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## Crop Conditions

(Bruce Bordelon, [bordelon@purdue.edu](mailto:bordelon@purdue.edu), (765) 494-8212)

Apples are 1-1/2 inch to 2 inch size where you can find them. There is plenty of scarring on fruit from the freeze. Apple scab is also common in unsprayed blocks. Pawpaw fruit are sizing and Phyllostica leaf spot is showing up.

Grapes are at cluster close/berry touch so berries should no longer be susceptible to black rot, powdery or downy mildews, though late season rots are still a possibility. Most grape varieties have a very small crop. Those with a full crop include Frontenac noir, gris and blanc, Petite Pearl, Crimson Pearl, Verona, and Itasca. A few others have a half crop or so. Varieties with low crops are showing excess vigor and shoot positioning will be very important to manage canopies to assure fruitful buds next year. I found the first symptoms of downy mildew this week, and Japanese beetles are present but not at damaging levels. Spray intervals can be lengthened and weekly scouting for leaf diseases and insect pests should continue. We made an application last week to control potato leaf hopper as they were at very high levels. Highly sensitive varieties are showing very mild 2,4-D injury.

Summer bearing red and black raspberries are ripening and there is considerable freeze damage showing up on floricanes. Flowers on primocane fruiting types are just showing on the early varieties. Japanese beetles and potato leafhoppers are prevalent. The last of the black currants and gooseberries are being harvested. Elderberries are in full bloom.



Apples at about 2 inches



Apple with frost scars



Apple with frost scars



Apple scab



Pawpaw fruit



Phyllosticta leaf spot on pawpaw



Full crop on Petite Pearl



Excess vigor in grapes



Japanese beetles on grape



Japanese beetle damage on grape leaf



Downy mildew symptoms on upper leaf surface



Downy mildew symptoms on lower leaf surface



2,4-D injury in grape



Black raspberry ripening



Black raspberry frost injury



Japanese beetles on brambles



Potato leafhopper damage on blackberry



Black currants



Gooseberries



Elderberry in full bloom



Milkweed providing valuable pollinator habitat

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## Outlooks showing confidence for below-normal precipitation

(Beth Hall, [hall556@purdue.edu](mailto:hall556@purdue.edu))

The roller coaster ride of Indiana weather continues. Things were drying out across the state with signs of browning lawns, rolling vegetation leaves, and lowering pond and stream levels. Then the rains came. Most of the state received between 2 and 3 inches of precipitation from June 20 through 29<sup>th</sup> - with wetter areas to the south and drier areas to the northeast. While this may seem good enough to relieve any concerns about drought developing, the temperatures have been high to encourage the evaporation of those wet surfaces. As a result, the [US Drought Monitor](#) has kept most of the state at "Abnormally Dry". The climate outlook for July 8-14 shows increased confidence of below-normal precipitation with the possibility of this dryness continuing into mid-July. Additionally, probabilities are significant that temperatures will be above normal - further exacerbating any dryness due to lack of rainfall. The climate outlook for July - provided by the national Climate Prediction Center - is showing strong confidence for above normal temperatures, but uncertainty regarding precipitation (Figure 1).

With temperatures continuing to be above normal, accumulated modified growing degree days continue to catch up to levels seen in previous years (Figures 2-3). Beware of elevated heat index values that can increase health risks when working outside. Learn more about how to stay safe during extreme heat and high heat index conditions from the [Centers for Disease Control and Prevention](#).

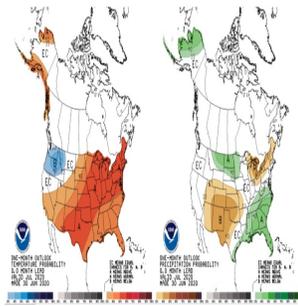


Figure 1

Growing Degree Day (50 F / 86 F) Accumulation

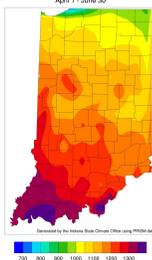


Figure 2. Modified growing degree day accumulations since April 1, 2020.

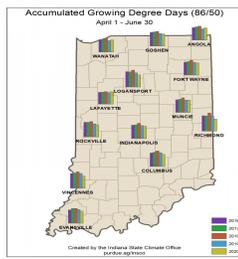


Figure 3. Comparison of the 2020 accumulated modified growing degree days since April 1st to previous years.

## Indiana Pesticide Clean Sweep Project

(Bruce Bordelon, [bordelon@purdue.edu](mailto:bordelon@purdue.edu), (765) 494-8212)

An **Indiana Pesticide Clean Sweep Project** designed to collect and dispose of suspended, canceled, banned, unusable, opened, unopened or just unwanted pesticides (weed killers, insecticides, rodenticides, fungicides, miticides, etc.) is being sponsored by the Office of Indiana State Chemist (OISC). This disposal service is free of charge up to 250 pounds per participant. Over 250 pounds there will be a \$2.00 per pound charge. This is a great opportunity for you to legally dispose of unwanted products at little or no cost.

