

## Southwest Michigan Field Crops Updates March 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.

## Michigan Soybean On-Farm Research Projects for 2023

The votes have been tallied and the 2023 Michigan Soybean On-Farm Research trials have been selected and are listed below. All trials will be replicated at least four times and must be oriented perpendicular to existing tile lines. **Detailed protocols for each of the projects should be obtained before conducting the trial. If you or someone you work with would like to know more, contact me (Eric Anderson) and I will send you details.**

- 1) **Broadcast Potassium Fertilizer:** This project will determine the yield and income benefits of applying a maintenance/crop removal rate of 0-0-60 in the spring on fields having soil test K levels in or below the maintenance range.
- 2) **Planting Date:** This project will measure the effect that planting date (April or early May vs 2-3 weeks later) has on soybean yield and income.
- 3) **Saltro® vs ILeVO® Seed Treatment:** This project will compare the performance of Saltro to ILeVO. Choose sites that have a history of moderate to severe SDS and have SCN present. Both Saltro and ILeVO will be provided.
- 4) **Heads Up® Seed Treatment:** This project will compare soybean yield and income from applying Heads Up seed treatment. The product will be provided.
- 5) **In-furrow Starter Fertilizer:** This project offers cooperators an opportunity to evaluate the yield and income benefits of their in-furrow starter fertilizer program when planting soybeans.
- 6) **Planting Equipment Comparison:** This project will compare the yield and income benefits of different planting equipment (unit planters, box drills and air seeders) in the row widths and planting rates selected by the cooperator.
- 7) **Biological + Post-emergence Herbicide:** This project will evaluate the yield and income benefits of adding a biological product (STIMULATE™ from GarrCo Products) to a post-emergence herbicide application. The STIMULATE will be provided to cooperators.
- 8) **Plant Growth Hormone/Foliar Fertilizer + Post-emergence Herbicide Trial:** This project will evaluate the yield and income benefits of applying ARCHITECH which combines a plant hormone with a 10-5-5 foliar fertilizer. The ARCHITECH will be provided.

- 9) **Prescription Foliar Fertilizer:** This project will evaluate the yield and income benefits of applying a prescription foliar fertilizer based on the results from an in-season plant tissue sample. The sampling, prescription and foliar fertilizer will be provided to cooperators.
- 10) **Foliar Fertilizer + Foliar Fungicide:** This project will compare the yield and income benefits of adding a foliar fertilizer (eNhance from Agroliquid) to a prophylactic foliar fungicide application. This trial is a good fit for producers planning to apply a foliar fungicide in 2023. The eNhance will be provided.
- 11) **Foliar Fungicide (Delaro Complete):** This project will evaluate the effect of a single foliar application of a relatively new fungicide from Bayer CropScience on soybean yield and income when applied in high-yield environments. The fungicide will be provided to the first 9 cooperators.
- 12) **White Mold Fungicide Application Timing:** Two fungicide application timings will be compared to an untreated control to identify the optimum fungicide application timing and to help validate the new Sporecaster phone app. This trial must be conducted in a field that has had severe and relatively uniform white mold within the past 5 to 7 years. The fungicide will be provided.
- 13) **Cover Crop (Cereal Rye):** This project will determine the yield, income and SCN population suppression benefits of adding a cereal rye cover crop prior to planting soybean. The trial should be conducted in fields with confirmed presence of SCN and the rye should be planted in alternating strips in late summer (after wheat or inter-planted into corn) or in the fall following corn harvest. The strips should be wider than the combine header.

## Planting Early? Get Your Seed Tested

A word from the [Michigan Crop Improvement Association](#) (MCIA)

If you are thinking about planting early or using a starter fertilizer, especially in-furrow, consider getting your seed tested to better understand the potential and limits of your seed. There are a wide range of tests to improve the knowledge a producer has about their seed. For example, a warm germination will determine how seed will perform under ideal planting conditions. If you are concerned about your seeds' vigor, run your seeds through a set of vigor tests: standard cold test, saturated cold test, tetrazolium test (TZ), an accelerated aging (AA) test or a fast green test. All these tests are designed to mimic extreme weather conditions seed may get exposed to once in the ground.

A saturated cold test will help determine if your seed is suitable for early planting. This test simulates chilling shock and low oxygen levels by testing seeds in cold, saturated soil. This test should not replace a typical standard cold test, which emulates a typical spring planting environment. However, it does provide a useful estimate of emergence under severe conditions.

The fast green test is used in seed corn to detect damage to the pericarp (seed coat), with a quick one-day turn around for accurate test results. This test provides useful insight regarding both seed conditioning and starter fertilizer. If seed corn was harvested at a higher moisture content, more threshing is required, leading to more tearing of the seed coat. To minimize mechanical damage to the seed, this test can ensure seed processing plants still maximize output while minimizing damage to the seed from machinery. If the seed coat damage is severe, fertilizers with high salinity could damage or kill the seed, leading to poor seedling emergence and stand. The amount of pericarp damage shown in this test can identify how susceptible a seed lot may be to soil pathogens, pests, and microorganisms.

