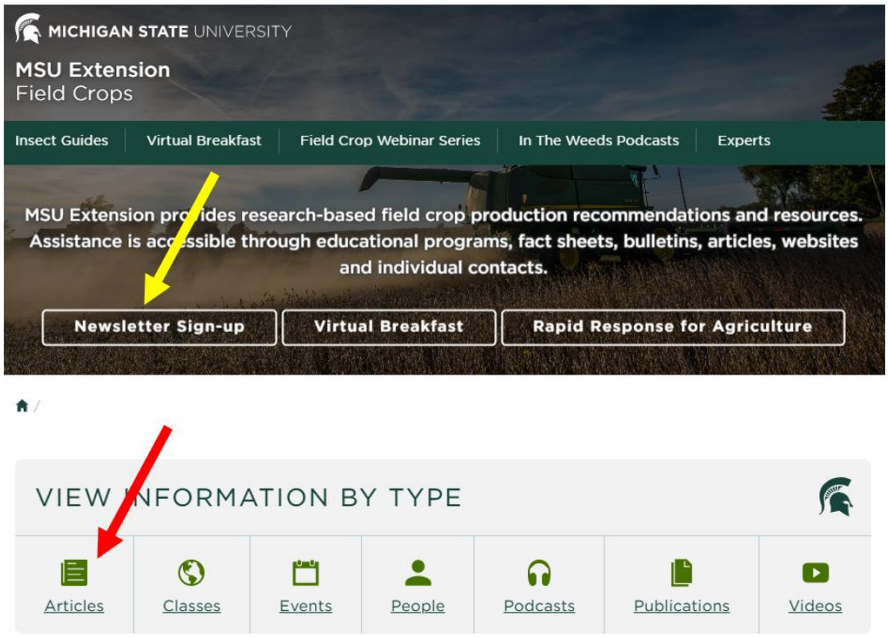
MICHIGAN STATE UNIVERSITY | Extension

Southwest Michigan Field Crops Updates
May 18, 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.

Weekly Southwest Michigan Crop Report Available

You can access the same crop report found in this newsletter almost every week during the growing season. One way is to sign up for a free MSU Extension News email digest by clicking on the "Newsletter Sign-up" button on the Field Crops team website or almost any MSU Extension website. After entering your name, email address, etc., then select Field Crop Production. You can choose to sign up for multiple digests from a wide range of options including Beginning Farmer, Farm Management & Ag Policy, Gardening, Pork Production, and a host of others.



If you don't want to receive a weekly email, you can view the Southwest Michigan Field Crops Update by individually searching under the Articles tab on the Field Crops team's website.

Avipel Dry Formulation Off the Market

Those of you who have heard of or used Avipel understand how important the product can be in deterring bird predation of valuable crops like seed corn. Sandhill crane in particular has been identified as a possible nuisance in seed corn as it will stab the ground shortly before or after corn emergence, grab the developing seedling and eat the seed, sometimes leaving behind the green plants. They appear to have an affinity for certain varieties and have been known to march down male rows of seed corn fields, taking all the males while leaving adjacent females.

Arkion, the company that produces Avipel, voluntarily pulled the dry product earlier this month due to EPA concerns. The powder formulation was the only option for most farmers who wanted to treat their own seed. The problems cited with the dry product included severe irritation to the eyes and respiratory tract from the active ingredient, 9,10-anthraquinone, as the powder easily becomes airborne when working with it. Some farmers have also reported severe nausea after working with the product. The liquid formulation is still available and being used by commercial seed treaters.

Arkion plans to submit data to EPA this summer who will then decide on a new registration, though farmers will have to make do without this tool likely for at least two growing seasons. Aside from non-lethal scare tactics,

growers can also apply for depredation permits from U.S. Fish and Wildlife. For more information on options for managing sandhill crane, view the Wildlife Management Webinar session on sandhill crane.

Three Corn Disease to Watch for in 2023

As the new growing season approaches, the Crop Protection Network team would like to highlight a new article focusing on three corn diseases that farmers should be aware of this year. "Three Corn Diseases to Watch for in 2023" provides important information on the symptoms, risk factors, and management strategies for gray leaf spot, southern rust, and tar spot. Learn more about the importance of early detection and proper management strategies to prevent yield loss and maintain healthy corn crops.

Free Wild About Conservation Webinar Series 2023 Starts in June

Human activities in yards and neighborhoods affect local wildlife and the quality of water in our soil, land, lakes, and rivers. No matter the size, our yards can serve as a refuge for unique plants and animals. From landscaping with native trees and shrubs to adding water features; even the smallest of things that we do can help.

Join us in our fourth year as experts from Michigan State University Extension discuss conservation practices anyone can implement in your property. Registration is free for the series. You can take part in one or all eight of the Wild About Conservation webinars from the comfort of your home. Webinars will take place on Tuesdays twice a month beginning on June 13 at 1 p.m. Each webinar will address a unique topic related to conservation and will feature an MSU Extension professional or experienced guest speaker.

