

## Southwest Michigan Field Crops Updates August 15, 2023

Here are updates from the MSU Extension Field Crops team in Southwest Michigan. If you have any items you would like me to include in future email updates—whether events you want others to know about or topics you would like to have addressed—please send me an email or call the office.

## Registration Still Open for Southwest On-Farm Research Field Day August 23



It is not too late to register for the MSU Extension On-Farm Research Field Day next Wednesday. Online registration has been extended to **Sunday, Aug. 20**.

The day begins at 8:00am with check-in and a light breakfast, the first educational session begins at 8:30am, and the day concludes by 2:00pm. **BONUS:** As the topic of on-farm safety and combine fires will be addressed, we will be giving away 3 fire extinguishers during a drawing at the end of the meeting!

**CREDITS:** 3 RUP, 5 CCA, 1 PARP (for our Indiana farmers, thanks to Jeff Burbrink), and MAEAP Phase 1 credit

**COST:** Cost is FREE due to generous funding from the Michigan Soybean Committee and the USDA Natural Resources Conservation Service Project

**REGISTRATION:** [Register online](#) by Aug. 20 to reserve a meal. Walk-ins will be accepted but lunch is not guaranteed. You can also call the St. Joseph County Extension office (269-467-5511) this week and they can help get you registered.

## Weather and Crop Update

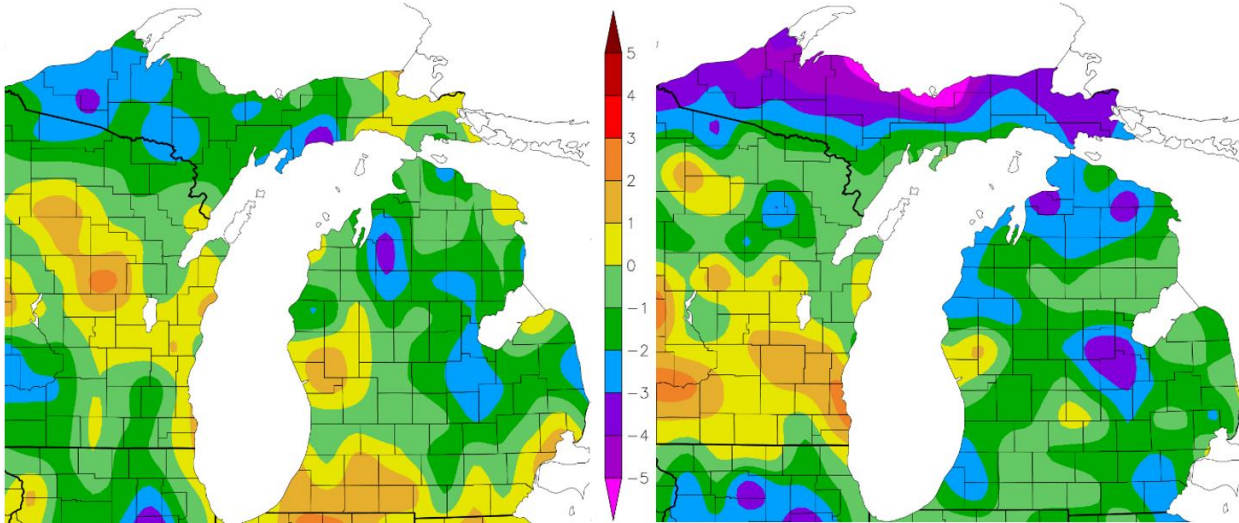
### Weather

Temperatures last week were within 1-2 degrees of normal. We accumulated 127 growing degree days (GDD base 50), and although most of the region continues to be near average for GDD<sub>50</sub> accumulation this year, portions of Berrien, Cass Van Buren and Allegan counties are now about a week behind. The forecasted reference evapotranspiration rate (FRET) is roughly 1.3 inches for most of the region for the week ending August 21 which

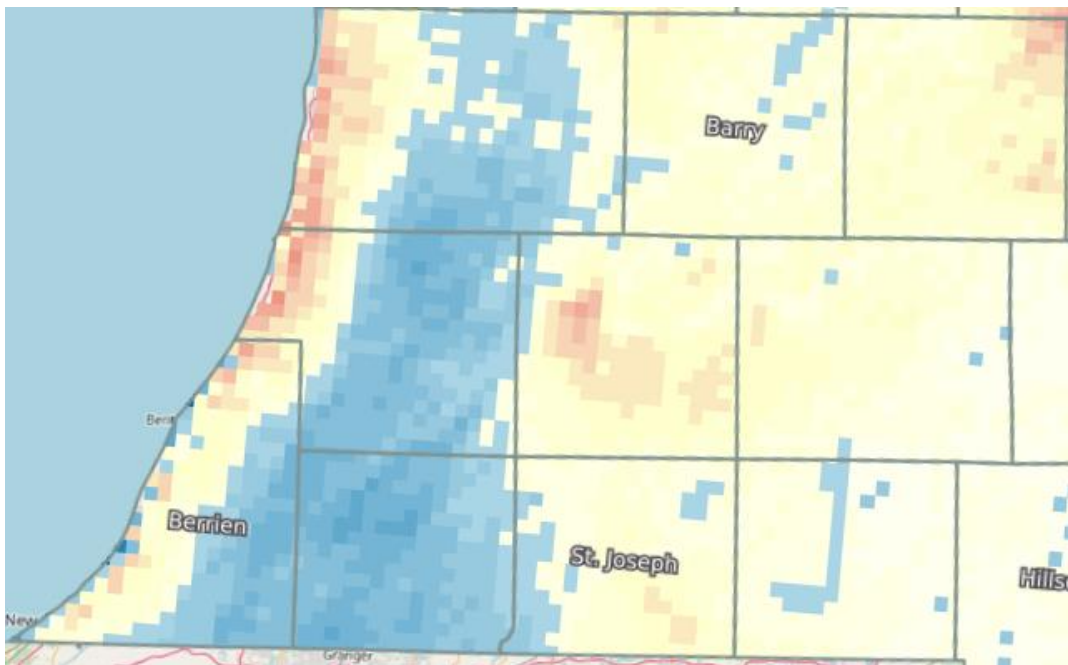
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is near normal for this time of year. An additional 135 GDD<sub>50</sub> are predicted for the coming week. The medium-range outlooks call for above-normal temperatures through the end of the month.

