MICHIGAN STATE UNIVERSITY | Extension

Southwest Michigan Field Crops Updates
March 2024

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

Soybean On-Farm Research Trial Topics Confirmed

Each year, Michigan Soybean Committee and MSU Extension work with soybean farmers to conduct on-farm research trials on a variety of subjects. The selection of those trials is based on feedback from attendees at winter meetings as well as conversations with MSU Extension campus researchers and agribusiness reps. Extension educators help farmers select fields, lay out plots, apply treatments, collect data, and harvest plots. Depending on the trial selected, free product and soil or tissue sampling is conducted on the field, and all results are communicated to cooperating farmers before being made available to all soybean growers across the state.

The following trials will be run in 2024. All trials will be replicated at least four times and must be oriented perpendicular to any existing tile lines. Detailed protocols for each of the projects are available. **If you are interested in learning more about any of these trials or signing up, contact Eric Anderson (269-359-0565 or eander32@msu.edu) or Nicolle Ritchie (269-858-8739 or ritchi67@msu.edu).**

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. The treatments are:
    1. A maintenance application of 0-0-60 as determined by proven yield goals. The fertilizer should be applied in the spring at least two weeks prior to planting, if possible.
    2. An unfertilized control

2) **Spring Tillage:** This project will determine the yield and income benefits of performing one-pass tillage operations compared to no-tillage. Cooperators choose the tillage implement to evaluate. The same planting equipment must be used for all treatments and be equipped and operated to perform in high-residue conditions. The treatments are:
    1. A single pass of the tillage tool of your choice (vertical tillage tool, high-speed disk, soil finisher, strip tillage, etc.) performed in the spring prior to planting
    2. An untilled control

3) **Planting Date X Maturity Group:** This project will measure the effect of planting date and maturity group on soybean yield and income. The treatments are:
    1. Planting date- In/near the third week of April as weather and soil conditions allow vs 2-4 weeks later
    2. Maturity group- Two varieties that are nearly one full MG different with all other traits being as similar as possible. These could be the longest and the shortest maturity groups you plan to plant in 2024.

4) **Planting Rates:** This project will compare the effects of four planting rates on soybean yields and income. This trial will be easier to implement if the planting equipment is equipped with hydraulic or electric drives on the seed metering system. The four planting rates for this project are:
    1. 70,000 seeds per acre
    2. 100,000 seeds per acre
    3. 130,000 seeds per acre
    4. 160,000 seeds per acre

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. (Sure Crop in-furrow starter is available.) The treatments are:
   1. In-furrow starter fertilizer (product and rate chosen by cooperator)
   2. Untreated control (no In-furrow starter fertilizer)

6) **In-furrow Radiate® and Accomplish Max™:** This project will evaluate the yield and income benefits of two products that have been included in multiple verified very high-yielding soybean contest entrieswhen applied in-furrow. The treatments are:
   1. An in-furrow application of 4 oz/ac of Radiate (plant growth regulator) + 30 oz/ac of Accomplish Max (biostimulant)
   2. Untreated control (no Radiate or Accomplish Max)

7) **Saltro® vs ILeVO® Seed Treatment:** This project will compare the performance of Saltro from Syngenta to ILeVO from BASF. Choose sites that have a history of moderate to severe SDS and have SCN present. Both Saltro and ILeVO will be provided. All seed used in the trial must be the same variety and seed lot. The treatments are:
   1. A base seed treatment (multiple fungicides and an insecticide) ***with*** Saltro
   2. A base seed treatment (multiple fungicides and an insecticide) ***with*** ILeVO
   3. Optional: A base seed treatment (multiple fungicides and an insecticide) **without** Saltro or ILeVO

8) **Soybean Seed Inoculation:** This project will evaluate the yield and income from applying rhizobia inoculant to soybean seed. All seed used in the trial must be the same variety and seed lot. The treatments are:
   1. Seed treated with a base seed treatment **with** a rhizobia inoculant selected by the cooperator
   2. Seed treated with the same base seed treatment used in treatment 1 **without** the rhizobia inoculant

9) **Pre-emerge Herbicide:** This trial will evaluate the effect of a pre-emergence (PRE) herbicide application on soybean yield and income. This trial is especially beneficial to producers that have not applied a PRE herbicide in the past and producers considering dropping the PRE herbicide application from their weed control program in 2024 (not recommended). The treatments are:
   1. A PRE herbicide application followed by a post-emergence (POST) herbicide application (herbicides are selected and provided by the cooperator)
   2. A POST herbicide application using the same herbicide(s), adjuvant(s), application date and application rates applied in treatment 1 (no PRE herbicide application)

10) **ArchiTech (plant growth regulator and foliar fertilizer):** This project will evaluate the yield and income benefits of including ArchiTech in the cooperator's normal post-emergence herbicide application. The ArchiTech will be provided. The treatments are:
   1. A post-emergence herbicide tank-mixed ***with*** ArchiTech at 32 oz/ac
   2. The same post-emergence herbicide applied in treatment 1 ***without*** ArchiTech

11) **Delaro® Complete for White Mold:** This project will evaluate the effect of a single foliar application of a relatively new fungicide from Bayer Crop Science on soybean yield and income when applied to fields having a history of white mold. The fungicide will be provided to the first 4 cooperators. The treatments are:
   1. A single foliar application of Delaro Complete fungicide at 8 oz/ac at **R1**
   2. Untreated control

