PURDUE UNIVERSITY

# FACTS FOR FANCY FRUIT

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*A Newsletter for Commercial and Advanced Amateur fruit growers.*

In This Issue



## Crop Conditions

*(Chloe Rose Henscheid, richa267@purdue.edu)* & *(Wil Brown-Grimm, wbrowngr@purdue.edu)*

Here at the Meigs Horticulture Facility in Lafayette, Indiana we couldn't ask for better crop conditions. We have been receiving good amounts of rain as needed for fruit maturation, without experiencing any flooding. The Japanese beetles seem to be our biggest issue right now across the board. Still no disease pressure to report, we will continue our cover sprays and hopefully it will stay that way.

Peach: Maturation

Apple (Rosalee): Maturation

Pear: Maturation

Grapes: Berry touch/ Bunch closure

Apple (Pixie Crunch): Maturation

Black Currant: Ripe

Blackberry: Green fruit to ripe

Aronia: Green fruit to ripe

Paw Paw: Maturation

Plum: Maturation

# Variable Temperatures, Sporadic Rainfall, and Growing Drought

*(Owen Rahman, orrahman@purdue.edu)*

Happy Independence Day from the Indiana State Climate Office!

Temperatures were much more pleasant over the past seven days (June 24-July 1) compared to the heat experienced in mid-late June. Across Indiana, temperatures varied from below to above normal from north to south (Figure 1). Southern Indiana had locations with temperatures up to 1°F above normal, while south-central Indiana observed near-normal temperatures. Areas north of Indianapolis had locations averaging 2-3°F below normal. Minimum temperatures were largely normal for the week (Figure 2, left), whereas maximum temperatures were well below normal for some (Figure 2, right). The largest maximum temperature anomalies occurred in the northern third of the state, with temperatures 3-4°F below normal.

Growing degree days (GDDs) since April 1st remain above normal for Indiana (Figure 3). Northwestern Indiana is 100-150 GDDs above normal as of July 1, while the rest of the state is 150-200 units above normal.

Precipitation was sparse for many across the state this past week but heavy for some (Figure 4, left). Southern and western portions of the state received below-normal precipitation, less than 75 percent of normal (Figure 4, right). One area south of Terre Haute received less than 50 percent of normal rainfall. Williams 3 SW, located in Martin County, had no measurable rainfall this week, earning the title of the driest station in the state. Northeastern portions of the state received above-normal rainfall, with extreme northeast Indiana receiving almost double their normal

rainfall. Rochester 2.4 NW, located in Fulton County, recorded 3.14 inches of rain for the week, the highest total in the state.

Drought has increased as of late, particularly in southern Indiana (Figure 5). The recent lack of rainfall in southern portions of the state has resulted in moderate drought (D1) developing in southeast and west-central Indiana. There was no moderate drought anywhere in the state last week, indicating worsening conditions, especially in southern Indiana. Most other counties in the state, with the exception of the northern and southern fringe counties, are experiencing abnormally dry (D0) conditions.

Looking ahead, conditions look to heat back up. Temperatures are expected to be above normal over the next 7 days, particularly in southern Indiana. Precipitation forecasts hint at slightly above-normal rainfall–a welcomed relief for many.

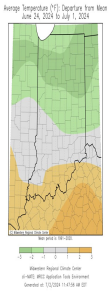


Figure 1. Average temperatures for June 24-July 1, 2024 represented as the departure from the 1991-2020 climatological average.

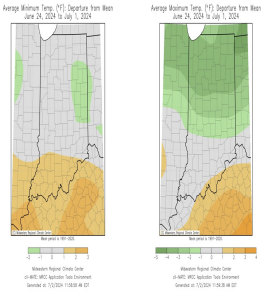
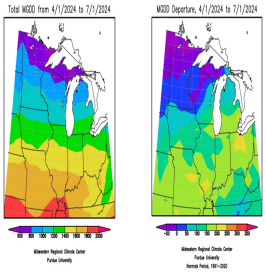


Figure 2. Left – Average minimum temperatures for June 24-July 1, 2024 represented as the departure from the 1991-2020 climatological average. Right – Average maximum temperatures for June 24-July 1, 2024 represented as the departure from the 1991-2020 climatological average.