There is a growing concern that long-season and late-planted crops will not have enough time to mature before a killing frost. Historically, the average date of a hard freeze (28 degrees) in southwest Michigan is October 24 give or take. Interestingly, the average first fall freeze has shifted 1-3 days later per decade since 1951. According to the [U2U website](#), for a 105-day corn hybrid planted on May 10 near Kalamazoo, silking should have started on July 26 and black layer should occur on or around October 6, nearly three weeks before the average first hard freeze. You can change certain inputs on the website for the hybrids you planted to estimate when to expect physiological maturity at your location.

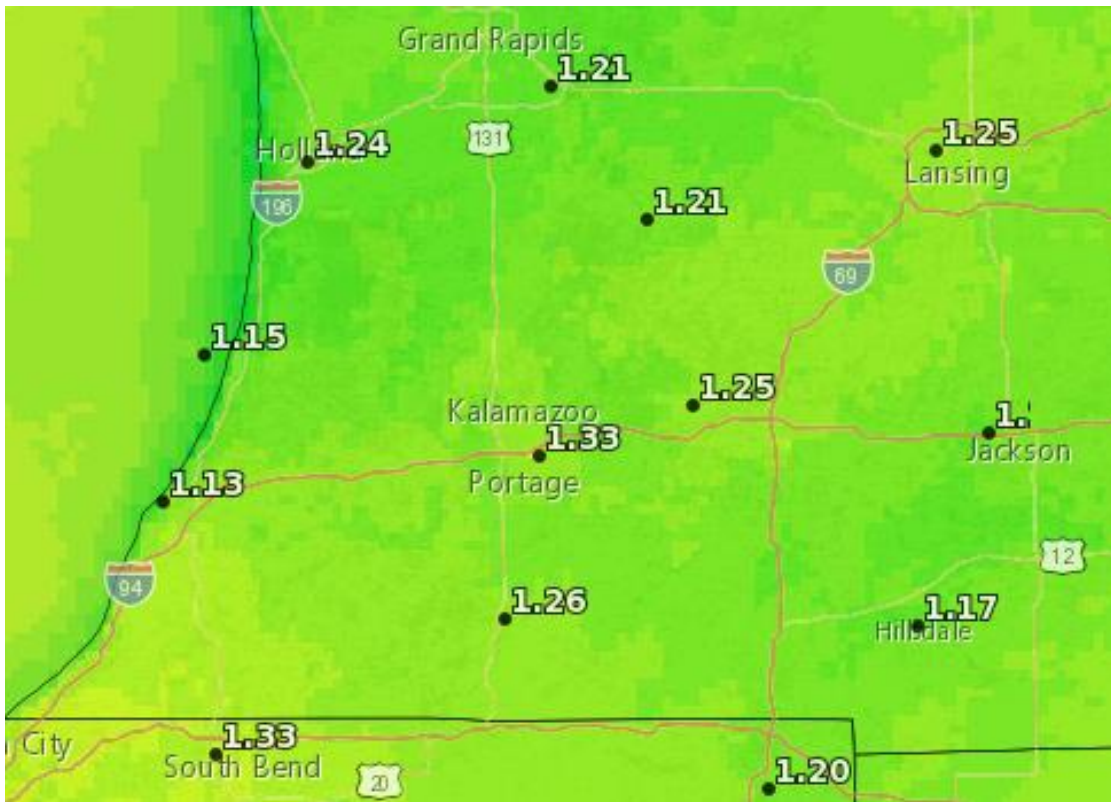


Departure from normal for average minimum (left) and maximum (right) temperatures for the week ending August 14.

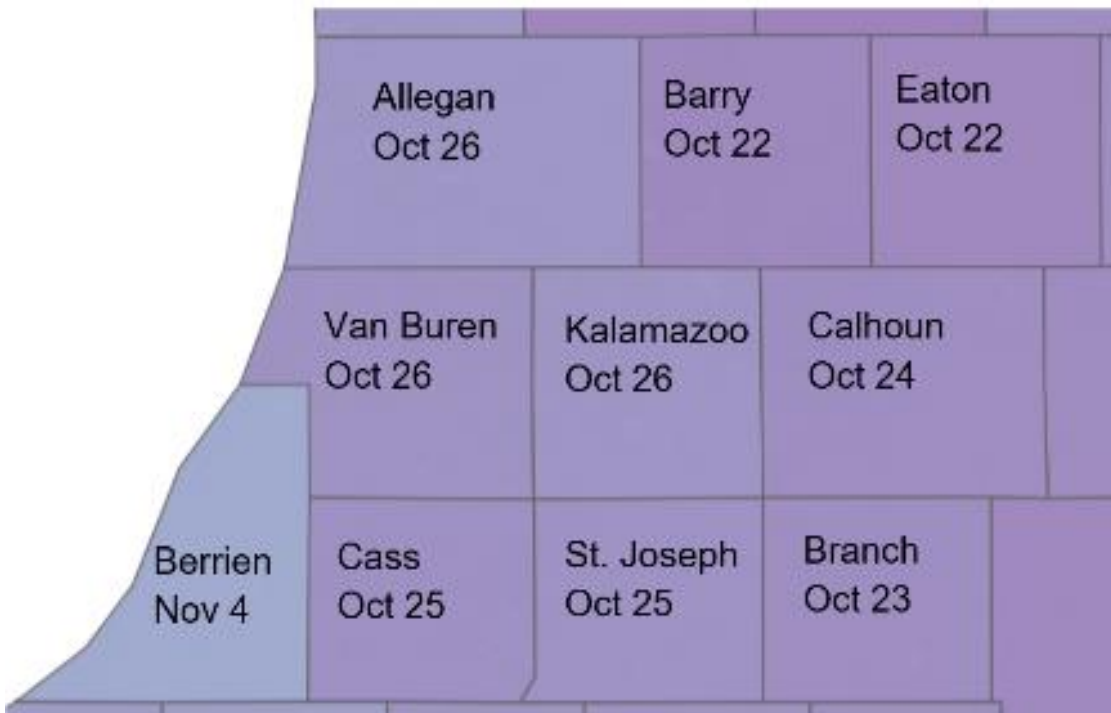


Growing degree day (GDD base 50 degrees) accumulation compared with normal since March 1.

