

Southwest Michigan Field Crops Updates July 15, 2022

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.

MSU Extension On Farm Research Field Day August 22

The third-annual MSU Extension On-Farm Research Field Day has been set for August 22nd in St. Joseph County. The final details are being set, but here is what we know so far.

- What: On-farm research projects and other topics relevant to row crop agriculture in southwest Michigan will be highlighted
- When: August 22nd from 8:30am to 12:30pm including lunch
- Where: TBD, but within 15 minutes of Three Rivers
- Who: Lyndon Kelley and Younsuk Dong - Impacts of varying levels of irrigation on soil moisture and crop response, and Resources for optimizing irrigation uniformity
Erin Burns -Controlling resistant weeds in potato
Brook Wilke - Cover crop following wheat, soil health and rainfall simulator
Marty Chilvers - Tar spot research plots in southwest MI
Others - TBD
- Cost: Free due to generous support from the Michigan Soybean Committee, lunch included
- Register: Registration will be via a quick and easy online form, details to follow

Should Atrazine Be More Restricted?

[USDA's Office of Pest Management Policy \(OPMP\)](#) is requesting input to inform their response to a recent EPA amended atrazine interim decision for registration review that includes ecological mitigation measures. You can learn more about the decision [here](#).

EPA has proposed a picklist of conservation measures to add to atrazine labels. Your input will give valuable information about mitigation and conservation practice options on corn and sorghum acres and inform OPMP's input to EPA. Your responses help inform regulators and USDA about what options are most workable for farmers and why.

You do not need to have experience using atrazine on corn and/or sorghum to take this survey, just experience in crop production practices. If you are, or have been involved in corn and/or sorghum production in the past three years and are willing to participate, go to

https://usdaopmp.gov1.qualtrics.com/jfe/form/SV_agW8JjsVXqR4jjg.

The survey takes about 10-15 minutes. **Please respond by July 31, 2022.**

Michigan Wheat Program Request for Proposals

The Michigan Wheat Program (MWP) Board of Directors is requesting research proposals be submitted for funding to assist growers in keeping wheat a profitable and high-quality crop in the state of Michigan. The MWP is the state wheat check-off program, voted in by the state's wheat farmers in July 2011, and again in January 2016 and March 2021.

Michigan wheat farmers need answers to both the yield and quality issues they face. Research projects are being sought that will address the many aspects of production that can help optimize yields including rotation, cover crops, nutrients, inputs, pests and disease. As projects are developed, collaboration between researchers and growers through on-farm research is very important.

Other requests that will further the wheat industry and provide additional options for farmers will be considered. Any project that has a funding match will be viewed favorably, as will collaborative projects with multi-researchers, multi-partners, multi-commodities and multi-farmers through on-farm research projects. Projects that leverage both collaboration in researchers, farmers and funding will receive additional consideration above those projects that do not. In all cases, research that can produce measurable results, as well as leverage wheat farmer dollars through collaboration will be viewed most favorably. As part of the research process, it is also imperative that the research results be shared. That should be considered as the project is being developed.

If you have an idea for an on-farm research project, please let me know as soon as possible. Proposals are due by Aug. 19 and it will take some time to think through all aspects of a project and write the proposal. Call (269-359-0565) or email (eander32@msu.edu) me with your ideas.

Sulfur Deficiency in Corn, Soybean, Alfalfa, and Wheat

In recent years, sulfur (S) deficiency has been diagnosed in corn, soybean, alfalfa, and wheat in the Midwest, including Indiana and Michigan. There are a number of reasons why S deficiency appears to be more common, including reduced atmospheric S deposition, continued and increasing crop removal of S, higher amounts of crop residues, greater use of no tillage, and earlier planting into cool wet soils. It is wise to consider S deficiency as a cause of crop growth problems where yellowing of the foliage is the primary symptom.