You can register at any time during the series. Once registered for all topics you will receive a link to all previously recorded webinars in the series. Topics for 2023 include:

- **13-June** - Bumble Bee Conservation In Michigan Requires a Community Approach
- **27-June** - Soils and regenerative agriculture
- **11-July** - Healthy Forests in the Face of Climate Change
- **25-July** - Landscaping over septic systems
- **15-August** - Bird Conservation and Research
- **29-August** - Leaves on the ground for birds in the air
- **12-September** - Planning and Planting a Native Plant Pollinator Garden
- **26-September** - Focus on Rare Species

The cost of all the webinars is FREE. To register, visit this website for Wild About Conservation 2023 webinar series. Each webinar will be recorded and made available approximately a week later. Please contact Beth Clawson at clawsonb@msu.edu with questions about this summer webinar series.

Grazing Workshop in Bangor on June 14

The Van Buren Conservation District will be holding a Grazing Workshop on Wednesday, June 14, 2023 from 8:30 AM - 12:30 PM at Windshadow Farm in Bangor. This event brings together pasture-based farmers and ranchers across the state to walk pastures, share knowledge, and learn. This event is free with registration being required and a light breakfast will be provided.

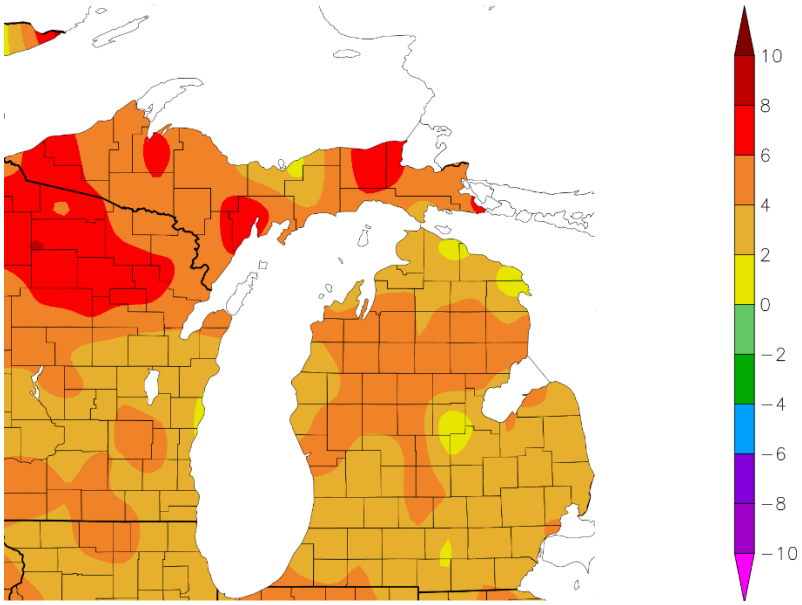
This Grazing Workshop event will be fun and informative for all farmers of all skill levels- from beginners to experts. Subjects that will be discussed include grazing tools and calculations, building a pasture-based grazing system from the ground up, reading your pastures for soil and animal health, encouraging your livestock to eat the weeds, and rotational fencing setup.

Speakers from the Van Buren Conservation District will talk about cost-share opportunities, programs and other topics affecting grazing livestock. Ron Klein from Windshadow Farm and Jeff Douglas with the Natural Resources Conservation Service join as speakers. Attendees will be able to ask questions and talk with fellow grazers and experts. Registration and a light breakfast will start at 8:30 AM and the program will begin at 9:00 AM.

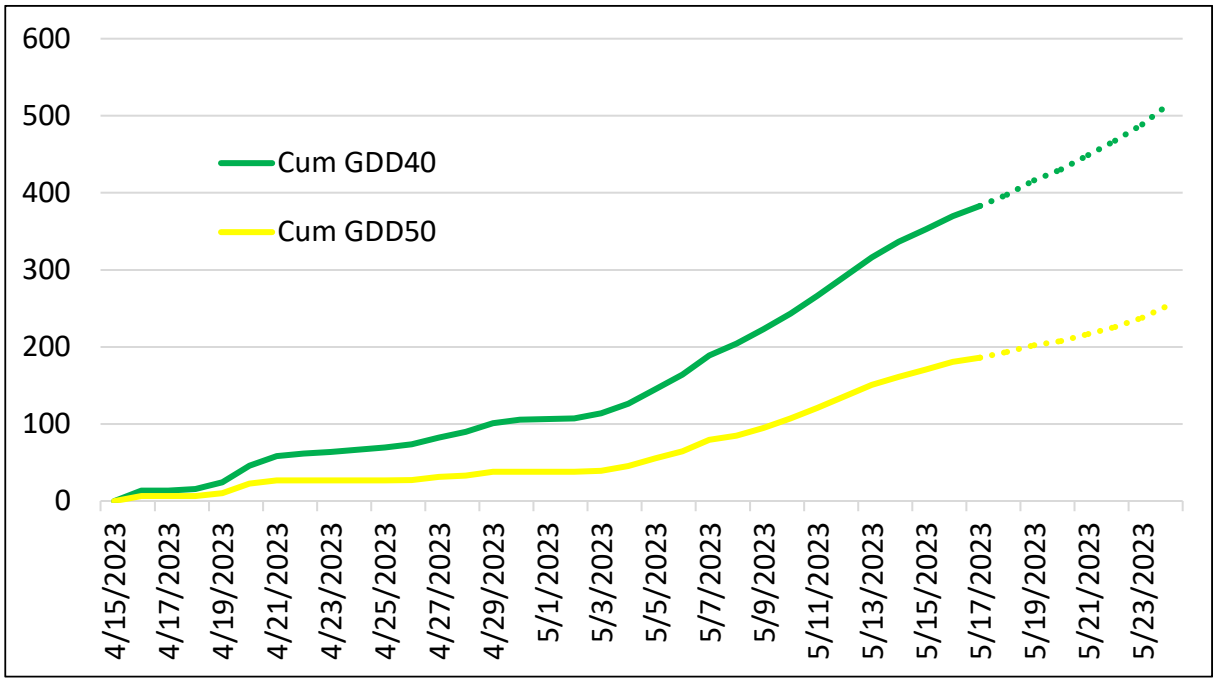
This event is free and open to the public but pre-registration is required. Attendees are asked to register by June 7, 2023 by calling the Van Buren Conservation District at 269-657-4030 x5 or visiting www.VanBurenCD.org/grazing-2023.