Even though MCIA is a certification agency, they also accept seed submissions from the public and no membership is required.

## Three Seconds Later

The Pipeline Ag Safety Alliance has produced this 12-minute award-winning documentary of a first-person account of a tragic drain tile accident and its impact on a close-knit community. [Watch Video](#)

## Mehlich 3 Soil Test Results - A Few Helpful Tips

The following tips were published by A&L Great Lakes Lab on transitioning your soil test records from other methods of testing (e.g., Bray P-1 for phosphorus, ammonium acetate for potassium) to Mehlich (M3). With the revision of the Tri-State Fertilizer Recommendations a few years ago, many growers and agronomists may choose to transition to M3 soil test values for making fertility decisions. Below are some suggestions to help make the transition to M3 easier.

- Make the conversion at a transitional time of the year, not in the middle of a fertility decision cycle. For example if you collect soil samples in the spring, make recommendations and review with producers in the summer and apply in the fall. A good time to make a clean transition to M3 would be in the winter prior to the collection of spring soil samples.
- Don't convert a field in the middle of a sampling cycle. If you sample every 4 years, wait until the next sampling cycle to convert a field. While it may seem best to change all fields at one time, changing within a sampling cycle can create more confusion. A clear transition time (month and year) is useful to verify what method a given field's data is in by comparing the sample collection date to the M3 transition date.
- Make sure to have fertility equations for both data types in your GIS software. Be sure to develop a process to ensure the correct equation is applied to the correct data - a clear transition date as mentioned above can help with this.
- Be sure to communicate with your GIS software provider, most software need to identify if the data is M3 before the data is imported. Our software company can walk you through the needed changes.
- Contact the lab before the transition is to take place. ALGL will need to adjust your account and possibly the GIS data export process to ensure that your data flow is not interrupted.
- While it may seem best to report both data values for a period of time, or to convert past data, this has proven problematic. It is best to make a defined transition at a preset and strategic time.

## Fungicide Efficacy Control of Corn Diseases Updated for 2023

The Corn Disease Working Group (CDWG) developed updated ratings for 2023 detailing how well fungicides control major corn diseases in the United States. Efficacy ratings for each fungicide were determined by field testing the materials over multiple years and locations. [View the full table and CDWG findings](#) to learn more about the differences in efficacy among a number of different fungicides.