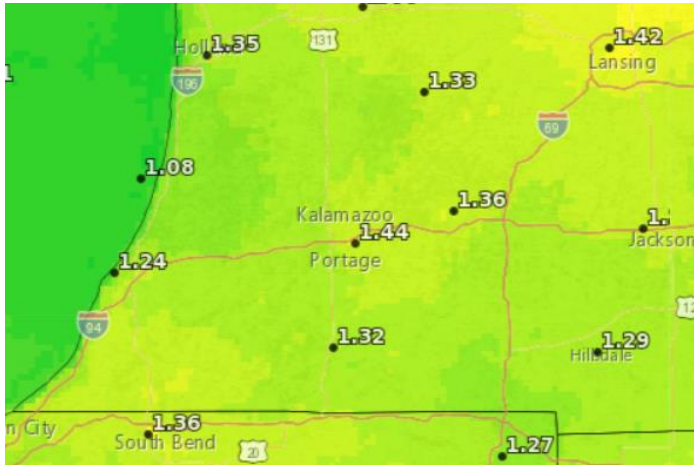
Researchers from Purdue and MSU have written a comprehensive bulletin addressing sulfur deficiency in corn, soybean, wheat and alfalfa entitled, "[Sulfur Deficiency in Corn, Soybean, Alfalfa, and Wheat](#)." Jim Camberato, soil fertility specialist at Purdue, Shaun Casteel, soybean specialist at Purdue, and Kurt Steinke, soil fertility specialist at MSU describe the background and reasons for sulfur deficiency, how to diagnose, and how to correct the problem.

Weather and Crop Update

Weather

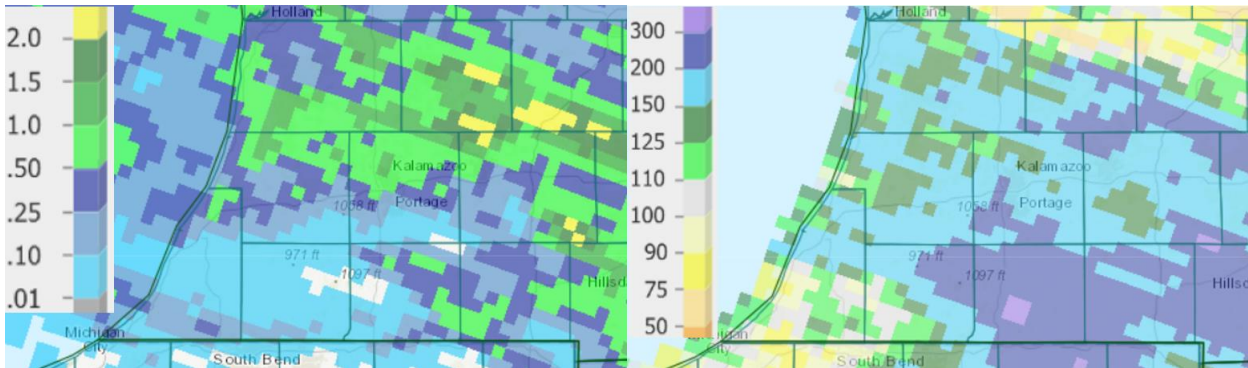
Temperatures this past week were near-normal to slightly below-normal on average in the southwest. We picked up 200 growing degree days (GDD, base 40 for alfalfa) or 130 GDD₅₀ (for corn and soybean) this past week. The forecasted reference evapotranspiration (FRET) rate will be 1.3-1.4 inches this coming week. The forecast predicts the addition of another 220 GDD₄₀ or 150 GDD₅₀ in the coming week. Both the 6-10 day and 8-14 day outlooks point to above-normal temperatures for the last week of July.

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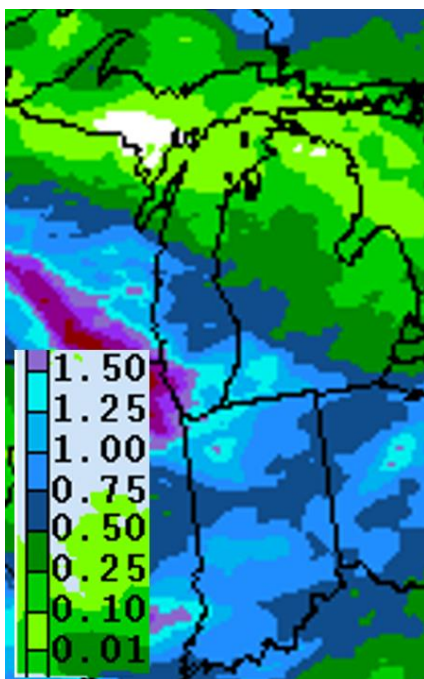


Weekly forecasted reference evapotranspiration rate for the week ending July 20.

Precipitation was less than half an inch for most of the region outside of an E-W band in the second and third tier of counties that received as much as 2 inches this past week. We were dry in the last half of June but mostly wetter than normal so far in July, so the last 30 days have been near normal on average. The forecast is for only another 0.50-1.5 inch of rain in the coming week with essentially all of that predicted to fall Friday through Sunday night. The medium-range outlooks call for normal to slightly lower than normal chances of rainfall for the last week of July.