12) **Delaro® Complete for High Yield:** This project will evaluate the effect of a single foliar application of a relatively new fungicide from Bayer Crop Science on soybean yield and income when applied in high-yield environments. The fungicide will be provided to the first 10 cooperators. The treatments are:
   1. A single foliar application of Delaro Complete fungicide at 8 oz/ac at **R3**
   2. Untreated control

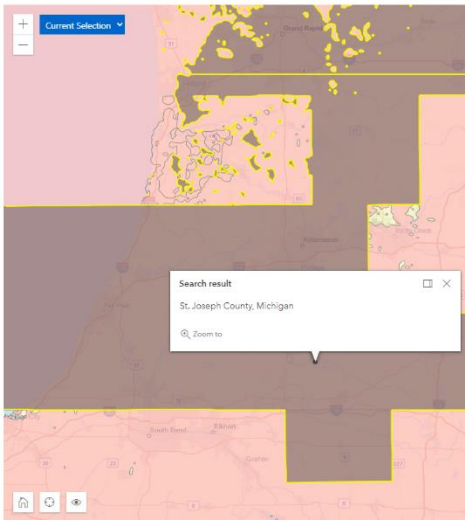
13) **White Mold Fungicide Application Timing:** Three fungicide application timings will be compared to an untreated control to identify the optimum fungicide application timing and to help validate the new Sporecaster phone app. This trial must be conducted in a field that has had severe and relatively uniform white mold within the past 5 to 7 years. The fungicide (Propulse from Bayer) will be provided. The treatments are:
   1. Foliar fungicide application at R1 (one open flower on 50% of the plants)

2. Foliar fungicide application 7 days after the R1 application
3. Foliar fungicide application 14 days after the R1 application
4. Untreated control

Endangered Species Bulletins and EPA Compliance

Last July, the EPA released a workplan to improve compliance with the Endangered Species Act (ESA). The EPA has a responsibility when registering or reviewing registration of pesticides to address potential effects on endangered species. The EPA press release EPA's Workplan and Progress Toward Better Protections for Endangered Species explains that "where EPA determines that a pesticide in the registration or registration review process 'may affect' a listed species, EPA must consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services), as applicable. During consultation, the Services provide EPA with measures, where needed, to avoid jeopardy to listed species and adverse modification of critical habitats from a pesticide. EPA faces several challenges that have made it difficult to implement timely and effective strategies that specifically address protecting listed species from possible pesticide effects. To better protect listed species, EPA is working to improve how EPA assesses effects to listed species in its pesticide evaluations and consultation processes."

The EPA - ESA Workplan presents several strategies for improved compliance with the ESA, but one of the major ones that do (and will) impact growers and applicators is the use of Endangered Species Protection Bulletins. From the above-mentioned EPA press release, "Endangered Species Protection Bulletins are a part of EPA's Endangered Species Protection Program. Bulletins set forth geographically specific pesticide use limitations for the protection of threatened and endangered (listed) species and their designated critical habitat." Bulletins must be obtained no more than 6 months in advance of the chemical's application. They are accessed at Bulletins Live! Two and require the following information: location (you can enter a city or an entire county), application month, and the EPA registration number of the chemical that will be applied.



A pink area will pop up if you are part of a Pesticide Use Limitation Area (PULA). Clicking on the pink area and selecting "full details" will turn the area a dark color and bring up the use restrictions. There is an option to print the bulletin so that it can be kept as part of your files. Currently in Southwest Michigan, dicamba, methoxyfenocide (Intrepid) and cyantriniliprole (Exirel) have use restrictions. While there are only a few active ingredients requiring this in the state of Michigan as of now, that number may increase in the next year as the EPA moves forward.

The press release states, "EPA continues to complete Endangered Species Act consultations and update the Bulletins Live! Two system with additional geographically specific use limitations that may be applicable to your pesticide product in the future. Therefore, before you apply a pesticide, check to see if new or additional directions for the product have been added to Bulletins Live! Two." Remember that the label is the law, and it is important to read and comply with information included on pesticide labels. For more information, read What you need to know about EPA's "Bulletins Live! Two" and reach out to your local MSU Extension.

Virtual Breakfast Series to Start Again on March 21, 2024

The MSU Extension Field Crops Team hosts the Virtual Breakfast Series every Thursday morning from 7:00am-8:00am during the growing season for farmers, agribusiness professionals, agency personnel, and others interested in agriculture. The series is flexible, fluid, and able to adapt to constantly changing conditions for crops such as corn, soybeans, alfalfa, wheat, sugar beets, and dry beans. Valuable crop management information is shared to address potential and current issues related to weather, pest infestation, and crop diseases. Emerging issues are addressed in a timely manner to help farmers increase efficiency and profitability of the farming operations.

Participating is easy and free! You can join the live meeting via Zoom using a computer, tablet, mobile device, or regular phone line. Restricted use pesticide (RUP) credits and Certified Crop Advisor (CCA) CEU's are available for live attendees. Participants must sign up to receive an email notification with instructions for joining the Virtual Breakfast here: **Sign up to receive Virtual Breakfast Zoom information**. You only need to do this once and you will receive the Zoom link and call-in phone number, as well as weekly reminders every Wednesday and Thursday.

If you cannot participate in the live session at 7 a.m., you can view the recorded version at any time and view past sessions from past seasons online. Recordings are closed-captioned and available at the Field Crops Virtual Breakfast webpage and the MSU Extension Field Crops Team social media platforms: Facebook, Spotify, YouTube, Apple Podcasts, and Twitter @MSUExtension.