**WHO:** All public and private schools, golf courses, nurseries, farmers, ag dealers, cities, towns, municipalities and county units of government or others receiving this notice are eligible to participate.

**WHEN/** 9:00am to 3:00pm Local Time

**WHERE:**

August 18, 2020: Noble County Fairgrounds, 580 Fair St. Kendallville, IN

August 19, 2020: White County Fairgrounds, 12 N 25 E Reynolds,

IN

August 20, 2020: Hancock County Fairgrounds, 620 Apple St. Greenfield, IN

August 25, 2020: Decatur County Fairgrounds, 545 S CR 200 W Greensburg, IN

August 26, 2020: Dubois County Fairgrounds, 4157 S St Rd 162 Huntingburg, IN

August 27, 2020: Hendricks County Fairgrounds, 1900 E Main St. Danville, IN

**HOW:** Complete the enclosed **Pesticide Clean Sweep Planning Form** (available on the OISC website at:

[https://www.oisc.purdue.edu/pesticide/clean\\_sweep.html](https://www.oisc.purdue.edu/pesticide/clean_sweep.html) son to the best of your ability. Mail, fax, or email the completed form to Garret Creason at 765-494-4331 or [gcreaso@purdue.edu](mailto:gcreaso@purdue.edu) no later than **Mon., August 10, 2020**. Then bring your labeled, leak free and safe to transport containers to the collection site. **DO NOT** mix materials. In case of an emergency, you should bring with you a list of products you are carrying and a contact phone number.

**COVID-19 Guidelines:** When you arrive to drop off materials please stay in your vehicle and a team member will check you in. Our team will be unloading one vehicle at a time to maintain physical distancing. If you must exit your vehicle, face masks are encouraged.

\*NOTE: OISC reserves the right to cancel this Pesticide Clean Sweep Project if there is not adequate demand. Participants submitting the enclosed planning form by August 10, 2020 will be contacted immediately if cancellation is necessary

## Grapevine powdery mildew fungicide resistance survey

(Bruce Bordelon, [bordelon@purdue.edu](mailto:bordelon@purdue.edu), (765) 494-8212)

Michigan State University is seeking help to conduct a survey for QoI/FRAC 11 resistant powdery mildew populations around the Great Lakes region.

**MSU and FRAME are seeking your help to conduct this survey.** Please contact [Nancy Sharma](mailto:Nancy.Sharma@msu.edu), a plant pathology graduate student, at [sharm115@msu.edu](mailto:sharm115@msu.edu) if you are interested in helping us. You will receive a kit to test your grape powdery mildew samples in your vineyard. The samples will then be sent in a provided overnight mailer back to MSU. We will send you the detailed procedure for sample collection as well.

See the full story at:

<https://www.canr.msu.edu/news/grapevine-powdery-mildew-fungicide-resistance-survey>

# Matted row strawberry renovation

(Bruce Bordelon, [bordelon@purdue.edu](mailto:bordelon@purdue.edu), (765) 494-8212)

By now, most harvest is over across the state. As soon as harvest is done, it's time to begin the renovation process. Matted row strawberry plantings must be renovated each year to establish new crowns for the following year's crop. For best results, renovation should be started immediately after the harvest is completed to promote early runner formation. This is especially important in the northern part of the state with its shorter growing season. The earlier a runner gets set, the higher its yield potential. Growers should begin renovation as soon as the last marketable berries are harvested. Delaying renovation is one of the most common mistakes growers make. Renovation should be completed by the end of July in normal years. The following steps describe renovation of commercial strawberry fields.

1. Weed control: Post emergent application: Annual broadleaf weeds can be controlled with 2,4-D amine formulations. Check the label as only a few products are labeled for use on strawberries. e.g. Amine 4 [Dimethylamine salt of 2,4-D (3.74 lb./gal.)] at 2 to 3 pts/acre in 25-50 gallons of water applied immediately after final harvest. Be extremely careful to avoid drift when applying 2,4-D. Even though the amine formulation is not highly volatile, it can vaporize under hot, humid conditions and cause damage to sensitive plants a considerable distance from the site of application. Some damage to strawberries is also possible. Read and understand the label completely before applying 2,4-D amine. If difficult to control broadleaves such as Canada thistle is a problem, Spur (clopyralid) can be applied either broadcast or spot treatment. Spur is not labeled in all states so check the label carefully. If grasses are a problem, sethoxydim (Poast 1.5 EC) or clethodim (Select 2 EC) will control annual and some perennial grasses. However, do not tank mix these materials and 2,4-D. See the Midwest Fruit Pest Management Guide and the product label for rates and especially for precautions.
2. Mow the old leaves off just above the crowns 3-5 days after herbicide application. Do not mow so low as to damage the crowns.
3. Fertilize the planting. Generally, nitrogen should be applied at 25-60 lbs/acre, depending on vigor. It is more efficient to split nitrogen applications into two or three applications at regular intervals, rather than apply it all at once. A good plan is to apply about half at renovation and half again in late August when flower bud development is occurring. A soil test will help determine phosphorus and potassium needs, but foliar analysis is a more reliable measure of plant nutrition. For foliar analysis, sample the first fully expanded leaves following renovation.
4. Subsoil: Where picker traffic has been heavy on wet soils, compaction may be severe. Subsoiling between rows will help break up compacted layers and provide better infiltration of water. Subsoiling may be done later in the sequence if crop residue is a problem or if soils are too wet at this time.

