

Southwest Michigan Field Crops Update August 1, 2024

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 St. Joseph County MSU Extension office.

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FREE SW MI On-Farm Research Field Day Wednesday, August 28

Join us to hear the latest and greatest in disease and crop management and irrigation and soybean research. Educational sessions will start the day off, followed by lunch and then a short tour of a couple research plots. The day will finish with an interactive pivot performance evaluation. The event starts at 9:00 am on Wednesday, August 28 at Covered Bridge Farm (56705 Covered Bridge Rd, Three Rivers, MI 49093). **Two RUP and 3.5 CCA (2 SW, 1 IPM, 0.5 CM) credits are available.** Courtesy of the Michigan Soybean Committee and NRCS, this event is offered free of charge. Whether you've collaborated on research in the past or not, all are welcome to attend! [Register here.](#)

MICHIGAN STATE UNIVERSITY | Extension

August 28, 2024
9:00 am - 2:30 pm

Covered Bridge Farm, 56705 Covered Bridge Rd, Three Rivers, MI

FIELD DAY
ON-FARM RESEARCH

REGISTER

bit.ly/on-farm-research

msue.stjoseph@county.msu.edu

Climate Change Research Opportunity

[This project](#) seeks to understand how climate change and extreme weather events impact crop yields, soil health, and the economic well-being of farmers across Michigan, while facilitating opportunities for Michigan farms to contribute to climate change solutions.

Options for levels of Farmer Participation

- Any farmer interested in participating in a soil health assessment. Two fields of your choice will be sampled by a team of researchers Fall of 2024. (~ 80 participant limit).

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- B. Conventional farmers who are interested in establishing regenerative practices such as cover cropping or buffer strips, but would like guidance through the process over the three-year study period (~5 participant limit)
 - a. This does not require shifting whole style of farming, just implementing new methods on select field(s)
 - b. Support regarding how this may work financially from farm collaborators and researchers
- C. Farmers currently using regenerative practices who would like to partner with researchers on this project for three years (~20 participant limit)



[Enroll in project here](#) or with the QR code.

FREE KBS LTAR Field Day – Thursday, September 5, 2024

September 5th will be the second annual field day at the Kellogg Biological Station (KBS) Long-Term Agroecosystem Research (LTAR) site (9693 N 40th St. Hickory Corners, MI 49060). This year we will highlight early agronomic and ecological outcomes in our system with a 5-crop rotation, no-till, cover crops, and precision ag technologies. We'll also discuss the practical tips, tricks, and adjustments needed to make conservation practices work. Any and all agricultural and conservation practitioners and professionals are invited to attend! Registration highly encouraged for this free event. Morning refreshments, snacks, and lunch provided! Reach out to Tayler Ulbrich (chico1n1@msu.edu) or Christine Charles (charl122@msu.edu) with any questions.

Registration and more details:

<https://events.anr.msu.edu/ltarfieldday2024/>

KBS LTAR FIELD DAY:

Kellogg Biological Station Long-Term Agroecosystem Research

Sustainable Cropping Systems for the Future

SEPTEMBER 5, 9:30-1:30 PM

- Early outcomes from the LTAR**
How does farming with a 5-crop rotation, no-till, cover crops and precision management compare to the prevailing corn/soy system?
 - Yield & profit
 - Pests & pollinators
 - Water quality
 - Greenhouse gases
 - Soil health
- How Tos & What-Not-To-Dos**
We'll share technical details on how we've overcome challenges to adopting new practices
- Free Lunch & Networking**

**9693 N 40TH ST.
HICKORY CORNERS MI**

Contact Tayler Ulbrich with questions
email: chico1n1@msu.edu

**REGISTER BY
AUGUST 23!**

Registration free,
but required

<https://events.anr.msu.edu/ltarfieldday2024/>

****RUP & CCA credits requested****



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Confidential Soil Nutrient Practices Survey