EPA Existing Stocks Order for Dicamba

The American Soybean Association (ASA) Applauds EPA Existing Stocks Order for Dicamba Ahead of Soy Planting "EPA has declared farmers can accept 'existing stocks'—previously registered pesticide products currently in the United States that were packaged, labeled, and released for shipment prior to February 6 (the effective date of the District of Arizona's vacatur of dicamba registrations). The existing stocks order also clarified that dicamba product already in the possession of distributors, co-ops, and other parties for sale before that date can be sold and distributed, within set guidelines outlined in the order." This order followed an Arizona federal district court dicamba ruling in which registrations for XtendMax, Engenia, and Tavium were vacated.

ARC/PLC Program Enrollment 2024 Crop Year by March 15

Agricultural producers who have not yet enrolled in the Agriculture Risk Coverage (ARC) or Price Loss Coverage (PLC) programs for the 2024 crop year have until March 15, 2024, to revise elections and sign contracts. Both safety net programs, delivered by USDA's Farm Service Agency (FSA), provide vital income support to farmers who experience substantial declines in crop prices or revenues for the 2024 crop year. In Michigan, producers have completed 33,987 contracts to date, representing 62.4% of the more than 54,499 million expected contracts.

Producers can elect coverage and enroll in ARC-County or PLC, which provide crop-by-crop protection, or ARC-Individual, which protects the entire farm. Although election changes for 2024 are optional, producers must enroll, with a signed contract, each year. If a producer has a multi-year contract on the farm, the contract will continue for 2024 unless an election change is made.

If producers do not submit their election revision by the March 15, 2024, deadline, the election remains the same as their 2023 election for eligible commodities on the farm. Also, producers who do not complete enrollment and sign their contract by the deadline will not be enrolled in ARC or PLC for the 2024 year and will not receive a payment if one is triggered. Farm owners can only enroll in these programs if they have a share interest in the commodity.

Producers are eligible to enroll farms with base acres for the following commodities: barley, canola, large and small chickpeas, corn, crambe, flaxseed, grain sorghum, lentils, mustard seed, oats, peanuts, dry peas, rapeseed, long grain rice, medium and short grain rice, safflower seed, seed cotton, sesame, soybeans, sunflower seed and wheat.

Web-Based Decision Tools
Many universities offer web-based decision tools to help producers make informed, educated decisions using crop data specific to their respective farming operations. Producers are encouraged to use the tool of their choice to support their ARC and PLC elections.

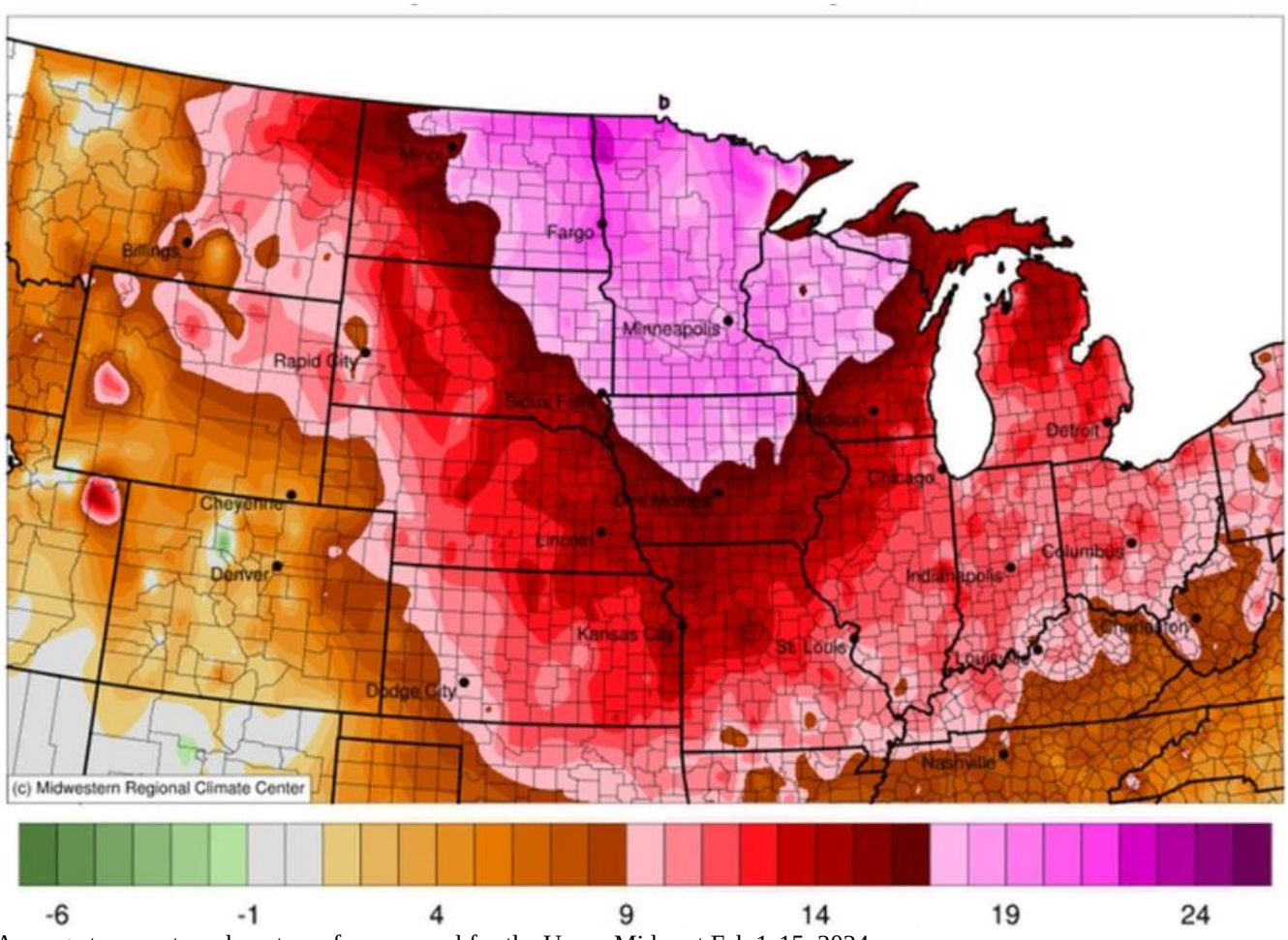
Crop Insurance Considerations
Producers are reminded that enrolling in ARC or PLC programs can impact eligibility for some crop insurance products offered by USDA's Risk Management Agency (RMA). Producers who elect and enroll in PLC also have the option of purchasing Supplemental Coverage Option (SCO) through their Approved Insurance Provider, but producers of covered commodities who elect ARC are ineligible for SCO on their planted acres.