Weather and Crop Update

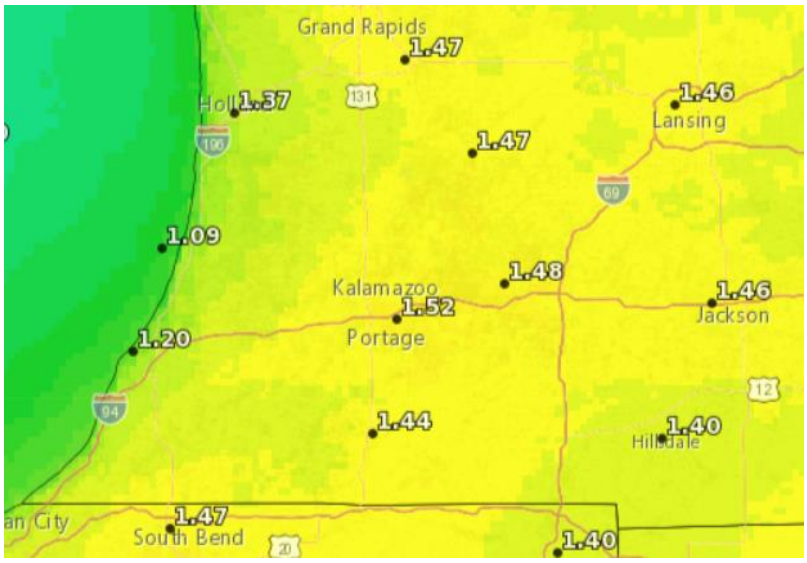
Temperatures this past week started warm but have since dropped off to closer to normal leaving us a few degrees warmer than normal on average. As predicted, soil temperatures have held above—but just above—50 degrees for the past 12 days. A frost warning was issued for the region for this morning (May 18), and the lowest temperatures were recorded at Enviroweather stations further north and east (Albion reported 34 degrees), but most stations recorded between 38 and 40 degrees with warmer temperatures closer to Lake Michigan. Michigan State University Extension climatologist Jeff Andresen says that an upper-air ridge in the western U.S. will bring warmer temperatures next week, but they may be short-lived. We should pick up an additional 68 growing degree days (GDD base 50 degrees) this coming week. With the warm temperatures and mostly sunny conditions predicted next week, the forecasted reference evapotranspiration rate (FRET) is roughly 1.4-1.5 inches in the southwest for the week ending May 24, reflecting conditions we typically see in mid-summer. Both the 6-10 and 8-14 day outlooks call for warmer than normal weather through the end of May.



Temperature departure from normal for the past 7 days as of May 17.

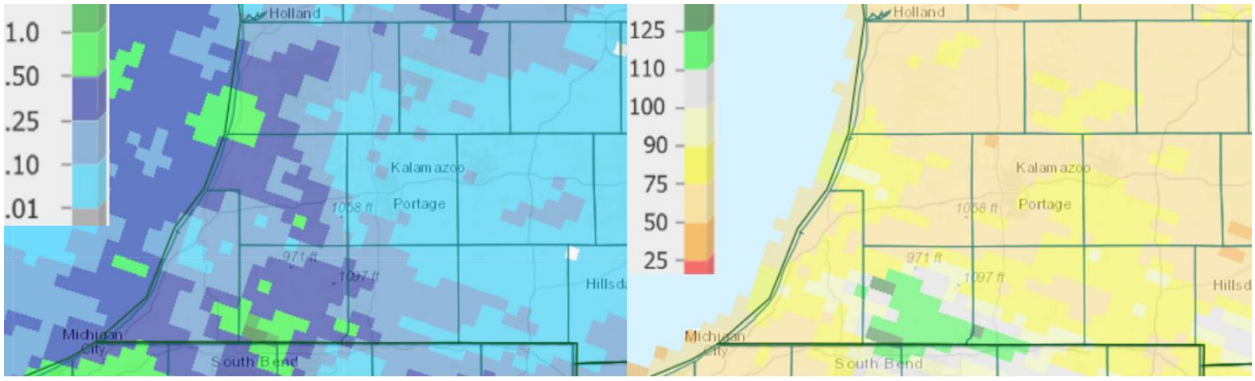


Growing degree days (GDD) base 40 degrees (green for forages, wheat) and base 50 degrees (yellow for corn, soybean) accumulation since April 15 as measured at the Kalamazoo Enviroweather station. Dashed lines indicate forecasted totals through May 24.