Soil nutrient deficiencies that limit crop yield are often foremost on farmer's minds but nutrient excesses, especially phosphorus and nitrogen, seem to grab the headlines. Since Michigan is surrounded by our five Great Lakes which ultimately receive any excess soil nutrients, there is an urgent need to identify best practices which feed crops adequately without adding to nutrient loading in the Lakes. Variation in soil type, soil texture, crops and cover crops grown, and crop rotations can have a huge impact on effectiveness of soil nutrient management practices. Vicki Morrone in the Department of Natural Resources at Michigan State University is part of a team evaluating the relationship among soil type, crops grown, and practices used to manage soil phosphorus and nitrogen. She is asking farmers from all types of production systems to help identify practices they use by filling out a brief anonymous online survey describing soil conditions and approaches used for soil phosphorus and nitrogen management. The information shared will help identify promising approaches for researchers to test on different soil types and with different field crop, vegetable, fruit, and pasture rotations. The survey will take about 15 minutes to complete, and everyone who completes it can be entered into a drawing for MSU hoodies. Deadline for survey is November 1, 2024. Winners will be announced on December 1, 2024, and mailed their prize. This work is funded by the USDA National Institute of Food and Agriculture. If you have questions, please email Vicki Morrone at sorrone@msu.edu. To access the survey, just point your phone camera at the QR code and tap the link when the address on the phone screen. This will take you to the confidential survey.



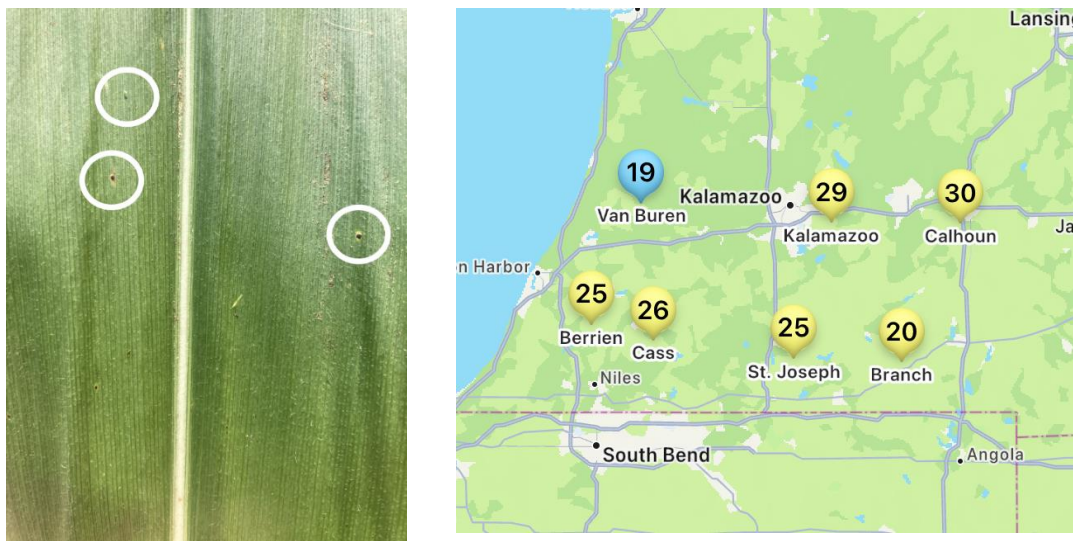
Field Crops Update

Soybean pods are between initial formation (R3) and partial seed fill (R5). **Phytophthora stem and root rot** is a concern after the heavy rains a few weeks ago. The standing water facilitates the travel of zoospores to soybean roots. Phytophthora is recognizable by the presence of a brown stem lesion that begins at the soil line and moves up the stem, but not all infected plants will show the brown lesion—some will simply be yellow or wilted. For more information, check out the article "[Soybean Phytophthora stem and root rot resistance genes have become less effective](#)". Minor foliar diseases and pests are present in the canopy. Some flowers are still out in the canopy, but most **white mold** sprays have been completed by now. Scouting for **Sudden Death Syndrome (SDS)** should start at R5 and continue through R6. It's important that the plants still be in a green stage so that identifying diseased plants is easier. SDS symptoms range from stunted growth to the recognizable leaf pattern of yellow interveinal chlorosis and then necrosis, as shown in the photo. Areas showing SDS symptoms can be sampled for **soybean cyst nematode** populations and sent to the [MSU Plant and Pest Diagnostics lab](#). Sample processing for Michigan soybean growers is [funded by soybean checkoff dollars](#).