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Total weekly forecasted reference evapotranspiration rate (FRET) for the week ending August 21.



Average first fall 28-degree freeze date for southwest Michigan according to the [Midwest Regional Climate Center Freeze Date Tool](#).

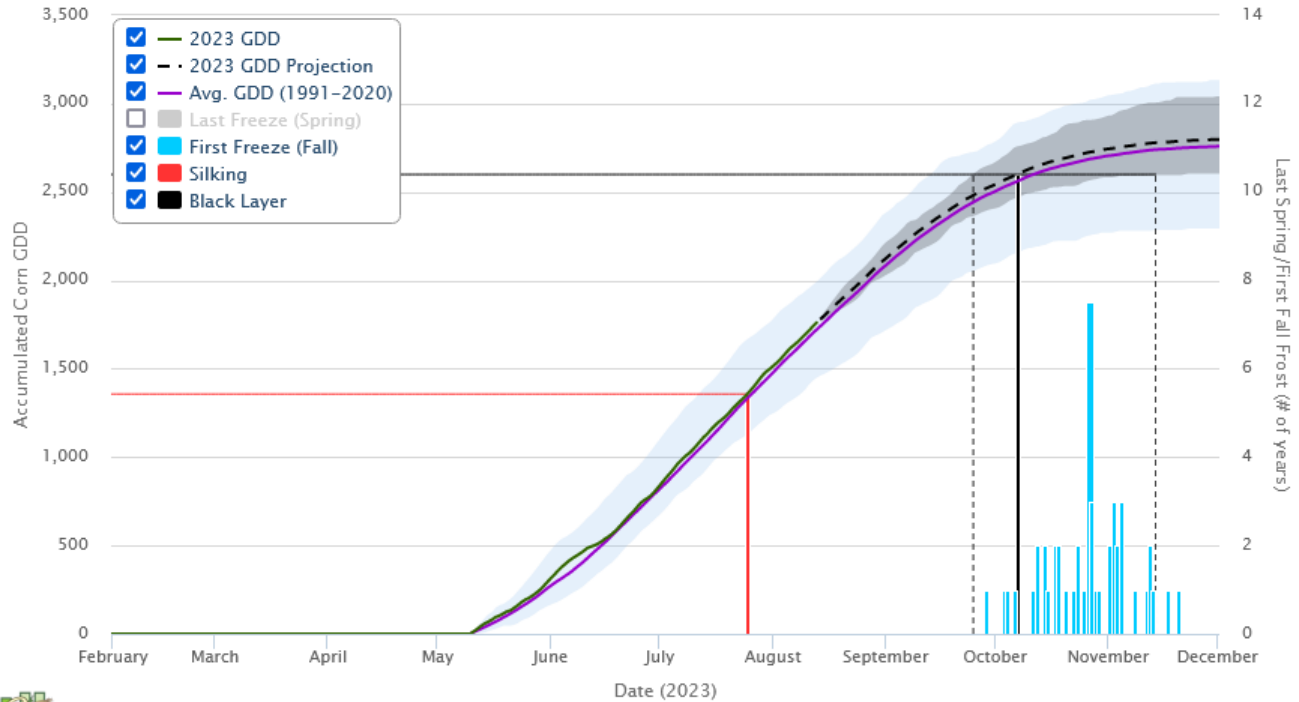
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GDD Start:   Comparison Years:  Corn Maturity Days:  Silking GDDs:   
 Freeze Temperature (°F):  Variation:  Current Day:  Black Layer GDDs:

## Corn Growing Degree Day Tool

Chart Options

Location: 41.92, -85.52 in St. Joseph Co., MI, Start Date: May 10, Maturity Days: 108, Freeze Temp: 28°F, Variation: All Years