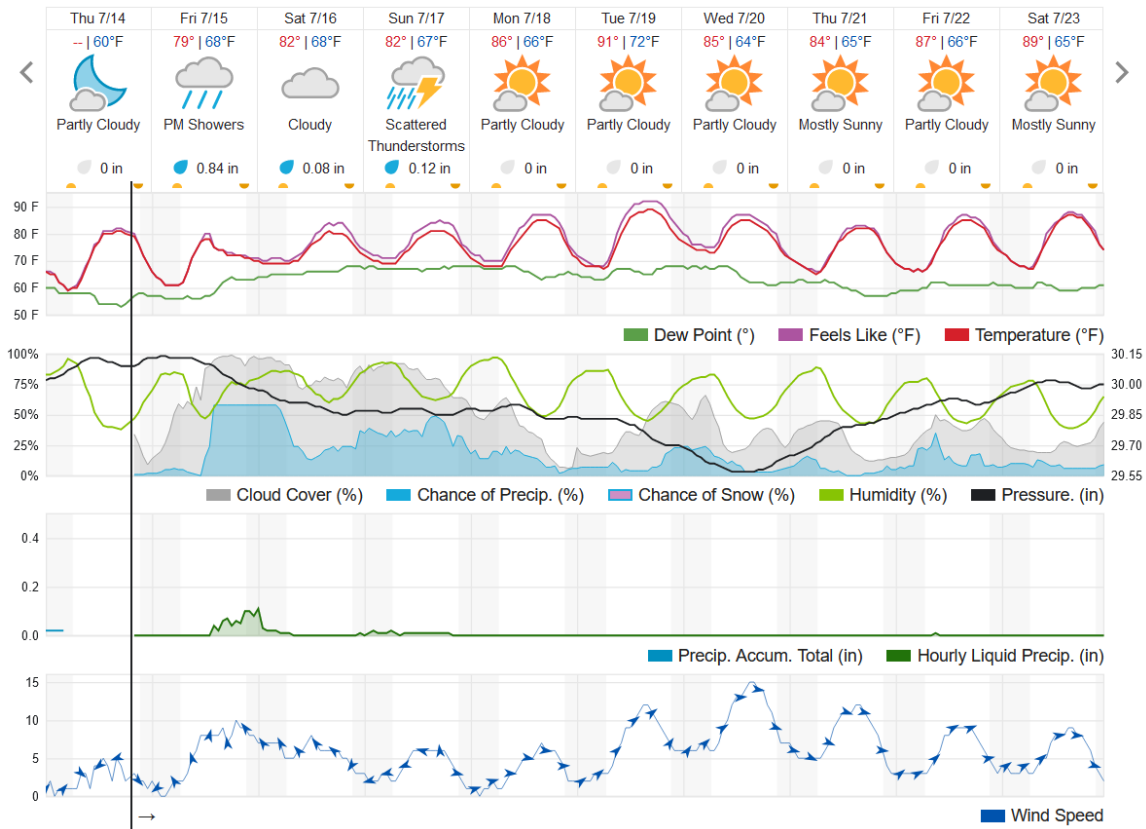


Precipitation totals from the past 7 days (left) and percent of normal for the past 14 days (right) as of July 14.