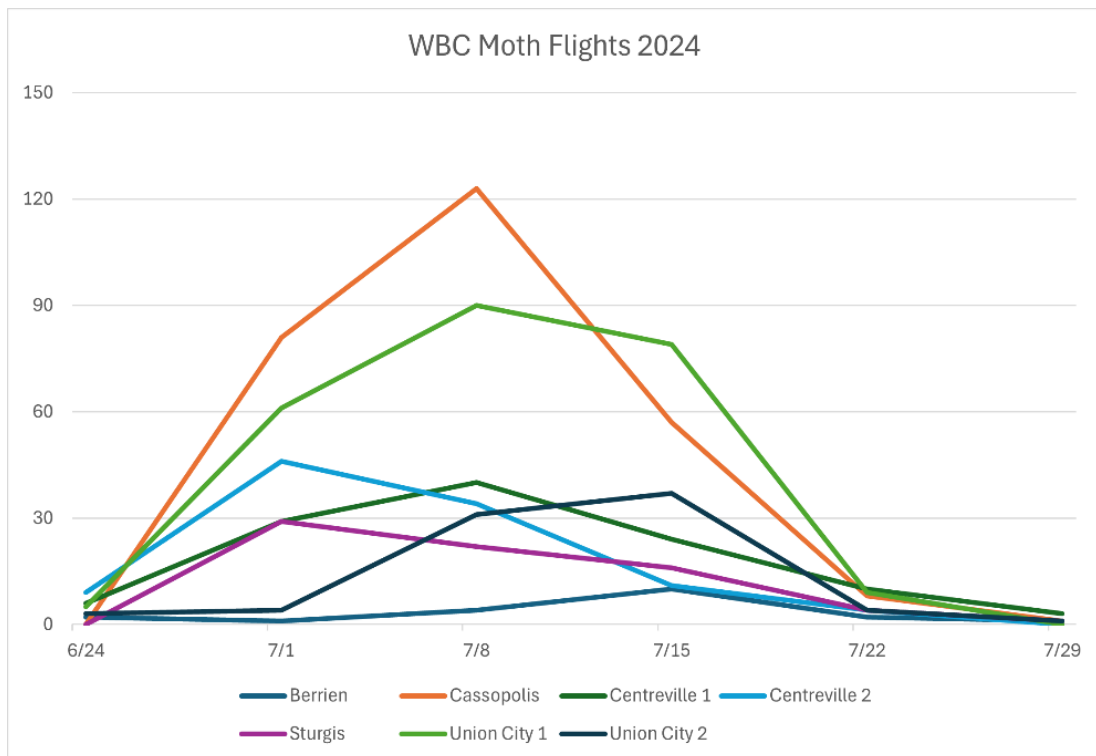


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Corn is mostly in reproductive stages with ears between R1 (silks visible outside the husk) and R4 (dough). **Tar spot** is present in low levels in Branch, Calhoun, Kalamazoo, St Joseph and Van Buren Counties, but fungicide application decisions should be made based on each field's condition rather than the tar spot map. The Tarspotter app shows medium tar spot risk throughout most of southwest Michigan for today, August 1.



Corn leaf aphids continue to land in fields and congregate mainly in the whorls. Black winged adults and green wingless adults may both be visible in the same field. The sticky honeydew secreted by the aphids can interfere with pollination but otherwise do not pose an economic threat in most cases. However, there is potential for them to transmit viruses. **Western bean cutworm (WBC)** peaked two to three weeks ago. For most areas, peak flight was the week of July 8, as shown in the graph below. Corn that is close to tasseling or freshly tasseling is most attractive for egg-laying female moths. When scouting, put the sun behind the leaves and watch the upper third of the canopy for egg masses. It takes about a week for egg masses to hatch, at which point the larvae will travel to reproductive tissues. Larvae or their entry holes may be visible, but they hide to feed on reproductive tissues, so larvae can be difficult to see without opening up the plant. The threshold for WBC damage is 5% of plants with egg masses and/or larvae. This is a cumulative threshold, meaning that findings add up from week to week.



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Potato harvest of fresh crop chippers continued. Early russet harvest will begin next week. Vine kill applications began almost a month ago but will pick up over the next week.

Weekly Crop Water Use

Corn and soybeans are currently in their early to mid-reproductive stages, making it crucial to meet their water needs. Soybeans are particularly sensitive to water stress during these stages when their water use peaks. Insufficient water during these stages can significantly reduce the number of seeds per pod or seed size, thereby lowering yield potential. Similarly, water stress during corn's tasseling and silking stages can decrease yield. To optimize irrigation efficiency during these critical periods,

Estimated weekly crop water use for field crops in Michigan (in/week)				
Week of July 29 - August 4				
Crop	Growth stage	Constantine	Entrican	Hart
Corn	V12	1.00	1.22	1.26
	VT	1.10	1.34	1.39
	Silk, Blister,			
	Dough, Begin Dent	1.10	1.34	1.39
	Full dent	1.00	1.22	1.26
Soybeans	R1 Beginning			
	bloom	1.00	1.22	1.26
	R2 Full bloom	1.10	1.34	1.39
	R3 and R4			
	Beginning Pod/Full			
Pod	1.10	1.34	1.39	
R5 Begin seed/Full				
seed	1.10	1.34	1.39	

aim to apply five to six days' worth of crop evapotranspiration, typically between 1 and 1.25 inches, depending on weather conditions. Utilize the water use table provided above as a guide to align your irrigation rate with the crop's water needs, accounting for any rainfall and leaving room for future precipitation events.

