

FANCY FRUIT

Issue: 25-10

August 21, 2025

A Newsletter for Commercial and Advanced Amateur fruit growers.

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Crop conditions

(Wil Brown-Grimm, wbrowngr@purdue.edu)

Hi! The peaches have run their course here at Meigs and have all fallen due to the recent storms. Early varieties of grapes are ripe. Most are still at veraison. The first watermelons will be harvested this Thursday! Our primocane fruiting blackberries are just now beginning to ripen. Honeycrisp apples seem to be a week or so from maturity.



Watermelon: Mature fruit



Blackberry: Mature fruit



Pawpaw: Fruit maturation



Apple (Pixie Crunch): Fruit maturation



Grapes: Veraison/ Maturity



Pear: Fruit maturation



Plum: Fruit maturation

Super cool & super dry for August's end: How the weather tables have turned

(Jacob Dolinger, jdolinge@purdue.edu)

With brute and sudden force, the atmosphere is doing its job: acting like a fluid. Weather is not a precise science, which means the atmosphere is constantly shifting. There tends to be some sort of pattern shift come mid-late August, and it looks like it's just about here. Temperatures are on their way down, as the National Weather Service's Climate Prediction Center (CPC) predicts a nearly 100% chance of sustained below-normal temperatures 6-10 days out from writing, so August 26-30 (Figure 1). We're talking lows in the upper 40s in certain spots across northern Indiana—brrr! Cities like Fort Wayne, Lafayette, South Bend, and Valparaiso could be seeing these temperatures. The last time minimum temperatures dropped below 50°F in Lafayette and South Bend was on June 2.

This is all welcome news for anyone who has

worked outdoors and has not enjoyed what has been an incredibly humid summer. The Lafayette area has had the second-highest number of dew points greater than 70°F this summer. For reference, dew points of 65°F-70°F are generally considered humid, while dew points above 70°F are very humid. Dew points can also reach above 75°F, as they have on several occasions this summer, and that is considered oppressive humidity. We're going to see some very low dew points through the end of the month, but that doesn't mean the humidity has left for good. Some models indicate a major warm-up again around Labor Day Weekend—another example of the atmosphere acting as a fluid, with all of its highs and lows.

Even with all the dramatic swings in temperatures and humidity, we will at the very least have sunshine. In fact, maybe too much sunshine, as below-normal precipitation is also quite likely in the 6-10-day outlook (Figure 2). We tend to get a bit drier in Indiana in August and September, but this period is expected to be drier than normal, which means anyone with stakes in agriculture may want to monitor soil moisture closely.

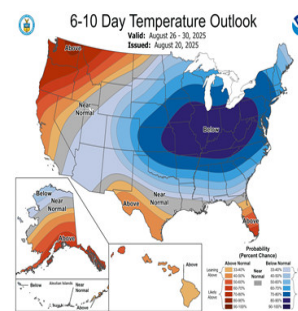


Figure 1: The CPC indicates a nearly 100% chance of below normal temperatures over much of the Midwest.

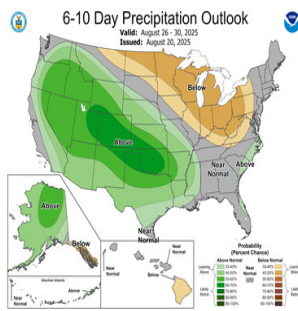


Figure 2: The CPC indicates a likely chance of below normal precipitation across the Midwest.

Determining apple maturity

(Peter M Hirst, hirst@purdue.edu, (765) 494-1323)

Making the decision on when to harvest can be a very tricky and complicated issue. The longer you intend to store the fruit, the more precise your timing needs to be. For summer apples, most growers only intend to store fruit until their higher quality fall apples come on stream, so storage times beyond a week or two are not that common. For example, very early season apples such as Lodi and Pristine should only be stored for a few weeks until Gala harvest begins. Even for fall apples, many Indiana growers aim to sell the majority of their crop immediately to the consumer, and try to be done by mid November or so. Since storage times are relatively short, harvest maturity is less important than for longer term storage. This being the case, apples should be harvested when they are fully ripe. This will maximize their flavor, and although it reduces their storage potential, this is not too important for many direct market growers. There are various tests for measuring fruit maturity and degree of ripeness, but taking a bite out of a few apples will give a good enough indication for fruit being stored for short periods where flavor is important but storage life is not. Obviously, this also applies to apples intended for U-pick.