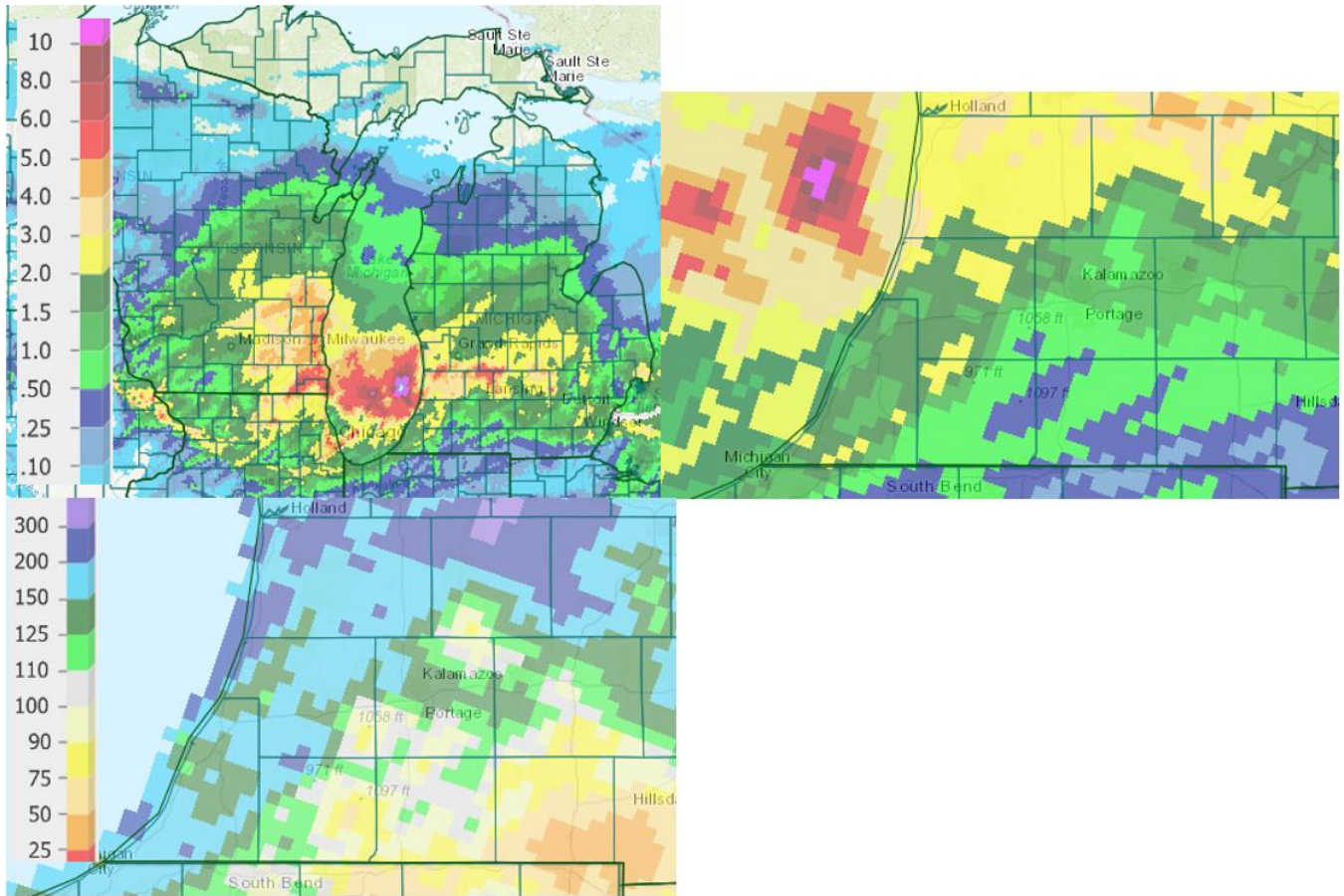


GDD Base 50/86 (degrees F); Created: 08/15/2023

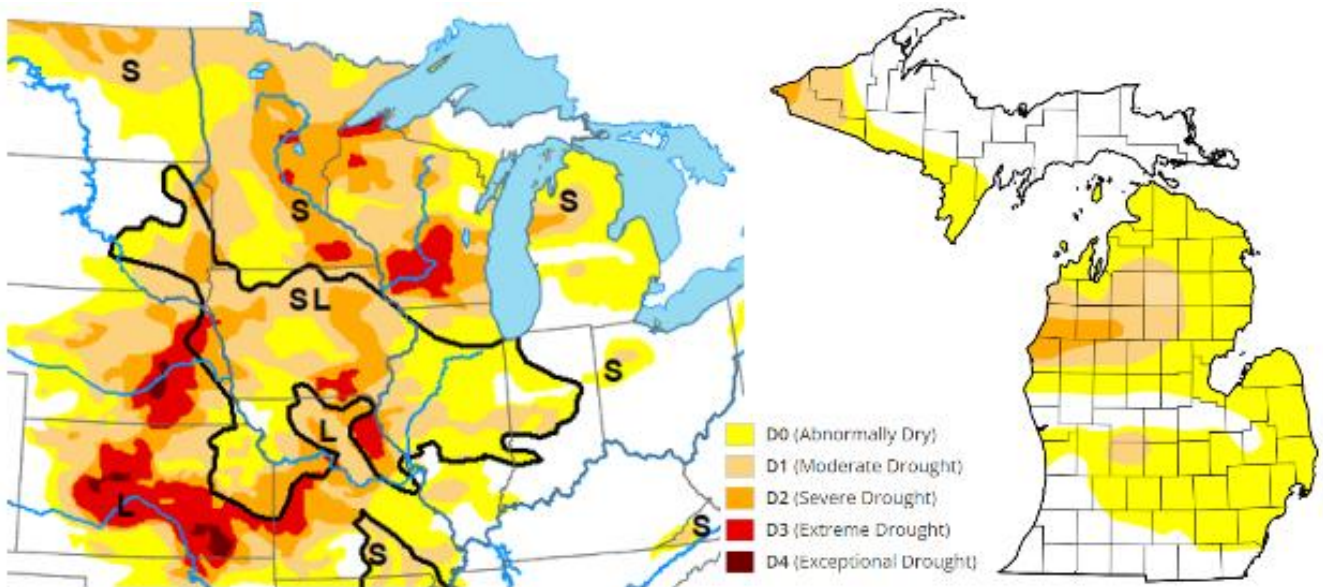
Corn development and predicted dates of key milestones based on growing degree day accumulation according to the [U2U Decision Support Tool](#).

Rainfall this past week ranged from less than a quarter of an inch along the Indiana border to over three inches closer to Grand Rapids. Rainfall during July was 1.5 to 2 times normal which alleviated short-term drought stress to crops and began to replenish the soil water reserves. However, so far in August, there has been a definite gradient from northwest to southeast within the region with the latter receiving very little rainfall. The drought monitor (August 10 release) shows drought status has been removed from southwest Michigan except for portions of Eaton and Barry counties. The precipitation forecast map for the coming week predicts totals of 0.25-1.0 inch for southwest Michigan. The medium-range outlooks call for slightly below-normal chances of precipitation through the end of August.