5. Narrow rows: Reduce the width of rows to a manageable width based on your row spacing, the aisle width desired, and the earliness of renovation. An appropriate final row width to attain at the end of the season is 12-18 inches. This is accomplished by establishing new runners from the few plants retained during renovation. Rows can be narrowed to as little as 6 inches during renovation. Use a tiller or cultivator to achieve the reduction. Since more berries are produced at row edges than in the middle, narrow rows are superior to wide rows. Narrow rows will give better sunlight penetration, better disease control, and better fruit quality. Wider rows lead to low productivity and increased disease pressure. See number 9 below.
6. Cultivate: Incorporate the straw and other plant material between rows and throw a small amount of soil over the row by cultivation. Strawberry crowns continue development at the top, and new roots are initiated above old roots on the crown, so 1/2 - 1 inch of soil on top the crowns will facilitate rooting. This also helps cover straw and old strawberry leaves in the row and provides a good rooting medium for the new runner plants.
7. Weed control: Pre-emergence weed control should begin immediately. There are more options today than in past years. Chateau, Dacthal, Devrinol, Prowl H<sub>2</sub>O, Sinbar and Spartan are labeled materials. See the Midwest Fruit Pest Management Guide and check the product labels carefully. Devrinol must be incorporated by irrigation, rainfall, or cultivation to be effective. Rate and timing of Sinbar or Prowl H<sub>2</sub>O application is critical. If regrowth has started at all, significant damage may result. Some varieties are more sensitive to Sinbar than others.
8. Irrigate: Water is needed for both activation of herbicides and for plant growth. Don't let the plants go into stress. Ideally the planting should receive 1 to 1-1/2 inches of water per week from either rain or irrigation.
9. Cultivate to sweep runners into the row until plant stand is sufficient. Thereafter, or in any case after early September, any runner plant not yet rooted is not likely to produce fruit next year and can be removed. Coulter wheels and/or cultivators will help remove these excess plants in the aisles. See number 5 above regarding desired final row width.
10. Adequate moisture and fertility during August and September will increase fruit bud formation and improve fruit yield for the coming year. Continue irrigation through this time period and fertilize if necessary. An additional 20-30 pounds of N per acre is suggested, depending on the vigor.

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## Extension Events

(Bruce Bordelon, [bordelon@purdue.edu](mailto:bordelon@purdue.edu), (765) 494-8212)

Due to the COVID crisis, all Purdue Extension meetings were

cancelled through June. After July 1, in-person meetings may be held and will follow state and local guidelines. Most Purdue Extension staff are working from home and we are available to answer your questions by email, phone or through social media. Our contact information is at the end of the newsletter.

**July 30, 2020** Small Farm Education Field Day

Hosted virtually

Contact Lori Jolly-Brown, [ljollybr@purdue.edu](mailto:ljollybr@purdue.edu)

**September 10-12, 2020** Purdue Extension Master Gardener State Conference

Sponsored by the Hamilton and Howard County Master Gardener Associations

Hamilton County Fairgrounds, Noblesville, IN (September 10 and 11)

Tours of Howard County gardens, Kokomo, IN (September 12)

<https://hcmga.org/2020sc>

(Registration open to Purdue Extension Master Gardener volunteers and Extension staff only)

**September 10, 2020** Hydroponics Workshop

Hosted virtually

Contact Lori Jolly-Brown, [ljollybr@purdue.edu](mailto:ljollybr@purdue.edu)

**January 19-21, 2021** Indiana Green Expo

Indiana Convention Center, Indianapolis, IN

Contact Brooke Ponder, [bponder@purdue.edu](mailto:bponder@purdue.edu)

**January 20 & 21, 2021** Indiana Horticultural Conference & Expo

Indianapolis Marriott East

Contact Lori Jolly-Brown, [ljollybr@purdue.edu](mailto:ljollybr@purdue.edu)

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