Fungicide Efficacy for Control of Corn Diseases Table (01/2023)				Anthracnose leaf blight	Common rust	Eyespot	Gray leaf spot	Northern corn leaf blight	Southern rust	Tar spot <sup>1</sup>	Harvest restriction <sup>2</sup>
	Active Ingredient (%)	Product/Trade name	Rate/A (fl oz)								
11	Azoxystrobin 22.9%	Quadris 2.08 SC, multiple generics	6.0 - 15.5	VG	E	VG	E	G	VG	NL	7 days
	Pyraclostrobin 23.6%	Headline 2.09 EC/SC	6.0 - 12.0	VG	E	E	E	VG	VG	NL	7 days
	Picoxystrobin	Approach 2.08 SC	3.0 - 12.0	VG	VG-E	VG	F-VG	VG	G	G <sup>3</sup>	7 days
3	Flutriafol 20.9%	Xyway LFR 1.92 SC Xyway 3D 2.5 SC	LF: 7.6-15.2 3D: 5.8-11.8	NL	U	NL	G	VG	NL	NL	N/A
	Propiconazole 41.8%	Tilt 3.6 EC, multiple generics	2.0 - 4.0	NL	VG	E	G	G	F	NL	30 days
	Prothioconazole 41.0%	Proline 480 SC	5.7	U	VG	E	U	VG	G	NL	14 days
	Tebuconazole 38.7%	Folicur 3.6 F, multiple generics	4.0 - 6.0	NL	U	NL	U	VG	F	NL	36 days
	Tetraconazole 20.5%	Domark 230 ME	4.0 - 6.0	U	U	U	E	VG	G	G <sup>3</sup>	R3 (milk)
11	Azoxystrobin 13.5%	Quilt Xcel 2.2 SE, multiple generics	10.5 - 14.0	VG	VG-E	VG-E	E	VG	VG	NL	30 days
3	Propiconazole 11.7%										
7	Benzovindiflupyr 2.9%										
11	Azoxystrobin 10.5%	Trivapro 2.21 SE	13.7	U	U	U	E	VG	E	G-VG	30 days
3	Propiconazole 11.9%										
3	Cyproconazole 7.17%										
11	Picoxystrobin 17.94%	Approach Prima 2.34 SC	3.4 - 6.8	U	U	U	E	VG	G	G-VG <sup>3</sup>	30 days
3	Flutriafol 19.3%	Fortix 3.22 SC		U	U	U	E	VG	VG	G-VG <sup>3</sup>	
11	Fluxasastrobin 14.84%	Preemptor 3.22 SC	4.0 - 6.0	U	U	U	E	VG	VG	G-VG <sup>3</sup>	R4 (dough)
3	Flutriafol 26.47%			U	U	U	VG-E	VG	VG	G <sup>3</sup>	R4
7	Bixafen 15.55%	Lucento	3.0-5.5	U	U	U	VG-E	VG	VG	G <sup>3</sup>	R4
3	Flutriafol 18.63%	TopGuard EQ	5.0-7.0	U	F	U	VG	G-VG	G-VG	G-VG <sup>3</sup>	45 days
11	Azoxystrobin 25.30%										
3	Mefenfluoconazole 17.56%	Velityma	7.0-10.0	U	U	U	VG-E	VG-E	VG	VG	21 days
11	Pyraclostrobin 17.56%										
3	Mefenfluoconazole 11.61%										
7	Fluxapyroxad 7.74%	Revytek	8.0-15.0	U	U	U	VG-E	VG-E	VG	VG	21 days
11	Pyraclostrobin 15.49%										
3	Prothioconazole 16.0%	Delaro325 SC	8.0-12.0	VG	E	VG	E	VG	G-VG	G-VG	14 days
11	Trifloxystrobin 13.7%										
3	Prothioconazole 14.9%										
7	Fluopyram 10.9%	Delaro Complete 3.83 SC	8.0-12.0	U	U	U	E	VG	G-VG	VG	14 days
11	Trifloxystrobin 13.1%										
7	Pydiflumetofen 7.0%										
11	Azoxystrobin 9.3%	Miravis Neo 2.5 SE	13.7	U	U	U	E	VG-E	VG	G-VG	30 days
3	Propiconazole 11.6%										
11	Pyraclostrobin 28.58%	Priaxor 4.17 SC	4.0 - 8.0	U	VG	U	VG	VG-E	VG	NL	21 days
7	Fluxapyroxad 14.33%										
11	Pyraclostrobin 13.6%	Headline AMP 1.68 SC	10.0 - 14.4	U	E	E	E	VG	G	G-VG	20 days
3	Metconazole 5.1%										
11	Trifloxystrobin 32.3%	Stratego YLD 4.18 SC	4.0 - 5.0	VG	E	VG	E	VG	G	NL	14 days
3	Prothioconazole 10.8%										
3	Tetraconazole 7.48%	Affiance 1.5 SC	10.0-14.0	U	G-VG	U	G-VG	G-VG	G	G <sup>3</sup>	7 days
11	Azoxystrobin 9.35%										
3	Flutriafol 15.7%										
11	Azoxystrobin 15.7%	Adastrio 4.0 SC	7.0-9.0	U	U	U	U	U	VG	U <sup>3</sup>	30 days
7	Fluidapyr 10.5%										

## General CRP Signup Open Through April 7

Agricultural producers and private landowners can begin applying for the Conservation Reserve Program (CRP) General signup starting **through April 7, 2023**.

Producers and landowners enrolled more than 5 million acres into CRP through signups in 2022, building on the acceptance of more than 3.1 million acres in the [largest Grassland CRP signup in history](#). There are currently 23 million acres enrolled in CRP, with 1.9 million set to expire this year. USDA’s Farm Service Agency (FSA) is aiming to reach the 27-million-acre cap statutorily set for fiscal year 2023.

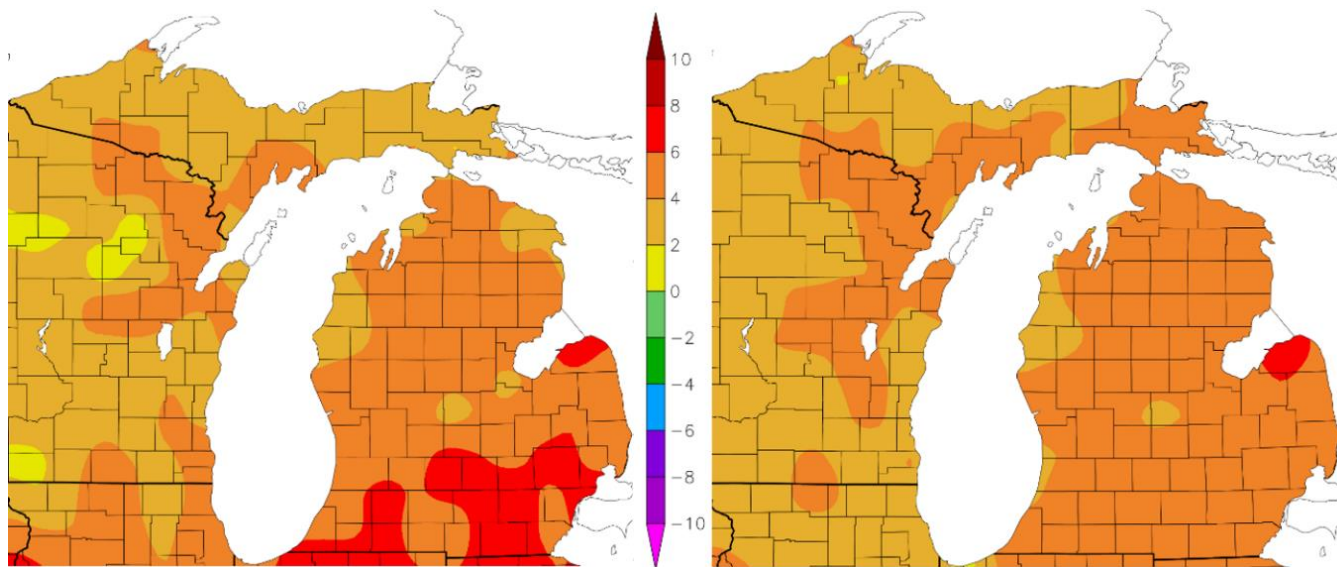
FSA will announce the dates for Grassland CRP signup in the coming weeks. Grassland CRP is a working lands program, helping landowners and operators protect grassland, including rangeland and pastureland and certain other lands, while maintaining the areas as working grazing lands.