The table above presents estimated crop water use for various field crops across three locations in Michigan. This data helps irrigation management decisions by showcasing potential crop evapotranspiration, calculated based on reference evapotranspiration and crop coefficients for each crop growth stage. It is crucial to note that crop water use values vary across regions due to differences in weather conditions, growth stages, agronomic practices and soil properties.

When using these values for irrigation scheduling, be mindful that they assume all applied irrigation water will be utilized by the plants without any loss. Additionally, these values do not account for any precipitation that may occur during the week of calculation. For more tools and information on irrigation scheduling tools, please refer to: fact sheet #3 - [Irrigation Scheduling Tools](#).

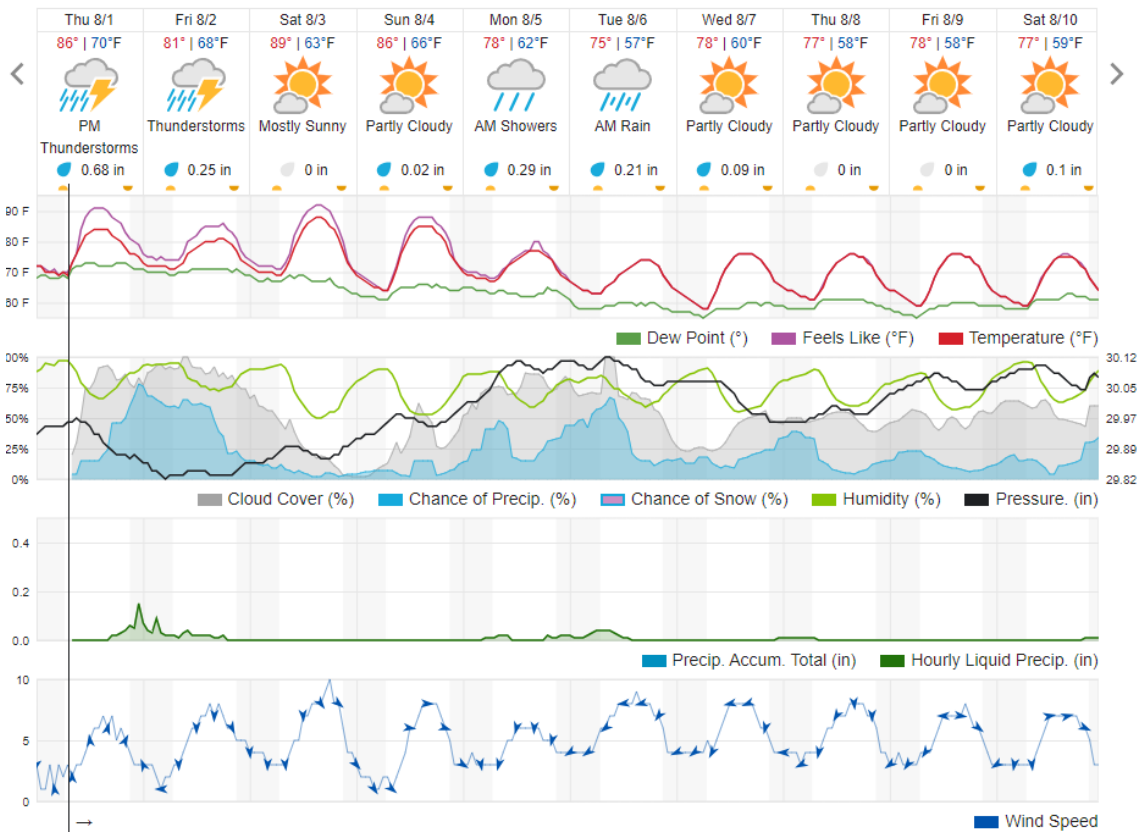
Reference evapotranspiration data was obtained from Enviroweather, which also offers a model for determining potential crop evapotranspiration. To access this tool, visit [Enviroweather](#), click on "Crops," select your crop and use the potential evapotranspiration tool by choosing your nearest weather station, the latest date of interest and other crop information.