Unlike SCO, RMA's Enhanced Coverage Option (ECO) is unaffected by participating in ARC for the same crop, on the same acres. You may elect ECO regardless of your farm program election. Upland cotton farmers who choose to enroll seed cotton base acres in ARC or PLC are ineligible for the stacked income protection plan, or STAX, on their planted cotton acres.

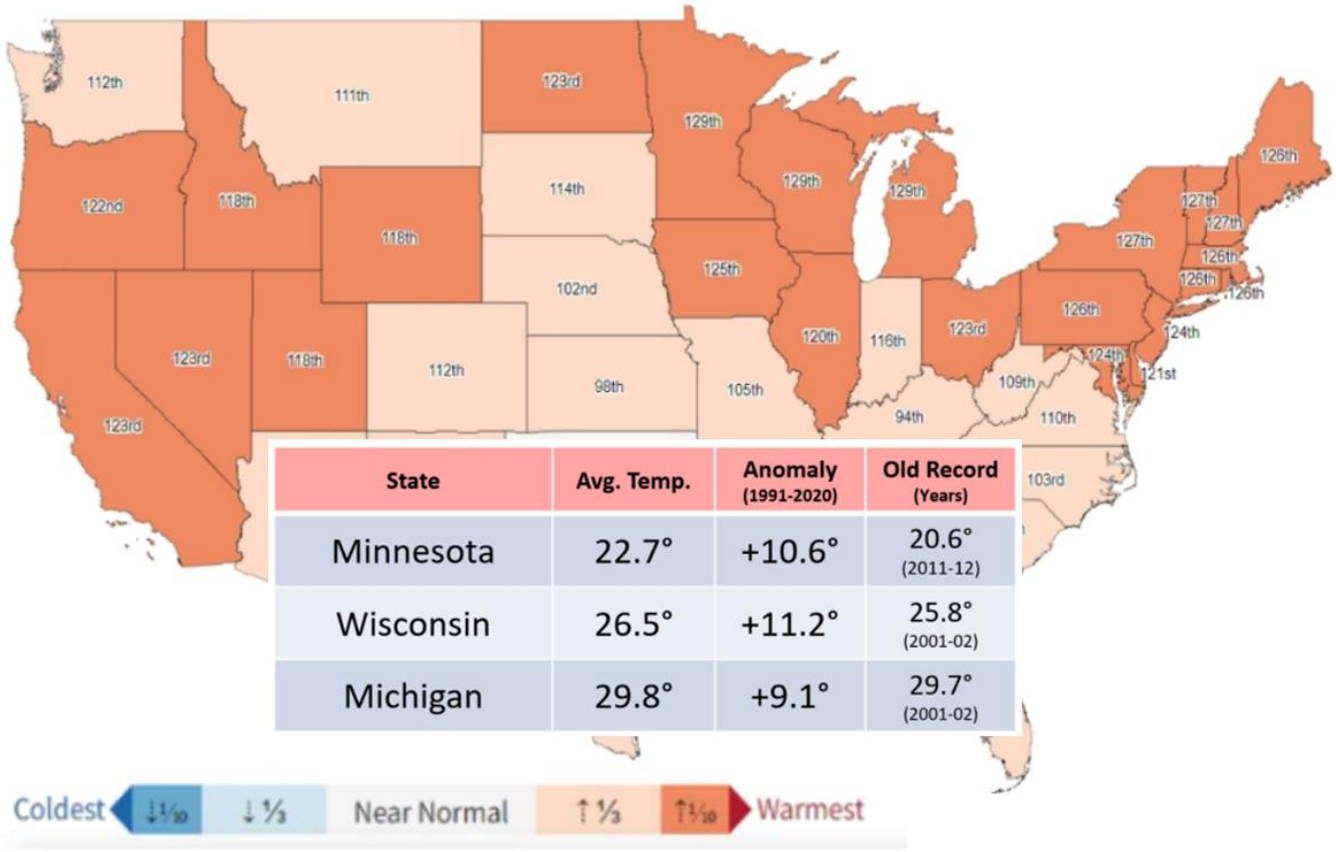
More Information
For more information on ARC and PLC, producers can visit the ARC and PLC webpage or contact their local USDA Service Center. Producers can also prepare maps for acreage reporting as well as manage farm loans and view other farm records data and customer information by logging into their farmers.gov account. If you don't have an account, sign up today.