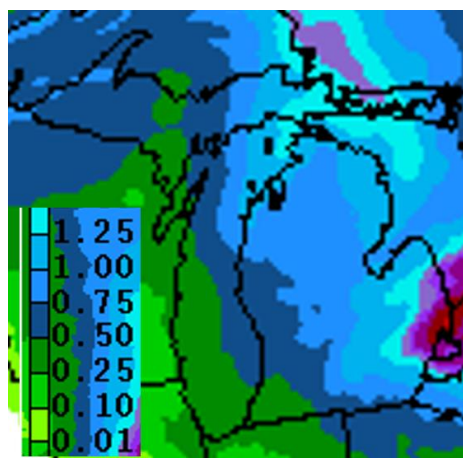
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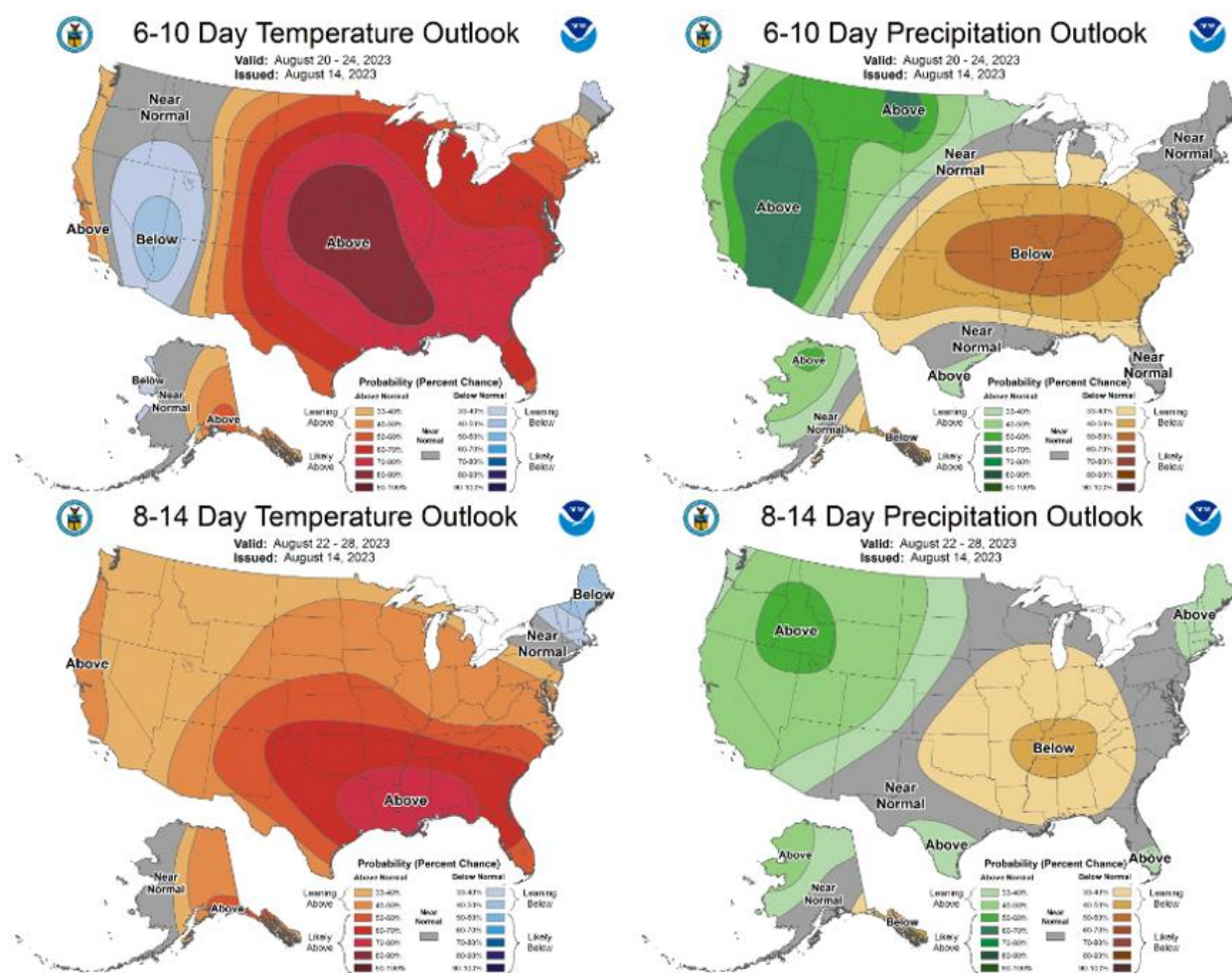
Precipitation totals for the past 24 hours (upper left) and 7 days (upper right) and percent of normal for the past 14 days (lower left) as of August 15.



Drought Monitor released August 10.



Precipitation forecast for August 15-22.



The 6-10 day (August 20-24, top) and 8-14 day (August 22-28, bottom) outlooks for temperature (left) and precipitation (right).