Protecting grasslands contributes positively to the economy of many regions, provides biodiversity of plant and animal populations, and provides important carbon sequestration benefits to deliver lasting climate outcomes.

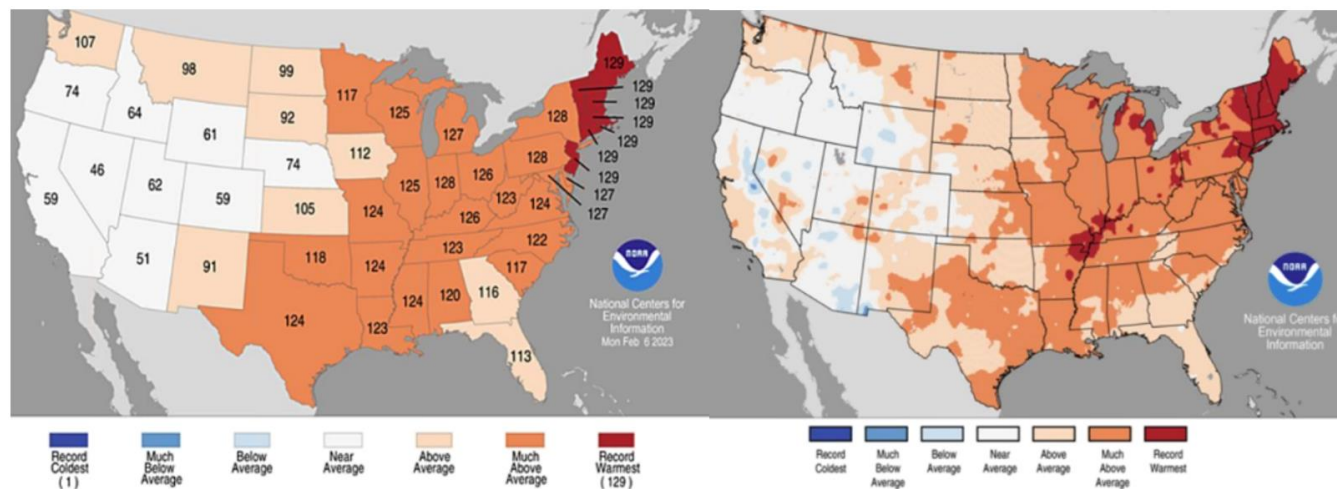
Landowners and producers interested in CRP should contact their local [USDA Service Center](#) to learn more or to apply for the program before their deadlines. Producers with expiring CRP acres can use the Transition Incentives Program (TIP), which incentivizes producers who sell or enter a long-term lease with a beginning, veteran, or socially disadvantaged farmer or rancher who plans to sustainably farm or ranch the land.

# Weather Update

Temperatures this winter continue to be unusually warm in Michigan with essentially the entire Lower Peninsula being 4-6 degrees warmer than normal. February was particularly warm with southern portions of the southwest being as much as 6-8 degrees warmer than normal. January was the 3<sup>rd</sup> warmest on record (1895-2023) in Michigan and the 6<sup>th</sup> warmest across the continental U.S. The current 6-10 day and 8-14 day forecasts (as well as the 3-4 week outlook) predict below-normal temperatures for March.