Weather Update

Weather
Tillage equipment has been rolling the past couple of weeks, and manure and fertilizer applications are in full swing. It doesn't take much imagination to see that we are in a very warm winter. Both December and January set records for warmest months, and February has continued that trend. Given the current forecast, we are likely to have just experienced the warmest meteorological winter (Dec-Feb) on record over the past 130 years. These record-warm temperatures have kept the ground from freezing beyond the surface layer in most locations—more to come about that as the spring progresses. Warm winters in the Great Lakes region are expected with strong El Niño events like we are currently in, and the forecast is for these conditions to persist through May. The current models predict a switch to neutral ENSO conditions for the spring with a strong possibility of a swing to La Niña for the summer and onward. Both medium-range outlooks call for above-normal temperatures for the first half of March.

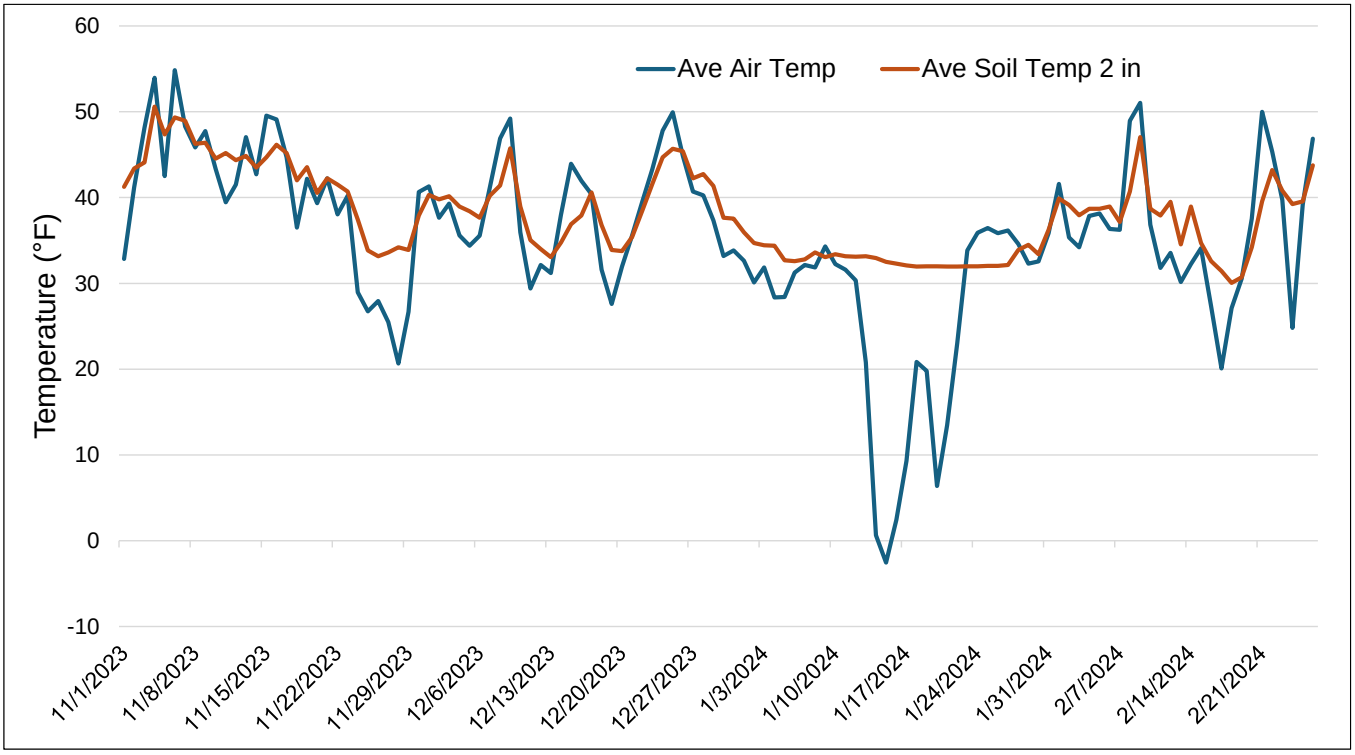


Average temperature departures from normal for the Upper Midwest Feb 1-15, 2024.