### Crops and Pests

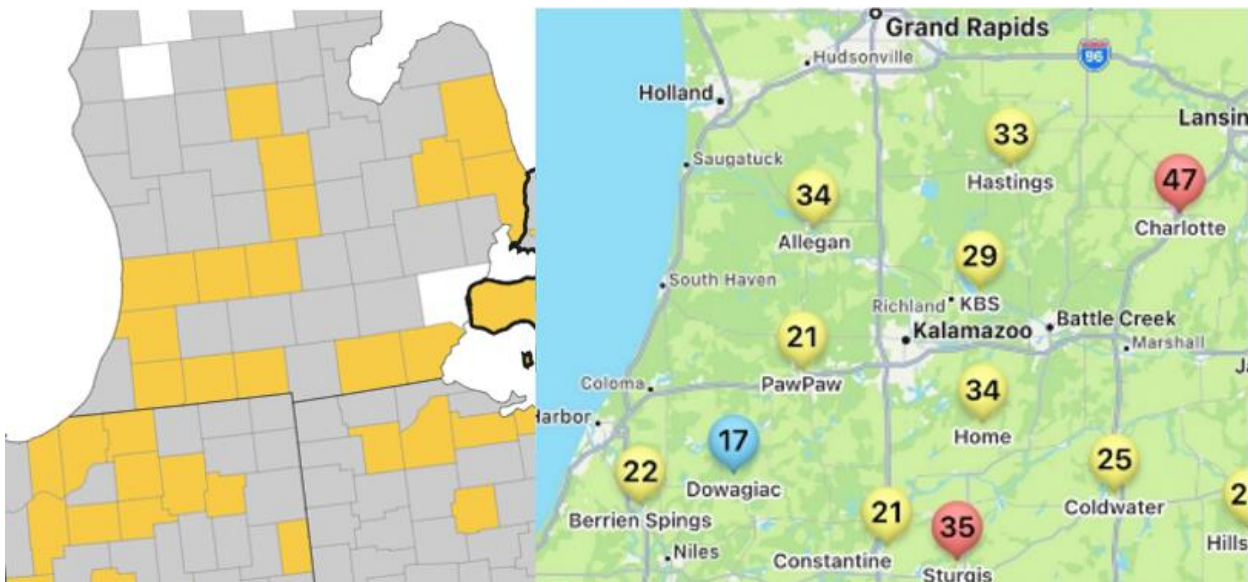
**Corn and soybean** look healthy in almost all fields and continue to advance through early reproductive stages. Corn fields range from pre-tassel to blister stage with most fields being in either late silk or blister stage. Confirmed tar spot reports have increased in Michigan according to the [Corn ipm PIPE tar spot map](#). Tar spot risk remains medium in the region for the most part. MSU field crop pathologist Marty Chilvers says, “Disease pressure is generally light and about a month behind development in 2021. If there continue to be leaf wetness events through August and September, we could see yield loss from tar spot. I recommend scouting your fields to

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know if you have disease pressure. When disease is present, a fungicide application between R1 and R3 typically results in good protection. There are some exceptions where a later application has helped protect yield.”



Corn at late blister stage. Photos courtesy of Eric Anderson.



Tar spot has been confirmed (gold) in several more counties in Michigan according to the [Corn ipmPIPE website](#) (left), and the current risk level is mostly medium according to the Tarspotter app (right).

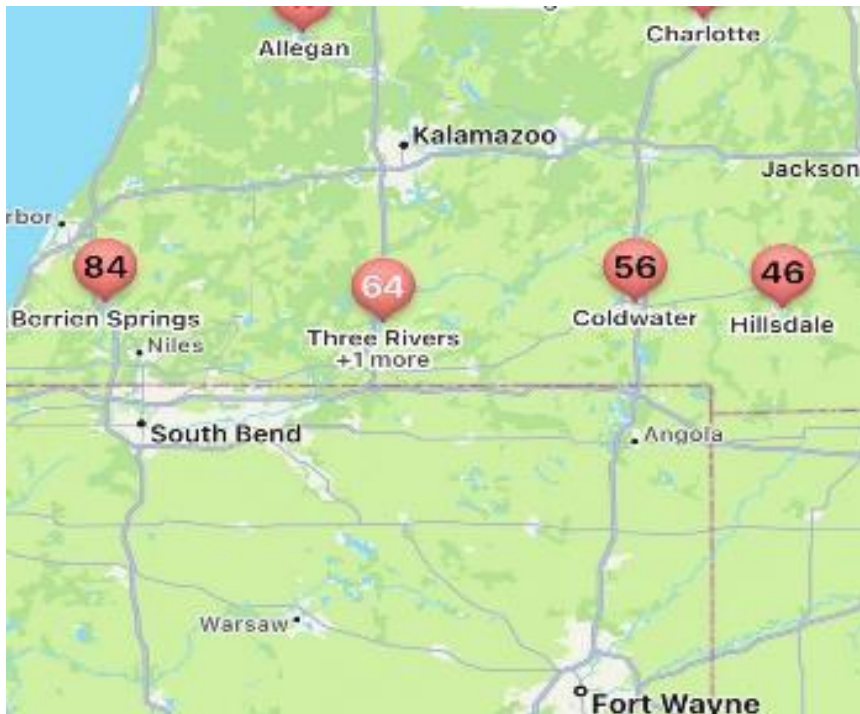
Soybean in all fields visited has reached R4 (full pod, pods are 3/4 inch at one of the four uppermost nodes on the main stem) and fields with early plantings and/or maturity groups have reached R5 (beginning seed, seed is 1/8 inch long in the pod at one of the four uppermost nodes on the main stem). The Sporecaster app for white mold continues to show high risk of white mold for most of the region. Chilvers says a fungicide application should be

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made between R1 and R3 growth stage with less efficacy at R4. "Revenge sprays" at R5 and beyond are ineffective according to Chilvers.



Soybean at beginning seed (R5) stage. Photos courtesy of Eric Anderson.



Risk of white mold in soybean according to the Sporecaster app.

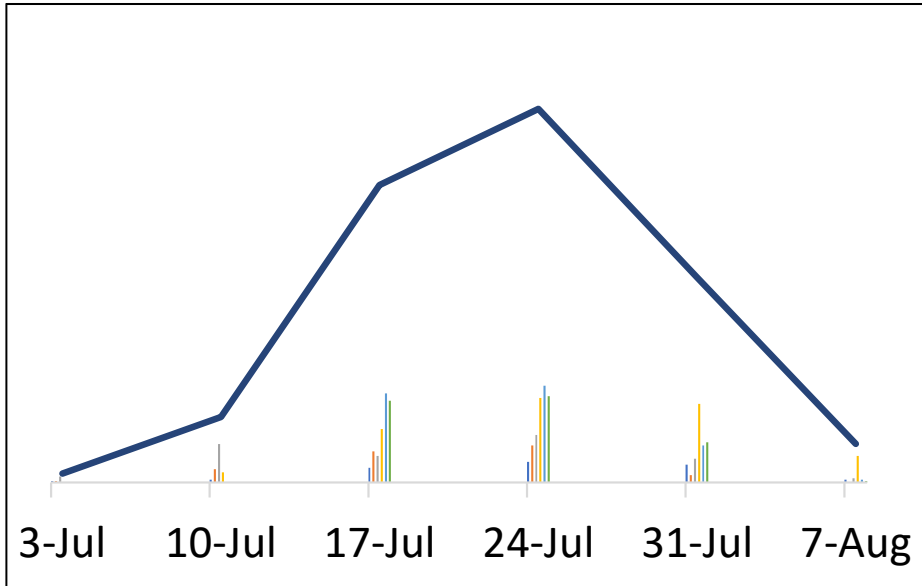
**Insects.** Western bean cutworm (WBC) moth trap counts in Indiana and southern Michigan continued to decline this past week, and it appears peak flight was during the third week of July. No reports of egg masses have come in, so hopefully that means feeding and kernel damage will be minimized this year. Refer to previous southwest Michigan crop reports for details on scouting for and managing this pest.