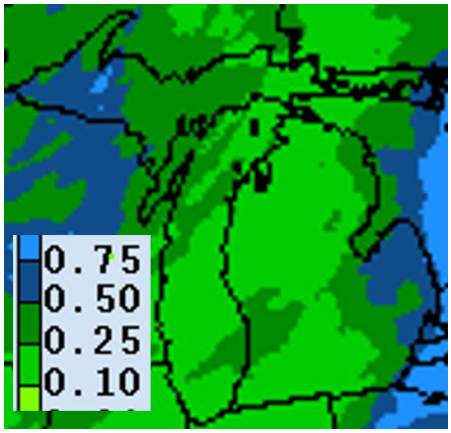


Total weekly forecasted reference evapotranspiration rate (FRET) for the week ending May 24.

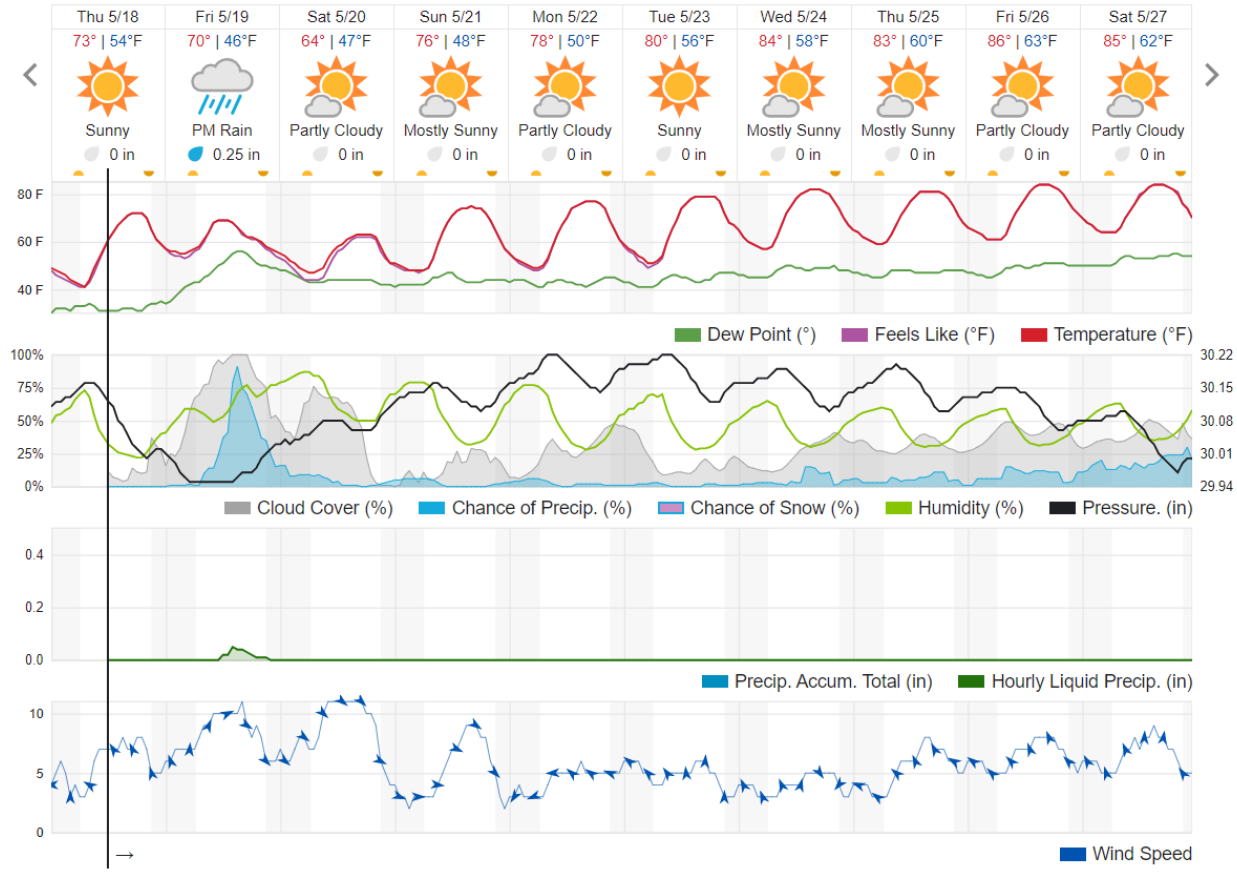
Rainfall last Friday never materialized for most of the region, and totals were less than 0.25 in. throughout most counties. Lather, rinse, repeat as we are expected to get another 0.25 in. this Friday with no rain in the forecast for the rest of next week. Aside from Cass County, the region has received 10-50% less rainfall than normal over the past 30 days amounting to a shortfall of 1-2 in. The current 6-10 and 8-14 day forecasts predict below-normal chances of precipitation through the end of May.