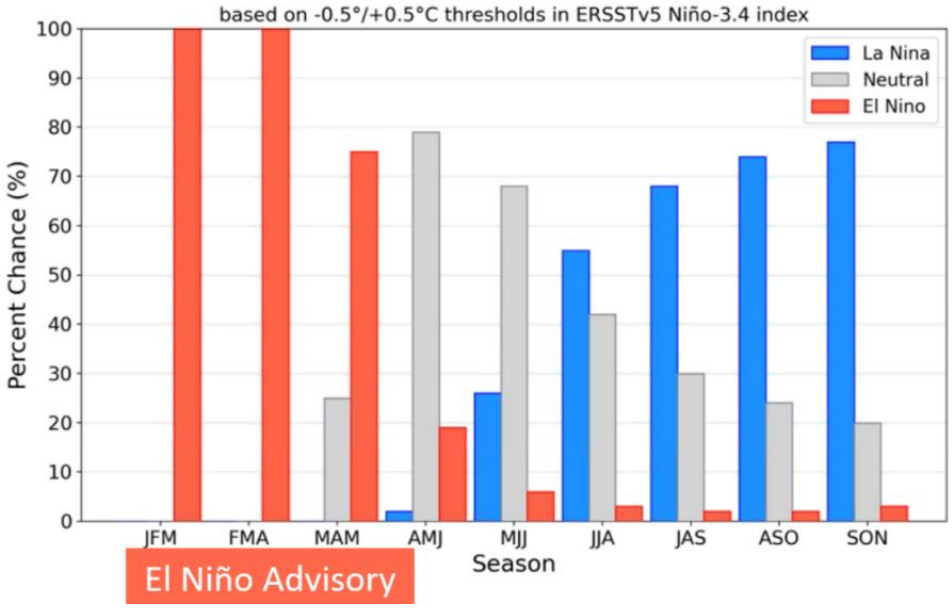


State	Avg. Temp.	Anomaly (1991-2020)	Old Record (Years)
Minnesota	22.7°	+10.6°	20.6° (2011-12)
Wisconsin	26.5°	+11.2°	25.8° (2001-02)
Michigan	29.8°	+9.1°	29.7° (2001-02)

December + January statewide average temperature ranking (out of 130 years). Michigan beat its old record set in 2001-02 by 0.1 degree.

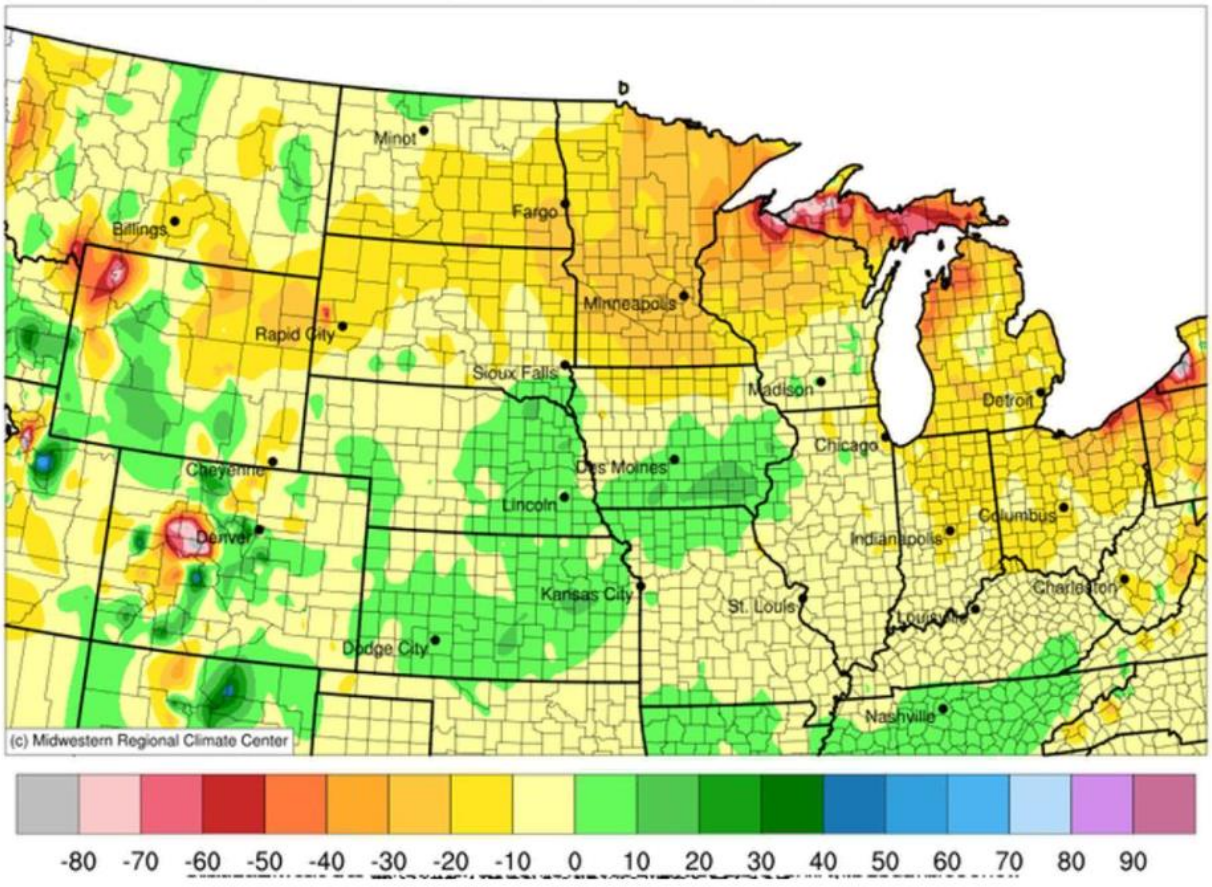


Average air and soil temperatures at 2-inch depth since November 2023 as measured at the Mendon Enviroweather site.