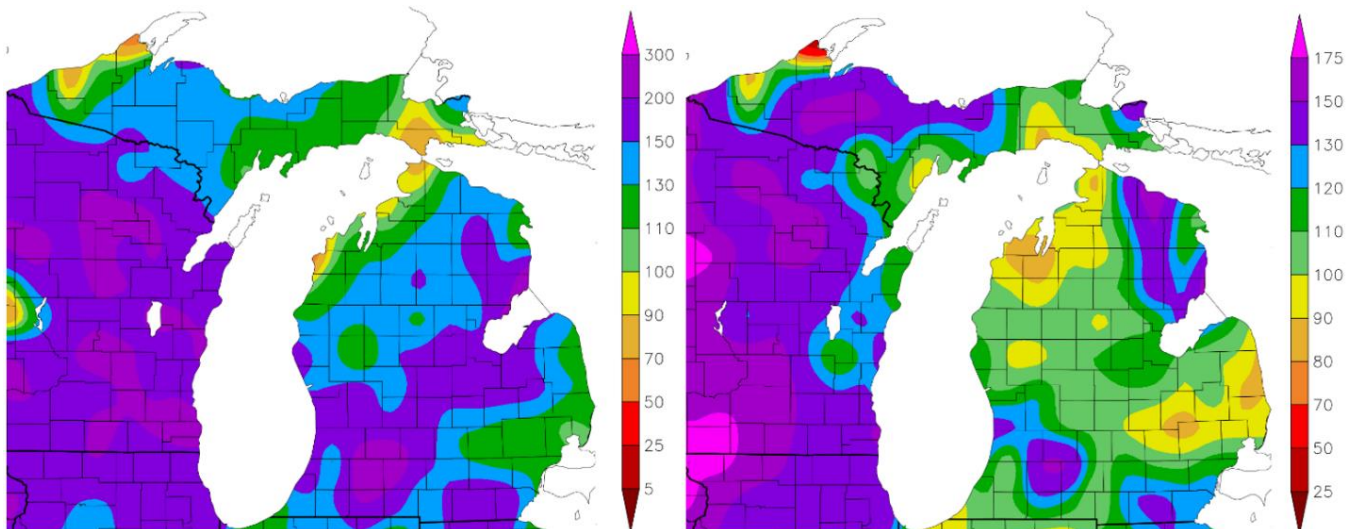
Temperature departure from normal for February (left) and December through February (right).



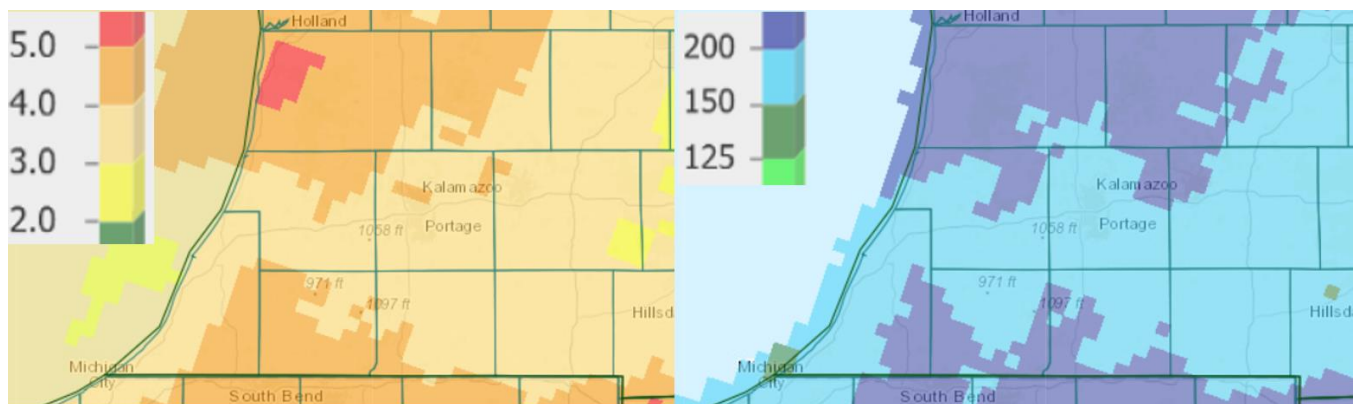
Average (left) and minimum (right) temperature rankings for January 2023.

This winter in general and February in particular have been wetter than normal in southwest Michigan, although the degree of wetness has greatly depended on location as usual. The psychedelic lava lamp maps for percent of normal precipitation show the high precipitation area from Grand Haven down to Battle Creek with as much as 50-100% (or 1-3 in) more precipitation than normal last month. Our neighbors on the east side of the state continue in moderate to severe drought, and impacts on wheat and forage this spring will need to be monitored. The forecast for the coming week predicts 1-2 inches of water-equivalent precipitation, most of that expected with the storm system today with another round possible on Monday. The current 6-10 and 8-14 day forecasts (as well as the 3-4 week outlook) predict near-normal precipitation through much of March.