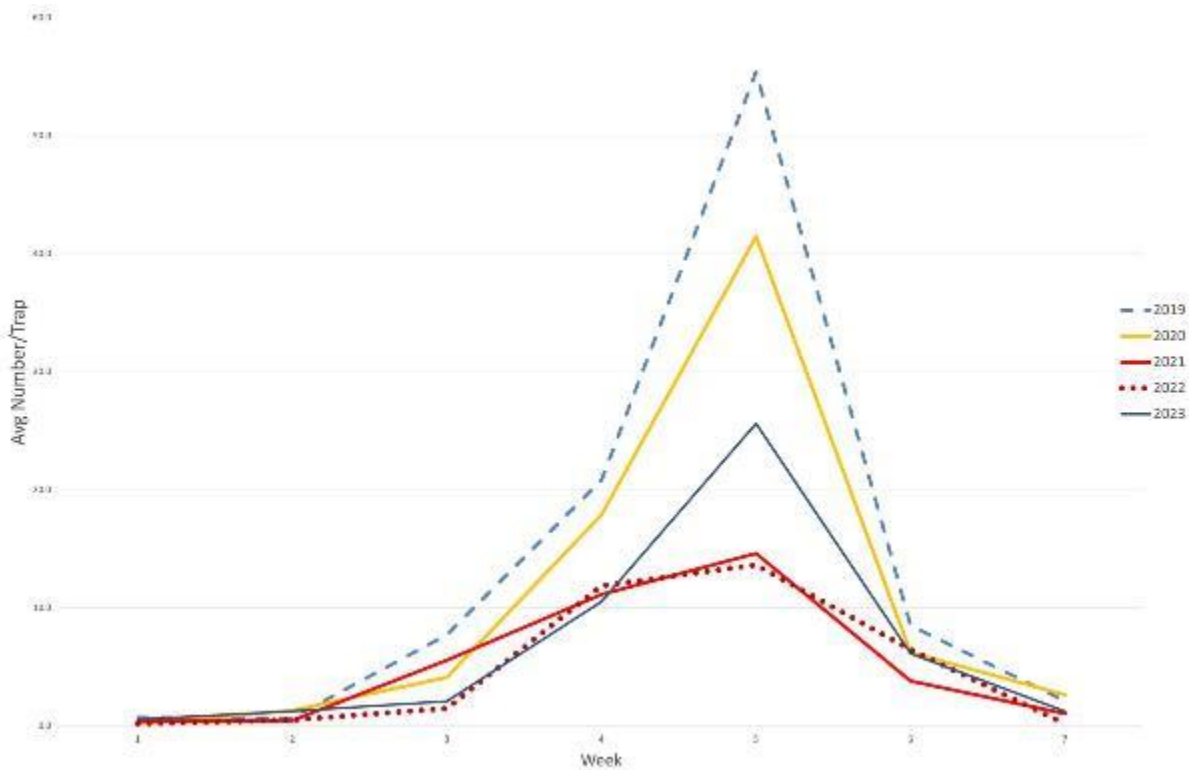
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Moth counts in western bean cutworm (WBC) traps in St. Joseph and Kalamazoo counties.

	3-Jul	10-Jul	17-Jul	24-Jul	31-Jul	7-Aug
WBC1	1	2	10	14	12	2
WBC2	1	9	21	25	5	0
WBC3	4	26	18	32	16	3
WBC4	0	7	36	57	53	18
WBC5			60	65	25	2
WBC6			55	58	27	1



Trend for western bean cutworm (WBC) moth counts in St. Joseph and Kalamazoo counties in 2023.



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Trend for western bean cutworm (WBC) moth counts in Indiana from 2019-2023. Note: Week 5 on the graph from Purdue was July 13-19 this year. Indiana graph courtesy of [Purdue University Extension](#).

**Irrigation.** Timely rainfall these past two weeks has given most irrigators a reprieve from chasing water. Both corn and soybean in almost all fields are at peak water use with a  $K_c$  of 1.2 which will continue through dent (R5) in corn and full seed (R6) in soybean. With the estimated weekly FRET at around 1.3 for this week, both crops will use 1.55 inches of water this coming week.

## CALENDAR

(Note: titles are clickable links to online content when highlighted and underlined)