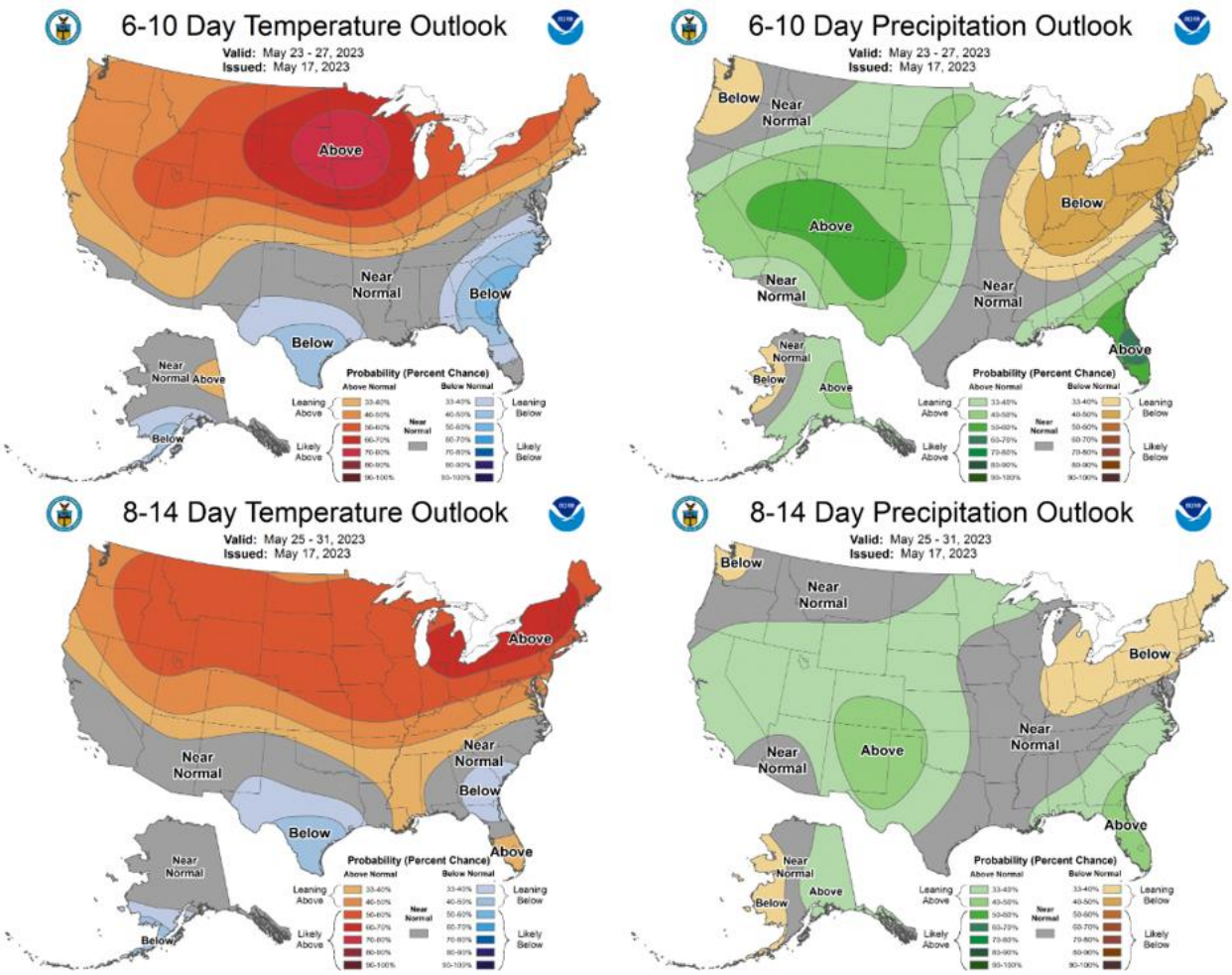
Precipitation totals for the past 7 days (left) and percent of normal for the past 30 days (right) as of May 17.



Precipitation forecast for May 18-25.



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



The 6-10 day (May 23-27, top) and 8-14 day (May 25-31, bottom) outlooks for temperature (left) and precipitation (right).