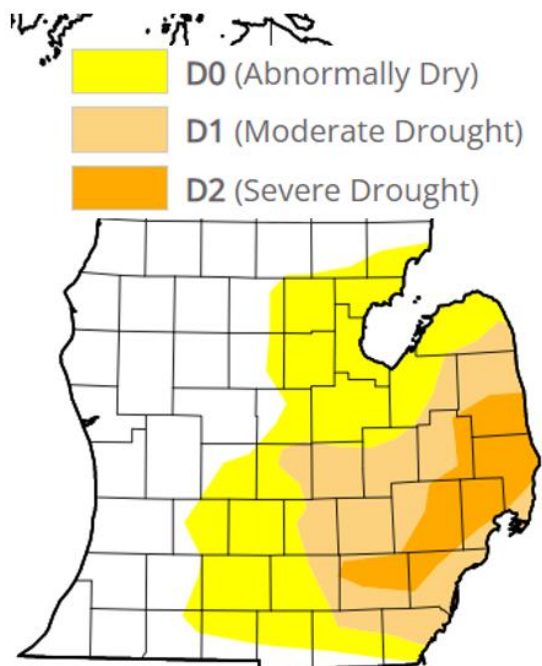
# Southwest Michigan Field Crops Update – March 2023 - 6



Percent of normal precipitation for February (left) and December through February (right).

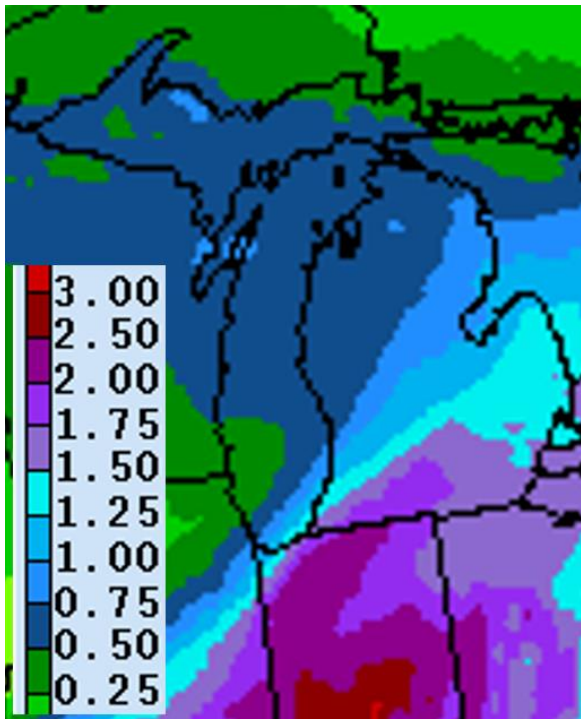


Precipitation totals (left, water equivalent) and percent of normal (right) for the past 30 days as of March 3.

