianafoodvision.org>

The Indiana Food Vision is for every Hoosier who eats or grows food and who wants to have a voice in shaping our future! Together, we are creating a road map for cultivating a robust, nourishing, and equitable food system where all communities in Indiana thrive. The Indiana Food Vision is a 'by the people for the people' effort to center the voices of Hoosiers who eat, grow, or buy food in Indiana - that means YOU! Please take a few minutes to share about your day-to-day food system experience by clicking the link to the survey.

Your Voice. YOUR Vision.

<https://bit.ly/3U7c3wB>

Blueberry Growers of Indiana Annual Meeting | June 17th Mishawaka, IN

(Miranda Purcell, mrpurcel@purdue.edu)

The Blueberry Growers of Indiana 2024 Annual Meeting will be held on Monday, June 17 at Blueberry Ranch (54743 Buckeye Road Mishawaka, IN 46545).

The farm tour will begin at 4:00 PM EST.

The main part of the meal, along with drinks and paper products will be supplied. Please bring a side dish or dessert to share!

RSVP to John Nelson at john@blueberryranch.com

Purdue Fruit and Vegetable Field Day

(Lori K Jolly-Brown, ljollybr@purdue.edu)

REGISTRATION NOW OPEN!

We are happy to announce that Purdue Extension is presenting its annual Fruit and Vegetable Field Day on July 18, 2024, at the Throckmorton/Meigs Horticulture Farm, Lafayette, IN.

Register here: [Purdue Fruit and Vegetable Field Day](#)

Contact [Lori Jolly-Brown](#) or [Petrus Langenhoven](#) if you have any questions.

Presentations:

Julia Wooby, Ian Kaplan, Laura Ingwell ***Trap Crop System for Multi-generational Control of Flea Beetles in High Tunnel Brassica***

Crops

Collard Greens & Mustard trap crop

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.

Robert Grosdidier & Laura Ingwell ***Pollinators in High Tunnels vs. Open Field Production***

Tomatoes, Long Beans, Zucchini, Strawberries

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.

Milena Agila & Laura Ingwell ***Evaluating the Impacts of Insect-Derived Soil Amendments on Crop Production*** ***Bok Choy, Carrots***

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.

Petrus Langenhoven & Nathan Shoaf ***Impact of Soil Fertility Amendments and Cover Cropping on Soil Health and Pepper Production***

Peppers

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.

Josue Cerritos & Stephen Meyers ***A Comparison of Silage Tarping and Herbicides for Weed Control in Potato***

Potatoes

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.

Miranda Purcell & Carla Wagner Evaluating the Use of Lasers as a Bird Control Strategy in the Vineyard Grapes

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.

Helen Nocito & Stephen Meyers Exploring the Use of Herbicide-Impregnated Fertilizer for Improved Crop Tolerance in Pumpkin Pumpkins

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.

Peter Hirst

Modern apple orchard systems for commercial and backyard growers

Apples

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.



Purdue Small Farm Education Field Day

(Lori K Jolly-Brown, ljollybr@purdue.edu)

Purdue Small Farm Education Field Day REGISTRATION NOW OPEN!

**Attendees, exhibitors, and sponsors
register here: [Purdue Small Farm Education
Field Day](#)**

July 25, 2024

The 2023 [Purdue Small Farm Education Field Day](#) was held at the Purdue Student Farm in West Lafayette, Indiana. With 105 participants registered, the in-person event featured an array of on-farm demonstrations and was a resounding success.

Nearly 84% of attendees reported that they learned something they didn't know before. A

third (34%) indicated they plan to adopt recommended practices for diversified farming systems, and a quarter (24%) plan to adopt recommended practices for creating, improving, or strengthening their business. Nearly half (45%) indicated they plan to adopt practices for horticulture and the environment or practices that will increase efficiency (42%). Over a third plan to adopt practices/technologies for the conservation of resources (37%). Nearly half (46%) of past field day attendees indicated that they had adopted new, recommended practices for their farm or operation. When asked what new practice they had adopted, participants responded:

- Alternate BT and Spinosad on brassicas.
- Pest scouting.
- Applied BT for brassica caterpillar complex control.
- Integrated pest management

Over three-quarters (80%) of participants reported that they had experienced financial improvements because of adopting new, recommended practices from the information presented at past field days.

Attendees commented

- “I recommend this event to any beginner small-scale producer.
- I brought my sons and my father to this event. It was a family education day for sure, and each one of us learned several things we didn’t know. Please continue to offer these events. It’s very helpful!
- Good information and a fun, interesting presentation
- I like the wide variety of topics, and I think that so much could be covered in such a short amount of time.
- Lots of helpful information covering a wide

variety of topics.

- Always learn, gain knowledge, and learn from questions others ask. When I get home, I can read the literature provided and share it with family in Virginia who farm.
- Very informative and builds on previous research.
- Everyone should learn about these topics.
- It was a good way to be exposed to a variety of horticultural crops.
- I am just beginning to develop my vegetable garden. The information given at the Field Day program was very useful, and I am confident I will create a beautiful garden space with plants that will give me a great yield. Also, I appreciate learning what insects I should keep an eye on.”

The event featured an array of “demonstration stations” on the farm where participants learned about a variety of topics:

- High Tunnel Pepper Production and Variety Selection
- High Tunnel Table Grape Production
- Silage Tarps and Their Potential Uses on Small Farms
- Growing Grains on the Small Farm - Dry Edible Bean Variety Trial
- Predator-Prey Dynamics in High Tunnel Crop Production
- Biorational Pesticide Efficacy for Controlling Caterpillars and Flea Beetles in Crucifer Crop Production
- Black Soldier Fly Composting and Specialty Crop Production
- Raised Garden Beds for Vegetable Production
- Postharvest Food Safety Demonstration
- Choosing Fertilizer Injectors for Drip Irrigation for Small Plots

Educational topics for the 2024 field day will be available in May. To learn more about the field day, visit our [webpage at www.purdue.edu/hla/sites/studentfarm/events/](http://www.purdue.edu/hla/sites/studentfarm/events/) or contact [Lori Jolly-Brown](#) or [Petrus Langenhoven](#).



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