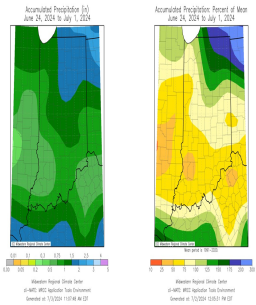


Figure 4. Left – Accumulated precipitation for June 24-July 1. Right – Accumulated precipitation for June 24-July 1 represented as the percent of the 1991-2020 climatological average.

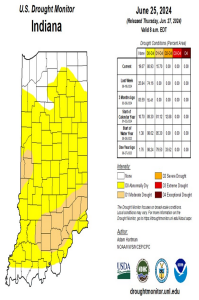



Figure 5. June 25 US Drought Monitor map.

# Exciting news from Spotted-wing drosophila monitoring traps

*(Elizabeth Yim Long, long132@purdue.edu)*

Dear readers, I have never been so excited to sort through trap catch from spotted-wing drosophila (SWD) monitoring traps (Figure 1A) as I have these last few weeks!! And it's not just because I'm a bug nerd over here, ha!

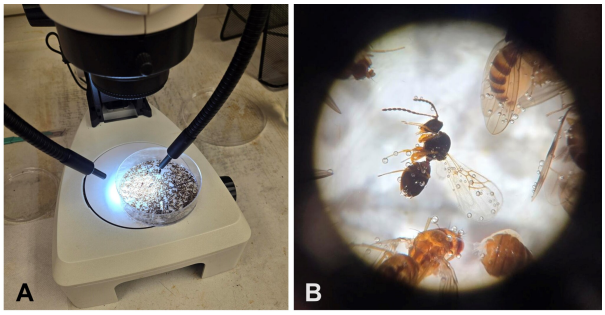



Figure 1. A petri dish containing insects collected in a spotted-wing drosophila Scentry jar monitoring trap (A) and a single, tiny parasitoid wasp in the family Figitidae (B).

This season, as I've been looking through the contents of SWD jar traps, I've seen many, tiny parasitoid wasps (Figure 1B) that I've never seen before – and upon closer inspection and a search of the literature, I believe these tiny wasps are parasitoids of SWD larvae!!! That's right: a parasitoid of the fly that has been ruining all our delicious small fruits for the last…forever! I have not confirmed the species yet, but the wasp is in the family Figitidae, which includes several species that search out SWD larvae (maggots) while they are inside the fruit to lay eggs in them, which ultimately KILLS THEM. Aren't insects amazing?! For every pest, there is a natural enemy, and finding this wasp in SWD monitoring traps indicates to me that they are out in the environment, searching out SWD (and other vinegar fly) larvae and helping us suppress them, right here in Indiana! A research article published earlier this year has also indicated captures of these same parasitoid wasps in Michigan. This is good news as we continue to battle SWD in small fruit production!

# Fruit growers, we want to know what's on your mind

*(Stephen Meyers, slmeyers@purdue.edu)*

Fruit growers, we want to know what topics you would like to learn more about at the 2025 Indiana Hort Conference & Expo. Help us bring you the tools, skills, and information you want to hear about by filling out a very short survey. Planning is in progress, so save the date! January 14-15, 2025

Take survey here

Your information is for IHC planning committee purposes only and we appreciate your time!

# Purdue Fruit and Vegetable Field Day

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

## Purdue Fruit and Vegetable Field Day on July 18, 2024 **Registration closes July 12th at midnight!**


Long Description

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.

**Registration is now open! Register here: Purdue Fruit and Vegetable Field Day**

The program is now available. Download HERE

Contact Lori Jolly-Brown or Petrus Langenhoven if you have any questions.

# Purdue Small Farm Education Field Day

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

**July 25, 2024 Purdue Small Farm Education Field Day REGISTRATION NOW OPEN!**

**Registration closes July 22nd!**

**Attendees, exhibitors, and sponsors register here:** Purdue Small Farm Education Field Day

**2024 presentations:**

- Insect dynamics in HTs
- Companion Plants and Syrphid Fly Recruitment
- High Tunnel Table Grapes
- Advantages and Considerations of Raised Bed Gardening
- High Tunnel Sweet Pepper Production Strategies and Variety Selection
- Tarps, fire, and cultivation- weed management updates and demonstrations.
- Strawberry production and strawberry propagation at small farms
- Soil moisture sensors
- Growing Open-Pollinated Corn on the Small Farm
- Postharvest Wash/Pack Design for Small Farms

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

To learn more about the field day, visit our webpage at www.purdue.edu/hla/sites/studentfarm/events/ or contact Lori Jolly-Brown or Petrus Langenhoven.

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