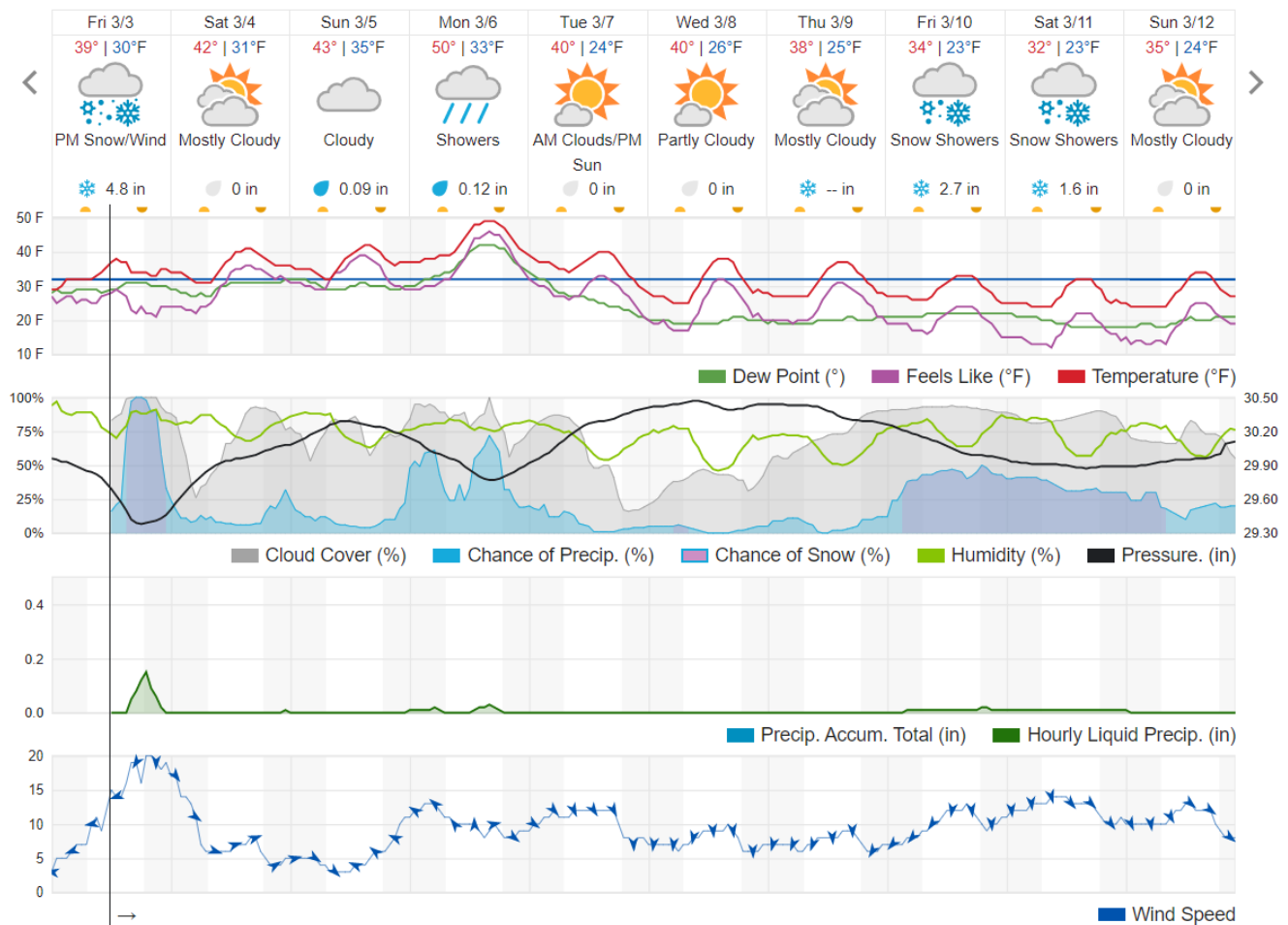


US Drought Monitor released Mar 2.

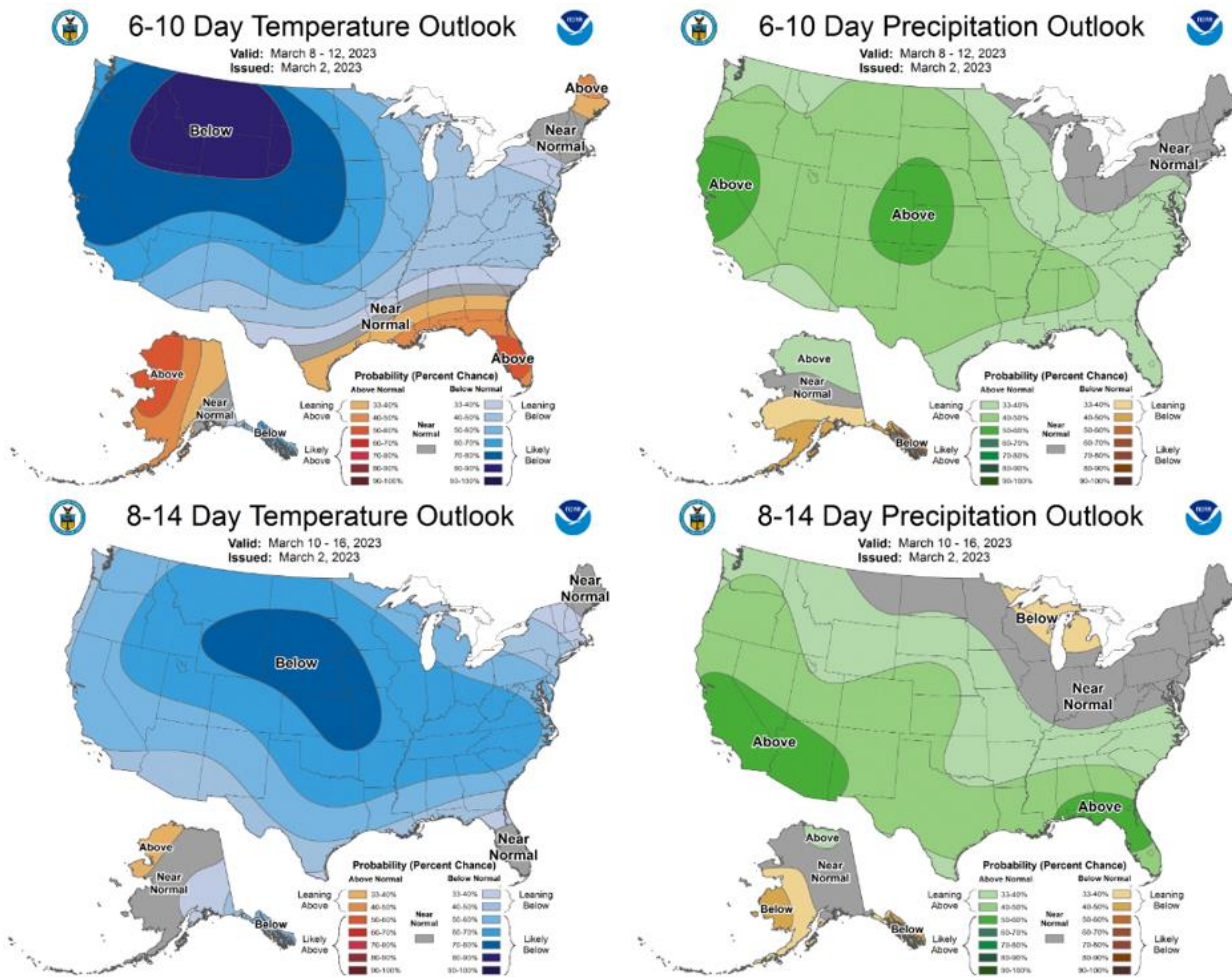
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Precipitation forecast for Mar 3-10 in water equivalents.