Bear in mind that even in cold storage, fruit continue to ripen, just at a slower rate.

Therefore, fruit intended for longer term storage should be harvested when they are less ripe. There is no single test that will give you the precise answer but factors such as calendar date, heat unit accumulation, fruit firmness, soluble solids concentration, starch content and ethylene evolution all give answers to a piece of the puzzle. As you can see, this gets complicated real fast. In fact, states with large apple industries have labs dedicated to performing these tests and measurements are fed into complex mathematical models to determine the optimum harvest time for fruit for long-term storage.

Beyond the taste test, if you are going to perform one test I suggest looking at starch index. As fruit ripen, enzymes convert starch in the fruit to soluble sugars, which explains why fruit become sweeter as they ripen. This test provides an estimate of how much of the starch in the apple has been converted to sugar. So, in Figure 1, the fruit with a rating of 0 (completely black) are full of starch and not ready to be harvested. The fruit with a rating of 6 have almost complete conversion of starch to sugar and are ready for immediate consumption. For short-term storage or immediate sale, harvest fruit when they have a starch index of 4-6. This test is quick, easy, and doesn't require expensive equipment. For more details look in Chapter 7 of the Tree Fruit Pest Management Handbook, ID-93, available at <http://www2.ca.uky.edu/agc/pubs/id/id93/id93.htm>

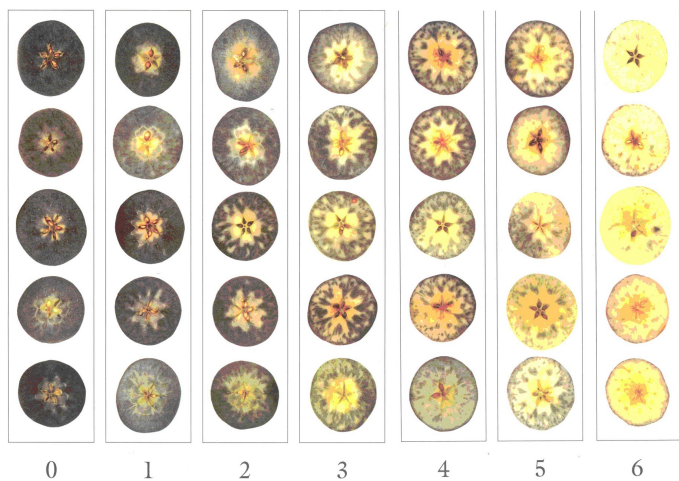


Figure 1. Chart showing starch pattern index. Fruit with a rating of 0 have a lot of starch which is stained black by iodine. Fruit with a rating of 6 have had virtually all their starch converted to soluble sugars, so are more ripe and sweet.

Late season disease management in grapes

(Miranda Purcell, mrpurcel@purdue.edu)

Fruit rots: Late season fruit rots, including sour rot complex, botrytis and ripe rot, are major concerns in the Midwest (Figure 1). Rains this time of the year can lead to disaster. If berries split due to rain, yeasts and bacteria can quickly invade damaged fruit, which can lead to rots that attract fruit flies. Managing fruit fly populations have been determined to help slow the formation of sour rot (Figure 2). Insecticides that can be used for management include Mustang Maxx, malathion and Delegate, all of which have relatively short PHIs (post-harvest intervals) (1, 3 and 7 days, respectively). Be sure to rotate chemistries as resistance can develop. Additionally, a general sanitizer, such as Oxidate, can be used to reduce microbials responsible for the rot itself, but research has shown that managing fruit flies is key.



Figure 1. Late season fruit rot, photo by Bruce Bordelon



Figure 2. Sour rot, photo by Bruce Bordelon
Botrytis is less common than sour rot in the Midwest, but it can occur occasionally, especially in tight-clustered varieties. Unfortunately, it is difficult to control botrytis this time of year. Applications made at bloom, cluster closing and veraison are much more effective.