Weather Update

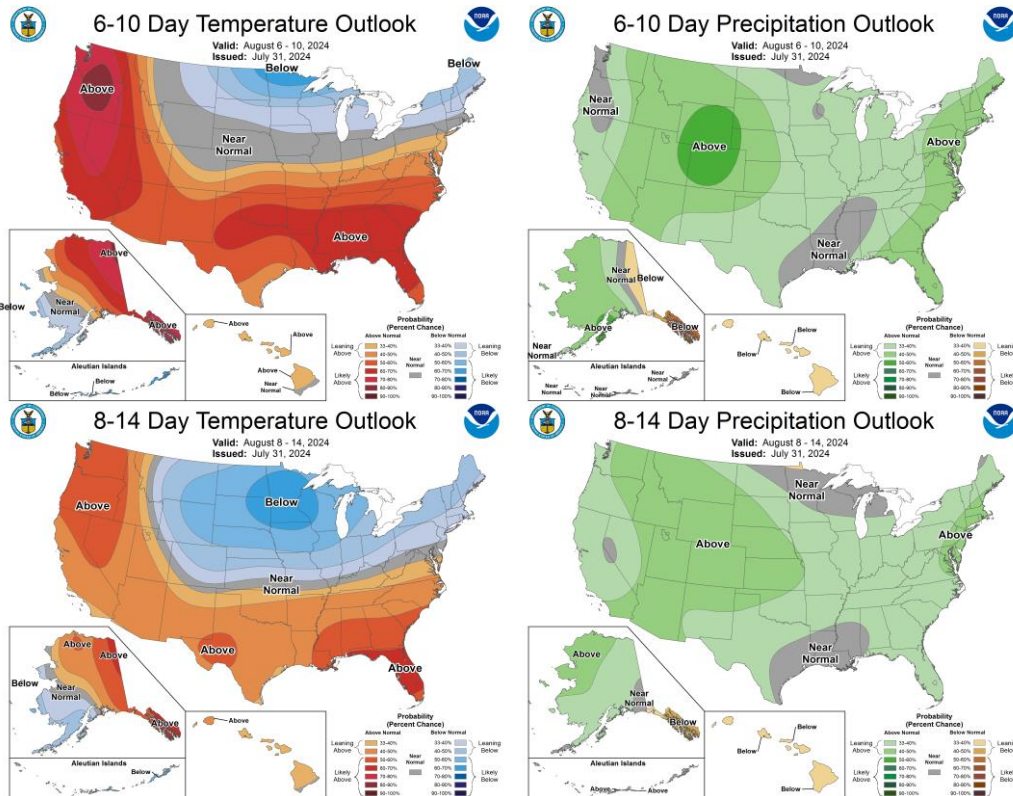
This past week was mostly hot and humid with little precipitation until Monday and Tuesday. We continue to be about a week to ten days ahead of normal on growing degree days. Michigan received about 10 inches of rainfall overall in the month of July. A weather system will bring precipitation to the state over the next 24 hours. An airmass arriving on Monday will cause temperatures to cool considerably. More precipitation is expected to arrive early next week, with an overall forecast of 1.5" within the next seven days.

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For a weekly weather outlook from MSU’s Jeff Andresen, join the free [Virtual Breakfast](#) meeting every Thursday through Sept 19. The weather update starts around 7:15 am (after the weekly topic).



Ten-day weather forecast for Kalamazoo according to [wunderground.com](#).



The 6-10 day (Aug 6-10, top) and 8-10 day (Aug 8-14, bottom) outlooks for temperature (left) and precipitation (right).

Calendar

[Note: Titles are clickable links to online content when highlighted and underlined.]