- Aug 17** [Virtual Breakfast – "Hot Topics" Q & A session.](#) 7-8am. Register online once for the entire series. Several faculty to join and share updates on their area of specialty.
- Aug 18** [Farmland Preservation in Michigan.](#) 9-11am. Van Buren Conference Center, 490 S Paw Paw St, Lawrence, MI. Learn & discuss hot topics in farmland use and protection: Farm transfer and succession; Land access and affordability; Investor and foreign ownership of farmland. Speakers from American Farmland Trust. RSVP by Aug 10. Contact [Julie Doll](#) from Michigan Agriculture Advancement with questions.
- Aug 22-23** [Beginner Grazing School.](#) 10am – 4pm. MSU Lake City Research Center, 5401 W. Jennings Rd., Lake City, MI. Team of experts addressing wide range of topics. Cost is \$250 for one person, \$400 for two from same farm, or, \$550 for 3 from same farm. Fee includes grazing stick, all program materials, and all meals. Register online by Aug 18.
- Aug 22** [MI Corn Between the Rows in Marshall.](#) 6pm. 19140 21 ½ Mile Rd, Marshall, MI. Free but RSVP requested. 1 RUP credit offered.
- Aug 23** [Southwest On-Farm Research Field Day.](#) 8am-2pm. [70811 Lakeview Rd., Sturgis, MI 49091.](#) See details in the description above. Register online by Aug. 17.
- Aug 24** [Virtual Breakfast – Timing the Last Irrigation Application with Younsuk Dong and Lyndon Kelley.](#) 7-8am. Register online once for the entire series.
- Aug 31** [Virtual Breakfast – Setting the Stage for Record Breaking Wheat Yields with Dennis Pennington.](#) 7-8am. Register online once for the entire series.
- Sep 7** [Virtual Breakfast – Marketing Your Grain Crops with Matt Gammans.](#) 7-8am. Register online once for the entire series.
- Sep 14** [Virtual Breakfast – Monitoring Nematode Resistance in Soybeans with Marisol Quintanilla.](#) 7-8am. Register online once for the entire series.
- Sep 15** [KBS LTAR Field Day.](#) 10am-2pm. Kellogg Biological Station, 9693 N 40th St., Hickory Corners, MI. First annual Long-Term Agroecosystem Research Field Day featuring sustainable cropping solutions for the future. Cost is free, includes lunch, register online.
- Sep 21** [Virtual Breakfast – Fall Weed Control with Christy Sprague.](#) 7-8am. Register online once for the entire series.
- Dec 19** [Integrated Crop and Pest Management Update.](#) MSU Livestock Pavilion. Save the date, details to come soon.

## MSU Extension Digest Briefs

### JOIN US! KBS LTAR FIELD DAY: SUSTAINABLE CROPPING SYSTEMS FOR THE FUTURE

**PUBLISHED ON AUGUST 11, 2023**

Curious about how MI rowcrop systems can be profitable and environmentally sustainable? Join us on September 15th for the first annual field day at the Kellogg Biological Station Long-Term Agroecosystem Research (LTAR) site. Registration link below.

### KEEP IRON OCHRE UNDER CONTROL IN YOUR BASEMENT

**PUBLISHED ON AUGUST 11, 2023**

Learn how to reduce iron ochre in your basement using three simple strategies.

### IS IT TOO LATE TO APPLY FUNGICIDES TO CONTROL WHITE MOLD IN SOYBEANS?

**PUBLISHED ON AUGUST 10, 2023**

Considerations for deciding when it is too late to apply fungicides to control white mold.

### MAKING THE MOST OF LOW HAY YIELDS

**PUBLISHED ON AUGUST 7, 2023**

In need of more hay? Protect what you have first.

### MICHIGAN STATE WHEAT BREEDING AND GENETICS PUBLISHED 2023 WHEAT VARIETY PERFORMANCE TRIALS

**PUBLISHED ON AUGUST 4, 2023**

MSU's Wheat Breeding and Genetics worked with 7 cooperators in 7 Michigan counties to test the performance of 102 wheat varieties from 11 different organizations.

### 2023 MICHIGAN WHEAT PERFORMANCE TRIALS

**PUBLISHED ON AUGUST 4, 2023**

The 2023 State Wheat Performance Trial entries were planted in 7 counties: Isabella, Hillman, Ingham, Huron, Montcalm, Sanilac and Tuscola.

### WHY DO SUBSURFACE DRAINAGE SYSTEMS UNDERPERFORM?

**PUBLISHED ON AUGUST 1, 2023**

Subsurface (tile) drainage removes excess water from the soil to create good fieldwork and crop growth conditions on poorly drained soils. In this bulletin, three common causes for the under-performance of subsurface drainage systems are described.

### MOLE DRAINS

**PUBLISHED ON AUGUST 1, 2023**

Mole drains are unlined tunnels (mole channels) in the clay subsoil formed by a mole plow.

### IRON OCHRE

**PUBLISHED ON AUGUST 1, 2023**

This bulletin describes the iron ochre issue and its mitigation methods.

### CHOOSING BETWEEN SOCK-WRAPPED AND SAND-SLOT PIPES

**PUBLISHED ON AUGUST 1, 2023**

This bulletin describes the condition where sock-wrapped and sand-slot pipes are needed.

### CHOOSING BETWEEN 8-ROW AND 4-ROW REGULAR-PERFORATED PIPES

**PUBLISHED ON AUGUST 1, 2023**

This bulletin compares the properties of two 4-inch diameter pipes: 8-row and 4-row regular-perforated pipes.

### WHY MACROPORES CAN RUIN YOUR BEST INTENTIONS WITH CONSERVATION PRACTICES

**PUBLISHED ON AUGUST 1, 2023**

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Site specific conservation planning is key to managing no-till and cover crops in row crop systems.

### SOUTHWEST MICHIGAN CROP PRODUCTION AND IRRIGATION RESEARCH FIELD DAY 2023 **PUBLISHED ON AUGUST 1, 2023**

Research efforts and current recommendations in irrigated corn and soybean production and pest management will be discussed at a field day in St. Joseph County on August 23, 2023.

### HOW DOES MARGIN PROTECTION OFFER COVERAGE? **PUBLISHED ON JULY 31, 2023**

Understanding margin protection payment calculations.

### MARGIN PROTECTION PROGRAM WIDENS COVERAGE FOR MICHIGAN FIELD CROPS **PUBLISHED ON JULY 31, 2023**

The Margin Protection program is an alternative to SCO or ECO options.

### ANN ARBOR GREENBELT PROGRAM CELEBRATES 20TH ANNIVERSARY WITH NEW AFFORDABLE FARMLAND ACCESS OPPORTUNITY **PUBLISHED ON JULY 31, 2023**

Request for proposals open until September 11, 2023.

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