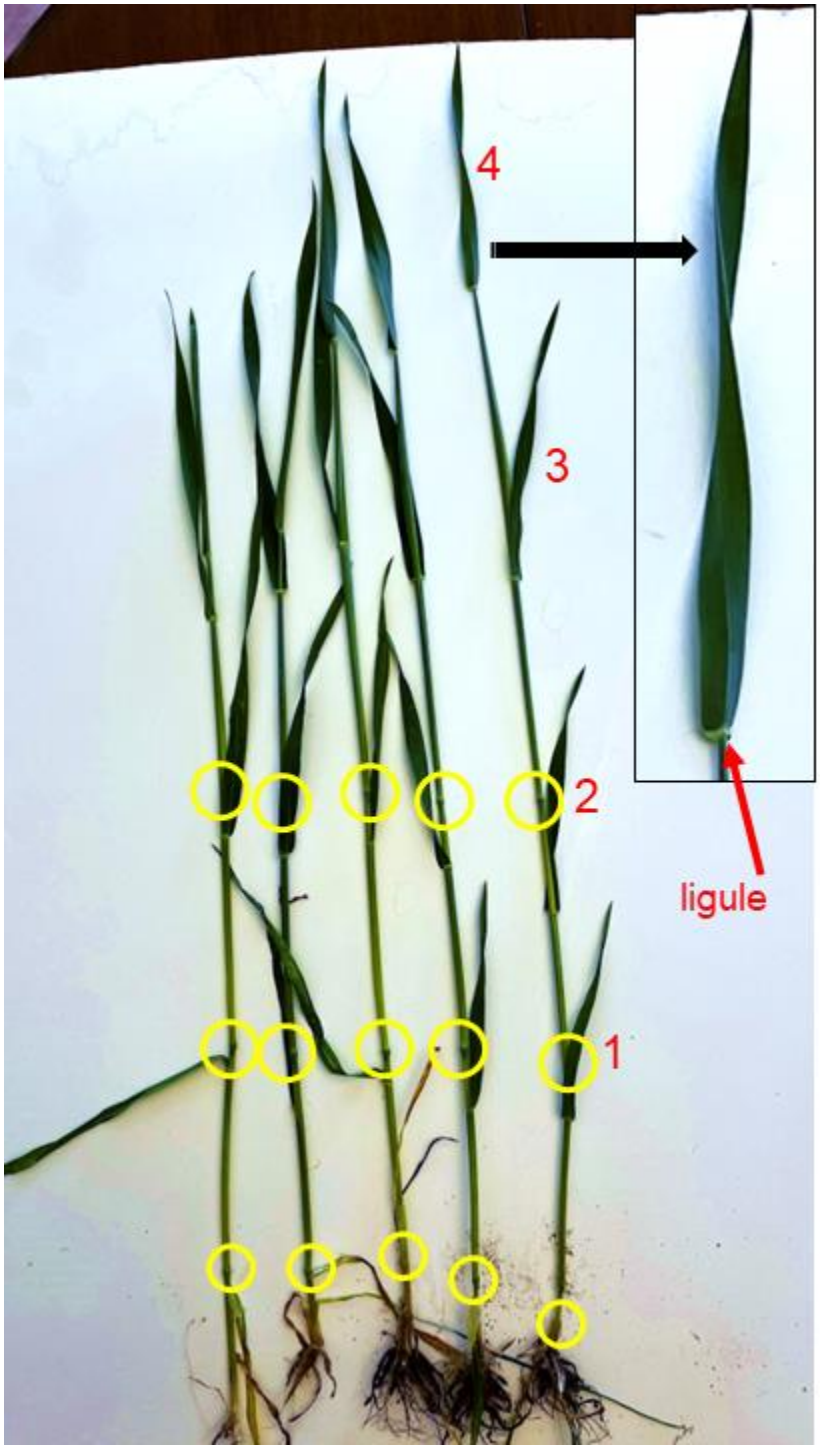
Crops and Pests

Corn and soybean planting progress showed 31% and 33% planted in Michigan, respectively, as of May 14 according to the latest USDA Crop Report. We are very close to the 5-year average of 37% for corn and 31% for soybean. However, since we did not get the expected rain last Friday, field work barely missed a beat and planting has continued to progress. I have gotten some reports of farmers being done planting with others expected to be all planted within a week, aside from possibly waiting on seed corn timing. Corn in Michigan was 3% emerged and soybean was 2% emerged as of last week. Soybeans that were planted a month ago have now begun emerging, and those planted 10-14 days ago will not be far behind.


Soybeans planted April 15 emerged earlier this week. Photo courtesy of Lyndon Kelley.

Winter wheat ratings in Michigan edged up slightly according to the current Crop Report with 70% rated as good or excellent and an additional 26% rated as fair. In all wheat fields visited this week, the flag leaf had begun to emerge (Feekes 8) in less developed plants and had fully emerged (Feekes 9, flag leaf ligule visible) in more advanced plants. Note that 50% of the field should have reached a given stage when determining the overall stage of the field. Once Feekes 9 has been reached, no further herbicide applications should be made, and fungicides to protect the flag leaf should be applied if needed.

According to North Dakotah State University's Agricultural Weather Network, it takes about 284 GDD (base 32 degrees) for wheat to develop from Feekes 9 to full boot stage (Feekes 10) and another 28 GDD_{32} for heading to initiate. According to the forecast for the Enviroweather station in Kalamazoo, we will have added 188 GDD_{32} by May 24 putting most fields in the middle of the boot stage (Feekes 9.5). Accuweather is a bit more bullish and predicts 202 GDD_{32} added by that date, and according to their 14-day forecast, we could see flowering begin by June 1.



Wheat at flag leaf. Yellow circles show nodes, leaves are numbered starting with the leaf attached to the first node with the flag leaf always being the fourth leaf. Photo courtesy of Eric Anderson.


Cereal rye fully headed earlier this week. Photo courtesy of Eric Anderson.

Forages. First cutting of alfalfa has begun in several fields although no blossoms have yet been seen. Several reports of alfalfa weevil have come in and many are choosing to spray to manage this pest. According to the Enviroweather alfalfa weevil development tool, light feeding begins around 300 GDD base 48 (accumulated since the beginning of the year) which occurred on May 12 according to the Kalamazoo station. Heavy feeding could begin 139 GDD_{48} after that point which is predicted to occur on May 24. It is important to refer to the insecticide label for pre-harvest interval (PHI) and make sure you have that much time between the application and when you plan to harvest.


Alfalfa chopping has begun in the region. Photo courtesy of Eric Anderson.

Severe alfalfa weevil feeding in alfalfa in Lapeer County in 2001…let's hope we don't see anything like this. Photo courtesy of Phil Kaatz. The inset is more likely what would be seen with early feeding. Photo courtesy of John Obermeyer.