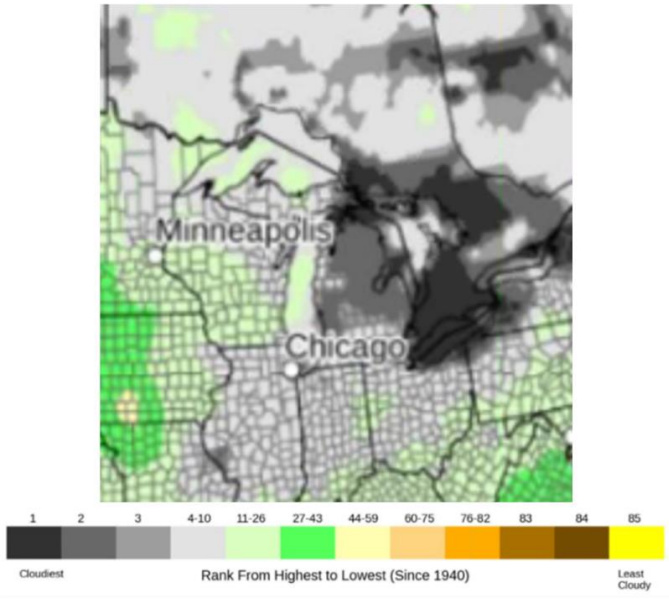


Current ENSO probabilities for 2024 issued February from NOAA.

Though January was fairly wet (110th wettest out of 130), snowfall this winter has been low due to the warmer temperatures with 10-20 inches less snow than normal for our region since October. January was also an unusually cloudy month in Michigan with records broken for a few locations along the west side of the state. February was significantly drier with much of the region receiving less than half the normal precipitation for the month. The precipitation forecast for the coming week predicts 0.50–0.75 inch for southwest Michigan, most of that predicted Monday through Wednesday next week. The 6-10 and 8-14 day outlooks both call for slightly above-normal chances of precipitation.



Accumulated snowfall (inches) departure from normal (1991-2020) for Oct 1, 2023 – Feb 15, 2024.

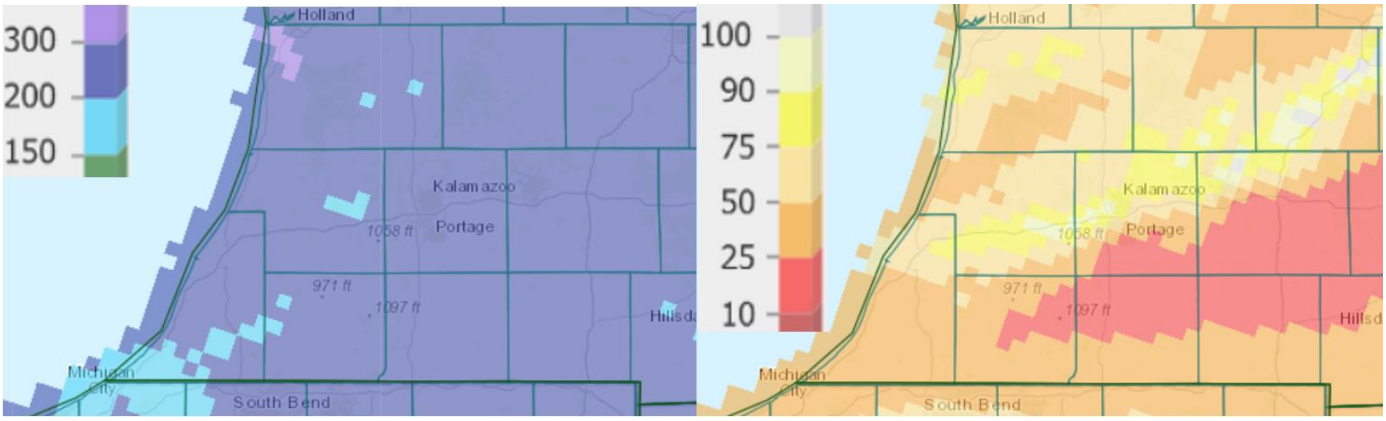


Location	Average % of Overcast Days	2024 % of Overcast Days
Muskegon, MI	73	100
Grand Rapids, MI	66	97
Traverse City, MI	69	97
Alpena, MI	63	94
Saginaw, MI	53	94

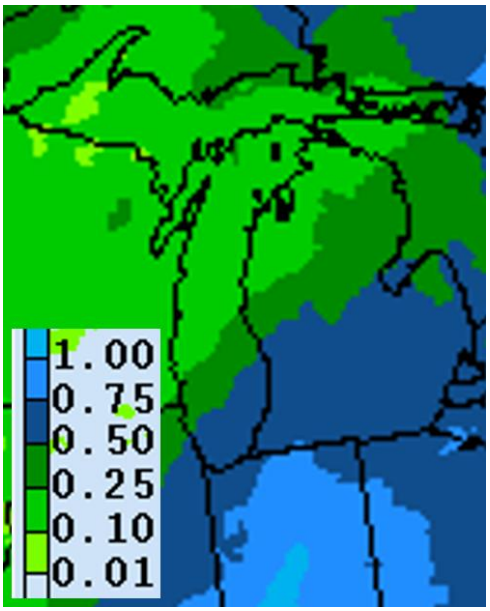
First and only time since 1951 that Muskegon had 100% overcast for any month!

All five locations set new or tied existing marks for the cloudiest January on record.