Ripe rot is a more recent problem that has been developing, especially in Frontenac and Marquette varieties. A veraison application of FRAV 11 containing fungicides appears to be effective at managing ripe rot, and a follow-up application can add additional protection. PHIs should be monitored closely.

Leaf diseases: We aren't seeing much powdery and downy mildew on grapes this year, but these diseases often get established in the late season near or after harvest. In some years, these diseases may cause defoliation well before the

onset of cool weather in the fall. It is important to manage these diseases even after harvest to maintain healthy foliage until frost to maximize winter hardiness. Downy can be controlled after harvest (when PHIs are no longer a concern) with phosphorous acid products, mancozeb, captan or one of the newer products such as Zampro. However, none of those fungicides will control powdery mildew. So a tank mix including one of the above with a DMI fungicide such as Rally would be a good approach. There are several other options for powdery mildew such as Torino, Endura, or Vivando, or even sulfur on sulfur-tolerant varieties.

If fruit has not been harvested yet, then options are limited to a hand full of products with short PHIs: phosphorous acid or captan for downy mildew, and Torino, Topsin-M, or sulfur for powdery mildew.

See the Midwest Fruit Pest Management Guide for more information:

https://ag.purdue.edu/departments/hla/extension/_docs/id-465.pdf

Cleaning and Sanitation Workshop

(Amanda Deering, adeering@purdue.edu)

Keeping produce safe and meeting buyers and regulatory expectations starts with strong cleaning and sanitation practices. Farms that implement proper procedures not only protect public health but also improve efficiency and build trust with customers. To help growers and farm workers strengthen these skills, we invite you to join us on **September 8th from 1:00 PM to 5:00 PM at the Purdue Student Farm** for a **free**, hands-on Cleaning and Sanitation Workshop. Attendees will learn from Purdue Extension experts about:

- Cleaning and Sanitizing Basics: wash/pack

area practices, sanitizer dilution, and using a Dosatron.

- Regulatory Requirements: understanding cleaning and sanitation rules for produce safety.
- SSOPs and Recordkeeping: writing Sanitation Standard Operating Procedures and maintaining records for third-party audits preparation.
- Water Sample Collection: hands-on activity to properly collect and handle a water sample
- ATP Meter Activity: using an ATP meter to test cleaning and sanitation efficacy in real time.

Don't miss this chance to gain practical, farm-ready skills that strengthen food safety programs and prepare for audits registration is free!

Registration Link:

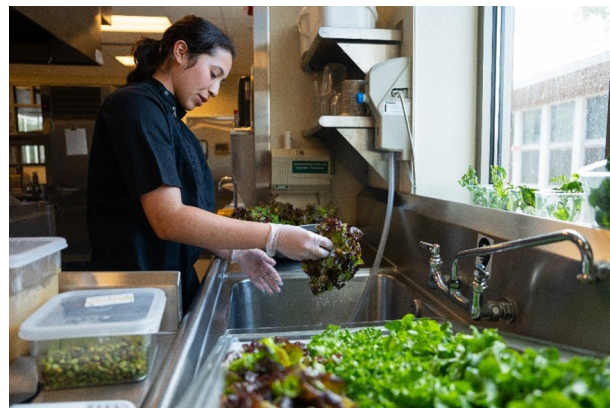
https://purdue.ca1.qualtrics.com/jfe/form/SV_81blwfocQNWOSYS

Date: 09/08

Time: 1-5pm

Location: Purdue Student Farm (PSF)

1491, Cherry Ln, West Lafayette, IN, 47906



Upcoming events

(Miranda Purcell, mrpurcel@purdue.edu)

Cleaning and Sanitation Workshop

September 8th from 1-5:00PM

Purdue Student Farm West Lafayette, IN

https://purdue.ca1.qualtrics.com/jfe/form/SV_81blwfocQNWOSYS

Indiana Horticulture Conference & Indiana

Small Farms Conference

March 3-5, 2026

Hendricks County Fairgrounds Danville, IN

<https://indianahortconference.org/>

https://extension.purdue.edu/anr/_teams/dffs/small_farm_conference/index.html

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