Irrigation. If you have not irrigated winter wheat or rye fields, it's likely that most of the soil moisture is nearly depleted. Wheat, rye and alfalfa (until cutting) use almost the same amount of water as 6-inch grass (ET reference crop). Irrigators will need to subtract any rainfall the field receives from 1.4 to 1.5 inches (FRET) to calculate the amount of irrigation needed to replace what the crop will use this week. Depending on how much soil moisture you have currently, you may be best advised to make more than just a maintenance application. Be aware of foliar disease implications. More information on irrigating wheat can be found in the MSU Extension article, "Considerations for raising irrigated wheat."

With the absence of normal rainfall and the prevalence of aggressively growing cover crops, many fields may benefit from irrigation to assist with germination or incorporation of nitrogen and herbicides. The goal is to wet the top 3-4 inches to break up any crust to assist in germination and to push herbicides and fertilizers into the upper layers of the soil, decreasing solar degradation. One challenge in using this strategy is ensuring the readiness of the irrigation equipment.

A major concept that confuses some producers is the need for greater amounts of water on heavier soils to get the same benefit. Heavier soils hold more water requiring a greater volume to penetrate the water to 4-6-inch depth. A general rule of thumb is that 0.5 inch on sandy and sandy loam soils and 0.75 inch on heavier loam soil is needed to germinate or incorporate herbicide and nutrients.

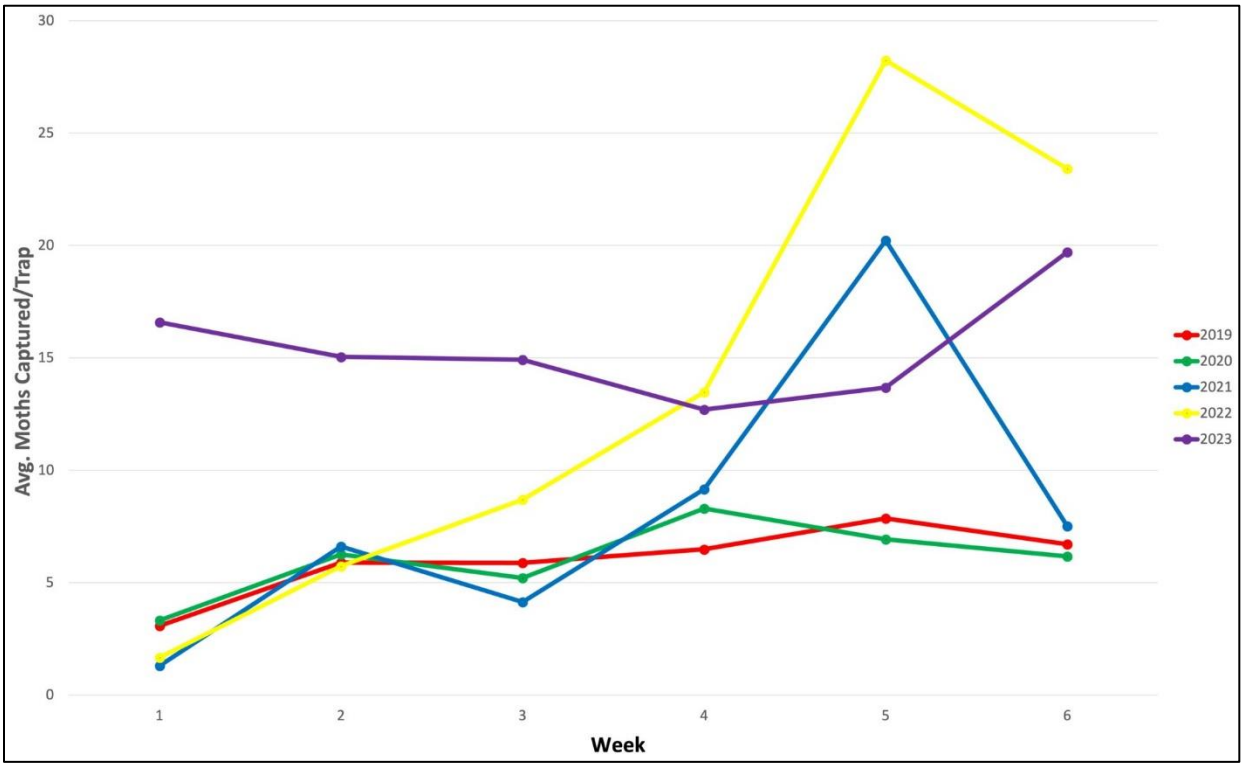
For more information on using irrigation to benefit in germination and incorporation of herbicides and nutrients, see the article "Irrigation to help get the crop started."

Whether ensuring adequate soil moisture for developing cereal crops (top) or newly-planted corn or soybean crops (bottom), or whether watering in nitrogen fertilizer or a residual herbicide, this will be a good week to begin irrigating if you have not yet started. Photos courtesy of Eric Anderson.

Insects. True armyworm (TAW) and black cutworm (BCW) trap counts in Indiana this past week (5/4-5/10) were impressive, signifying that these pests could still be a concern this spring, especially with fields just getting sprayed and planted recently. Counts from southwest Michigan were again very low across the board.

Moth captures from Indiana for the week ending 5/3/23. Black cutworm trap counts marked with an asterisk were considered “significant” by Purdue staff.