- Aug 8** [Virtual Breakfast: Improving Grain-Y Field Photos](#). 7:00 am. The weekly online program provides timely, relevant information to keep field crop farmers and consultants up to date with rapidly changing crop conditions, pests, diseases and environmental conditions during the growing season. Register once for entire series online.
- Aug 8** [2024 Montcalm County Field Day](#). 8:00 am. Montcalm Research Center, 4629 W McBride Rd, Lakeview, MI. MSU Extension and the Michigan Potato Industry Commission would like to invite all producers, agribusinesses, and community members to join us for a day on the Montcalm Research Farm!
- Aug 15** [Virtual Breakfast: Field Crops Nematode Update](#). 7:00 am. The weekly online program provides timely, relevant information to keep field crop farmers and consultants up to date with rapidly changing crop conditions, pests, diseases and environmental conditions during the growing season. Register once for entire series online.
- Aug 22** [Virtual Breakfast: Lime](#). 7:00 am. The weekly online program provides timely, relevant information to keep field crop farmers and consultants up to date with rapidly changing crop conditions, pests, diseases and environmental conditions during the growing season. Register once for entire series online.
- Aug 28** [On-Farm Research Field Day—SW MI](#). 9:00 am. Three Rivers, MI. Speakers will share key learnings from past research, and participants will be able to visit fields with current research plots and an interactive pivot performance evaluation.
- Aug 29** [Virtual Breakfast: Maximizing Wheat Yield Potential](#). 7:00 am. The weekly online program provides timely, relevant information to keep field crop farmers and consultants up to date with rapidly changing crop conditions, pests, diseases and environmental conditions during the growing season. Register once for entire series online.
- Sept 5** [Virtual Breakfast: Drought-proofing Agriculture w/ Drainage Water Recycling](#). 7:00 am. The weekly online program provides timely, relevant information to keep field crop farmers and consultants up to date with rapidly changing crop conditions, pests, diseases and environmental conditions during the growing season. Register once for entire series online.
- Sept 5** [KBS Long-Term Agroecosystems Research Field Day](#). 9:00 am. Kellogg Biological Station, 9693 N 40th St., Hickory Corners, MI 49060. This field day will focus on field crops, soil health and regenerative agricultural practices.
- Sept 12** [Virtual Breakfast: Grain Marketing](#). 7:00 am. The weekly online program provides timely, relevant information to keep field crop farmers and consultants up to date with rapidly changing crop conditions, pests, diseases and environmental conditions during the growing season. Register once for entire series online.
- Sept 19** [Virtual Breakfast: Late Season Weed Control](#). 7:00 am. The weekly online program provides timely, relevant information to keep field crop farmers and consultants up to date with rapidly changing crop conditions, pests, diseases and environmental conditions during the growing season. Register once for entire series online.

MSU Extension Digest Briefs

PUBLISHED ON AUGUST 01, 2024

- [GRANTS FOR FARMERS – PART 1: GRANT LISTINGS](#) - Listings of grants available to farmers from the USDA, Michigan Department of Agriculture and Rural Development and others.
- [IRRIGATION SCHEDULING TOOLS AVAILABLE THROUGH MSU EXTENSION](#) - Irrigation scheduling tools not only help in deciding irrigation timing and amount but also facilitate water use reporting.

PUBLISHED ON JULY 31, 2024

- [SECOND ANNUAL KBS LTAR FIELD DAY IS SET FOR SEPTEMBER 5](#) - Come learn about tips, tricks and data from an aspirational farming system with layered conservation practices, including a diverse rotation, cover crops, no-till and precision management.

PUBLISHED ON JULY 29, 2024

- [FINDING FINANCIAL SUCCESS IN UNCERTAIN TIMES](#) - Revised online course available from MSU Extension

PUBLISHED ON JULY 26, 2024

- [THE BUZZ ON THE NEW INSECT/ARTHROPOD DIAGNOSTICIAN AT MSU PLANT AND PEST DIAGNOSTICS](#) - Following the retirement of Howard “Bugman” Russell, Sarah Hughson has begun her role as the new insect/arthropod diagnostician.

PUBLISHED ON JULY 25, 2024

- [SOUTHWEST MICHIGAN FIELD CROPS UPDATE – JULY 25, 2024](#) - A week of dry weather led to wheat harvest, straw and hay baling and movement by gravity and evaporation of standing water pooled in fields. Late blight was found in potatoes in southeastern St. Joseph County.
- [SOUTHWEST MICHIGAN FIELD CROPS UPDATE – JULY 18, 2024](#) - More rainfall this week left fields and crops saturated, which affected field work. Most soybeans and corn throughout the region are in or entering reproductive stages.
- [WHEAT WATCHERS 2024 WRAP UP](#) - Strategies to help you proactively market grain from two growing seasons.

PUBLISHED ON JULY 22, 2024

- [SCHEDULING TOOLS HELP IRRIGATORS GET THE MOST OUT OF RAINFALL](#) - Michigan and Indiana will often get rainfall in late June and early July to the extent it will refill the root zone for corn and soybeans.
- [MICHIGAN STATE UNIVERSITY RESEARCHERS SEEK FARMER INNOVATIONS ON SOIL NUTRIENT MANAGEMENT PRACTICES](#) - The information you share in this survey will help MSU researchers identify best management practices to balance nutrients in the soil.

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