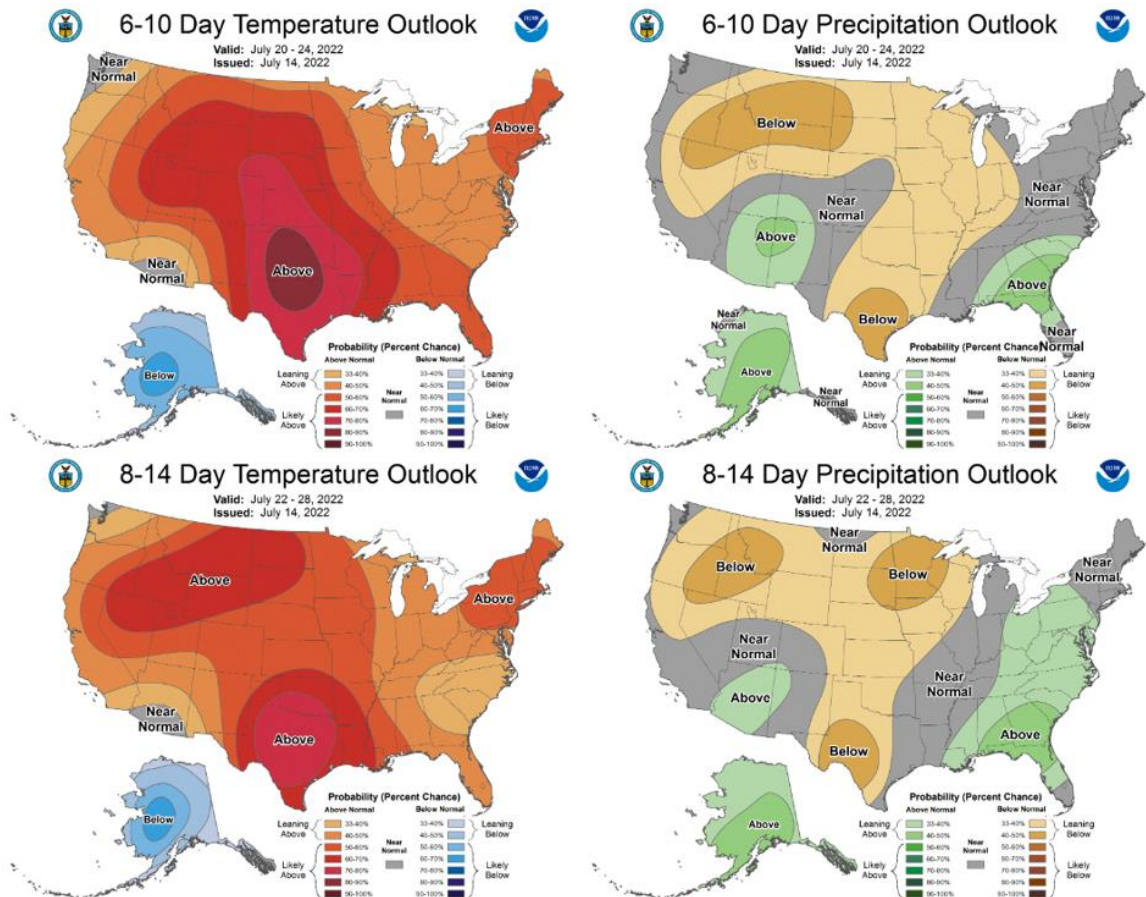


Precipitation forecast for July 15-22.

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The 10-day weather forecast for Kalamazoo according to wunderground.com.



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

Crops and Pests

Corn and **soybean** continue to look healthy with 66 and 60 % of the crop rated good to excellent, respectively. Early-planted corn has reached the silking stage while most fields are still pre-tassel. Soybean in most fields is still at beginning flower (R1, open flower at any node) or full flower stage (R2, open flower at one of the two uppermost nodes) with pods forming at the base of many plants. A few plants in early-planted fields with short-season varieties had reached the beginning pod growth stage (R3, 3/16 inch or longer appear at one of the four uppermost nodes). Only minor bean leaf beetle and Japanese beetle feeding has been found in soybean, and no signs of tar spot have been found yet in the lower canopy in corn fields.



Corn has reached the silking stage in earlier-planted fields, triggering several management decisions as the key stage of pollination commences.



Early-planted corn at silking (R1) growth stage in St. Joseph County. Photo courtesy of Eric Anderson.



Soybean plant at full flower (R2, open flower at one of the two uppermost nodes). The canopy has not yet closed in this field planted on 30-inch row spacing. Photo courtesy of Eric Anderson.

Weeds. Recently a graduate student from the MSU weeds group visited southwest Michigan to collect samples of several weed species for a molecular study including waterhemp and Palmer amaranth. These amaranth species are related to both redroot and smooth pigweeds and can be difficult to tell apart for those who have not spent time looking closely at the plants. The following pictures will help in distinguishing these species. The MSU weeds group has two related resources available online to aid in identification and to manage these weeds—[“Keys to distinguishing Palmer amaranth from other species”](#) and [“Management of multiple-resistant Palmer amaranth”](#)—and Purdue has a similar fact sheet available online, [“Palmer Amaranth Biology, Identification, and Management.”](#) If you find either waterhemp or Palmer amaranth in your fields, please contact the St. Joseph County Extension office (msue.stjoseph@county.msu.edu or 269-467-5511) and we will come and collect samples for this study.



Waterhemp (left side of each picture) can be distinguished from redroot and smooth pigweeds (right side of each picture) by the absence of fine hairs on the stems of waterhemp. Photos courtesy of Eric Anderson.



Newest leaves of Palmer amaranth can have a distinctive light green color. Photo courtesy of Eric Anderson.



The petiole is longer than the leaf blade, a characteristic easy to see on more mature leaves. Photo courtesy of Eric Anderson.



The petiole (stem-like connection from the leaflet to the main stem) of Palmer amaranth is longer than the leaf itself (left) and spiny bracts are found at the base of the leaves. Photos courtesy of Eric Anderson.