BCW	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6
Allen	0	1	0			9
Allen	1	2	3	3	3	8
Allen	61*	50*	26*	43*	15	29*
Elkhart	5	30*	8	8	4	4
Jasper	65*	3	4	0	0	3
Jasper	0	9	10	11		
Kosciusko	13	24*	24*	8	12	9
Lake	151*	948	52*	16	20*	87*
Lake	5	16	19*	6	8	5
Lake	0	1	9	7	10	14
LaPorte	26*	27*	27*	6	16	43*
Porter	16*	39*	27*	17	6	26*
St. Joseph	0	25*	42*			
Whitley	74*	76*	58*	11	17*	26
Whitley	32*	15	5	13	6	8
TAW						
Pinney	60	296	216	54	56	401
NEPAC	0	259	179	13	39	323



Comparison of black cutworm trap counts in Indiana in 2023 (purple) vs the last five years. Graphic courtesy of Purdue Extension.

Moth captures from traps set in southwest Michigan for the week ending on the given date.

		17-Apr	24-Apr	1-May	8-May	15-May
Armyworm	TAW 1	69	1	1	1	0
	TAW 2	1	11	11	7	8
	TAW 3	2	1	0	5	1
	TAW 4	0	13	1	9	5
Black cutworm	BCW 1	0	0	0	0	0
	BCW 2	0	0	0	1	1
	BCW 3	1	3	1	0	0
	BCW 4	2	0	0	0	0

Calendar

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

May 25 **Virtual Breakfast - Plant & Pest Diagnostics - Know Your Problems with Erin Hill .** 7-8am. Register online once for the entire series.

Jun 1 **Virtual Breakfast - Wildlife Management with James DeDecker.** 7-8am. Register online once for the entire series.

Jun 8 **Virtual Breakfast - Q & A "Hot Topics".** 7-8am. Register online once for the entire series.

Jun 14 **Van Buren Conservation District Grazing Workshop.** 8:30 AM - 12:30 PM. Windshadow Farm, 24681 County Road 681 Bangor MI. Register by June 7 by calling 269-657-4030 x5 or visiting the website.

Jun 15 **Virtual Breakfast - Equipping Operating Sprayers in Soybeans with Mike Staton.** NOTE CHANGE from earlier schedules. 7-8am. Register online once for the entire series.

Jun 22 **Virtual Breakfast - White Mold Management in Soybean with Marty Chilvers.** 7-8am. Register online once for the entire series.

Jun 28 **MSU Weeds Day**. 8:30am-1pm. MSU Agronomy Farm, 4450 Beaumont Rd, Lansing, MI. Optional afternoon tours available. Register online at $30/person, onsite for $40.

Jun 29 **Virtual Breakfast - Cercospora Leaf Spot Management in Sugar Beets with Daniel Bublitz.** 7-8am. Register online once for the entire series.

Jun 28 **Tillage Field Day**. 8am-12pm. MSU Mason Research Farm, 1614 Okemos Rd, Mason, MI. Hold the date, more details to follow.

MSU Extension Digest Briefs

WHEAT WATCHERS WEEK OF MAY 15, 2023

PUBLISHED ON MAY 18, 2023

See how the wheat crop is progressing across Michigan this week.

SOYBEAN PLANTING DEPTH CONSIDERATIONS WHEN PLANTING INTO DRY SOIL CONDITIONS

PUBLISHED ON MAY 18, 2023

How to identify and achieve the optimum planting depth if you are faced with dry soil conditions.

USDA PANDEMIC ASSISTANCE REVENUE PROGRAMS ARE STILL AVAILABLE TO PRODUCERS FOR A LIMITED TIME

PUBLISHED ON MAY 16, 2023

Applications for programs for losses from 2020 and/or 2021 are available until June 2.

2023 MSU WEED TOUR IS JUNE 28

PUBLISHED ON MAY 15, 2023

Come join us to view the latest in corn and soybean weed control research.

GROWING NITROGEN WITH LEGUME COVER CROPS

PUBLISHED ON MAY 10, 2023

Nitrogen is an essential nutrient for plant growth, but price fluctuations of fertilizers leave farmers looking for alternative solutions. Planting legumes as a cover crop can increase soil nitrogen and perhaps even reduce reliance on fertilizers.

CAN BIOLOGICAL PRODUCTS SUBSTITUTE FOR FERTILIZER NUTRIENTS?

PUBLISHED ON MAY 5, 2023

Growers should be curious but also careful on how these products are tested prior to farm-wide implementation.

MSU EXTENSION RELEASES NEW SERIES ON GRAIN MARKETING

PUBLISHED ON MAY 3, 2023

The series provides a walk through on marketing fundamentals for beginning farmers.

ALFALFA FIELDS WANTED TO TEST METHOD FOR DETECTING AUTOTOXICITY BEFORE PLANTING

PUBLISHED ON MAY 2, 2023

MSU researchers are developing a method to fine-tune alfalfa planting decisions by detecting autotoxicity in soils and we need farm fields where we can test it.

IMPROVING IRRIGATION EFFICIENCY & ANNUAL WATER USE REPORTING

PUBLISHED ON MAY 1, 2023

Agricultural irrigation accounted for 39% of Michigan's consumptive water use in 2015 (Michigan Department of Environmental Quality, 2017), with 125 billion gallons of water withdrawn in 2020 (Eaton, 2021).

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