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



The 6-10 day (Mar 8-12, top) and 8-14 day (Mar 10-16, bottom) outlooks for temperature (left) and precipitation (right).

## Winter Calendar

Titles are clickable links to online content when highlighted and underlined

- Mar 6** [Michiana Irrigated Corn and Soybean Production Workshop](#). 8:30am-4pm. Blue Gate Restaurant, Shipshewana, IN. Register online. **Pre-registration deadline Mar 3**, but you can also register onsite at \$30. Call Purdue Extension (260-636-2111) for information. **2 RUP, 5 CEU**
- Mar 7-9** [MSU Drainage Design Workshop](#).
- Mar 9-11** [Commodity Classic](#). Orlando, FL.
- Mar 23** [In-Person Pesticide Applicator Training/Testing](#). 8am-2pm. MSU Southwest MI Research and Extension Center, 1791 Hillandale Road, Benton Harbor, MI. Must attend both training and testing. Core exam only, no categories, no RUP credits. Cost is \$25 for training, separate fee paid to MDARD for licensing. Register online.

## MSU Extension Digest Briefs

PUBLISHED ON MARCH 6, 2023

- [MSU RESEARCHERS IDENTIFYING CORN TAR SPOT MANAGEMENT STRATEGIES](#) - A team of MSU scientists is working with regional and national partners to mitigate damage from corn tar spot, a disease that can drastically reduce yields.



## Southwest Michigan Field Crops Update – March 2023 - 9

### PUBLISHED ON MARCH 2, 2023

- [PRAIRIE STRIPS: A CASE STUDY ON IMPROVING FARMING YIELDS AND POLLINATOR HABITAT BY TRANSFORMING UNPROFITABLE FARMLAND INTO PRAIRIE](#) - Creating an agroecosystem to benefit wildlife, research, and the future of farming.

### PUBLISHED ON FEBRUARY 28, 2023

- [FOTONOVELA: A HELPFUL TOOL REDUCING MENTAL HEALTH STIGMA WITHIN SPANISH-SPEAKING COMMUNITIES](#) - Developed as part of its farm stress management efforts, MSU Extension offers a new mental health resource for people who speak Spanish – the fotonovela titled Sentimientos Secretos, or Secret Feelings.
- [MENTORS MATTER FOR NEW FARMERS](#) - Michigan Sustainable Farm Mentors program connects 42 beginning and aspiring farmers with experienced farmers.
- [FROST SEEDING RED CLOVER INTO WINTER WHEAT](#) - Frost seeding red clover into wheat has many benefits.
- [SUSTAINABLE AGRICULTURE GRANTS FOR TRAINING FARM EDUCATORS AND GRADUATE STUDENT RESEARCH](#) - Apply by April for projects supporting people, resource protection, and long-term farm profitability.

### PUBLISHED ON FEBRUARY 20, 2023

- [MARCH IS FROST SEEDING MONTH IN MICHIGAN](#) - Frost-seeding with improved legumes and grasses is an economical way to improve pasture yield and quality.

### PUBLISHED ON FEBRUARY 17, 2023

- [MICHIANA IRRIGATED CORN & SOYBEAN CONFERENCE ON MARCH 6](#) - The Michiana Irrigated Corn & Soybean Conference in Shipshewana, Indiana, will prepare farmers and irrigation professionals for the 2023 season.

### PUBLISHED ON FEBRUARY 13, 2023

- [2023 GREAT LAKES FORAGE AND GRAZING CONFERENCE TO FOCUS ON EFFICIENCY FOR ANIMALS AND PLANTS](#) - Join keynote speaker Daniel Olson, 7th generation dairy farmer, as he brings innovative solutions to big challenges in growing better crops and animals.

### PUBLISHED ON FEBRUARY 8, 2023

- [CONTEMPORARY CONCEPTS TO INCREASE PROFIT OFFERED AT 2023 DRAINAGE WORKSHOP](#) - Learn modern drainage design with free user-friendly online tools and hands-on exercises March 7-9, 2023.

### PUBLISHED ON FEBRUARY 6, 2023

- [WHEAT IS THE SOIL HEALTH ADVANTAGE](#) - Laura Van Eerd details how soil metrics of her long-term experiments were influenced by the reintroduction of wheat.

### PUBLISHED ON FEBRUARY 3, 2023

- [FUNGAL INFECTIONS OF CORN AND MANAGEMENT STRATEGIES](#) - Corn grain and silage often provide the dry matter content in a dairy ration. Fungi in corn causes rot, lost yields and can lead to an accumulation of mycotoxins. Learn best practices to minimize losses and risks caused by corn fungi and rot.
- [REVENUE INSURANCE CAN HELP SUPPORT USE OF GRAIN MARKETING TOOLS](#) - Offset concerns of lost production when marketing grain.

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