Insects. There was a significant uptick in moth catches for western bean cutworm (WBC) this week. This is a little surprising since the trap catches in Indiana last week were meager, and they usually see increases in moth flights before we do. Unfortunately, the moths timed their arrival to coincide with many fields in the region being about a week away from tasseling, and the peak flight may arrive just when most fields will be pre-tassel, the stage when the females lay eggs. No fall armyworm (FAW) were caught again this week.

Moth captures for WBC in southwest Michigan.

| | 5-Jul | 12-Jul |
|------|-------|--------|
| WBC1 | 1 | 12 |
| WBC2 | 1 | 25 |
| WBC3 | 0 | 6 |
| WBC4 | 2 | 33 |
| WBC5 | 10 | 109 |
| WBC6 | 2 | 23 |



Pre-tassel corn is the stage targeted by female western bean cutworm moths for laying eggs. Increased moth captures this past week are not a welcome sight. Photo courtesy of Eric Anderson.

Irrigation. Corn at V16 all the way through beginning dent (R5) has a Kc of 1.2 and will require 1.5-1.7 inches this week. Soybeans at R1 (beginning bloom, Kc=1.0) will use 1.3-1.4 inches, those at R2 (full bloom, Kc=1.1) will use 1.4-1.5 inches, and early fields that have reached R3 (beginning pod, Kc=1.2) will use 1.5-1.7 inches.

The topic of this week's [MSU Extension Field Crops Virtual Breakfast](#) was focused on sugar beet management which is not pertinent for our region. However, next week on July 21st we will have another "hot topics" edition of the Virtual Breakfast, so plan to join with your pressing questions.

Calendar

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

July 15

- Final Date to Report Crop Plantings & CRP

July 21

- [Virtual Breakfast - Hot Topic Q&A session](#). 7-8am. This hour-long broadcast from the MSU Extension Field Crops Team will run throughout the cropping season and feature a brief weather forecast and a presentation from a MSU specialist or educator on a timely topic. One RUP and one CCA credit will be available with each session. Cost is free. Register to receive the link that will be used throughout the season.

July 27

- [Tri-State Precision Agriculture Conference](#). 8am-4:30pm. Northwest State Community College, Voinovich Auditorium, 22600 SR 34, Archbold, OH. Coordinated by: OSU Extension Henry County. \$45 w/ Ohio pesticide credits, \$35 w/o credits. Pre-registration due July 22, \$55 after that, free to all FFA Members.

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July 28

- [Virtual Breakfast - Bugs and More Bugs with Chris DiFonzo](#). 7-8am. Register online once for the entire series.

August 3

- [St. Joseph/Branch Counties MAEAP Summer Farm Field Day](#). 10:00 AM to 2:00 PM. R& D Equipment, 12508 Broadway Rd Three Rivers.

August 4

- [Virtual Breakfast - Alfalfa Planting Recommendations with Kim Cassida](#). 7-8am. Register online once for the entire series.

August 11

- [Virtual Breakfast - Combat Excess Water in a Changing Climate with Ehsan Ghane](#). 7-8am. Register online once for the entire series.

August 18

- [Virtual Breakfast - Carbon Market Update with Matthew Gammans](#). 7-8am. Register online once for the entire series.

August 22

- [MSU Extension On-Farm Research Field Day](#). 8:30am-12:30pm. Details to come. Cost is free, lunch is included.

August 25

- [Virtual Breakfast - Hot Topic Q&A session](#). 7-8am. Register online once for the entire series.
- [2022 MSU Tile Drainage Field Day](#). 9am-3:30pm. 13000 Bird Lake Rd, Camden, MI. Field demonstrations and speakers addressing demo of a water-gate valve, installation of a water control structure, nutrient placement, cover crops, saturated buffers, and more. Cost is free, lunch is provided, register online.

MSU Extension Digest Briefs

PUBLISHED ON JULY 12, 2022

- [PRICE CHECKING YOUR GRAIN MARKET STRATEGIES](#) - Have you reviewed your market strategies and are they keeping up with changes in the market environment?

PUBLISHED ON JULY 7, 2022

- [MONITORING FOR FUNGICIDE RESISTANCE IN THE SOYBEAN SUDDEN DEATH SYNDROME PATHOGEN IN MICHIGAN](#) - A new project from MSU researchers needs symptomatic soybean plants for fungicide resistance study.
- [MSU RECEIVES \\$590K USDA GRANT FOR CORN TAR SPOT RESISTANCE RESEARCH](#) - Addie Thompson, an assistant professor of maize genetics and genomics, leads the project.

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