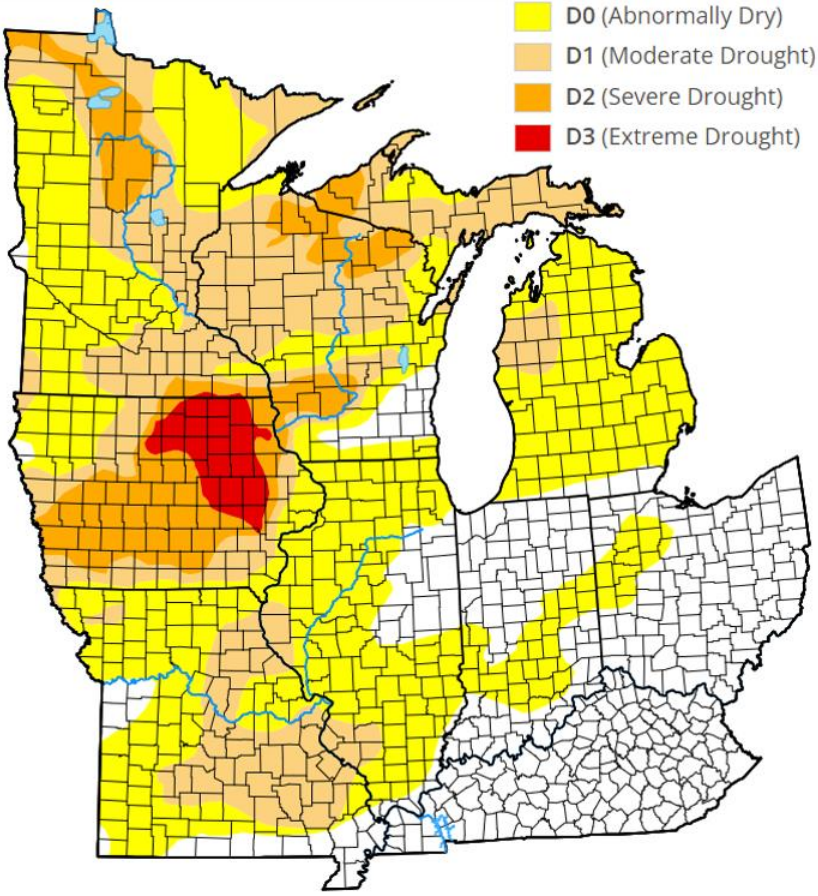
Upper Midwest cloudiness ranking (out of 85) since 1940 (left) and percent of overcast days for several cities in western Lower Peninsula in January (right).



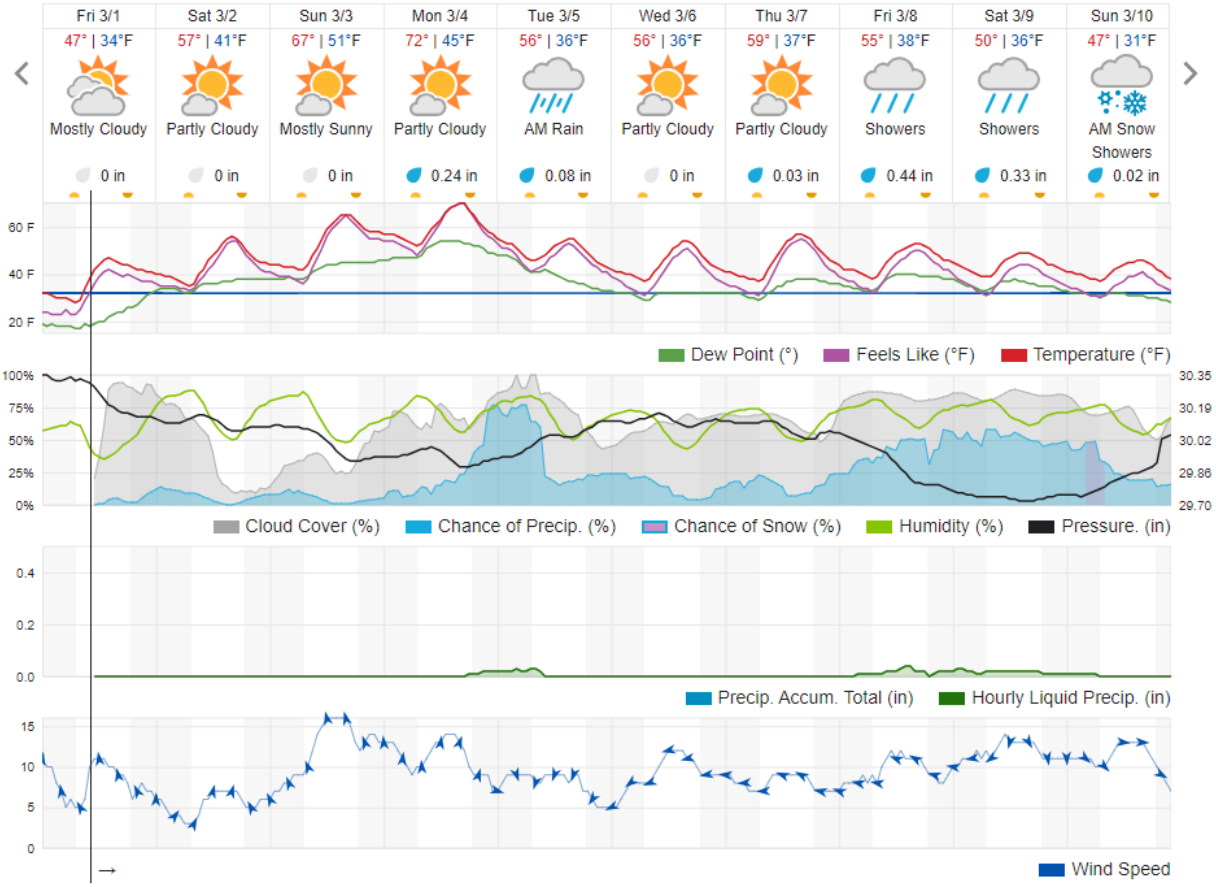
Precipitation percent of normal for January (left) and February (right).



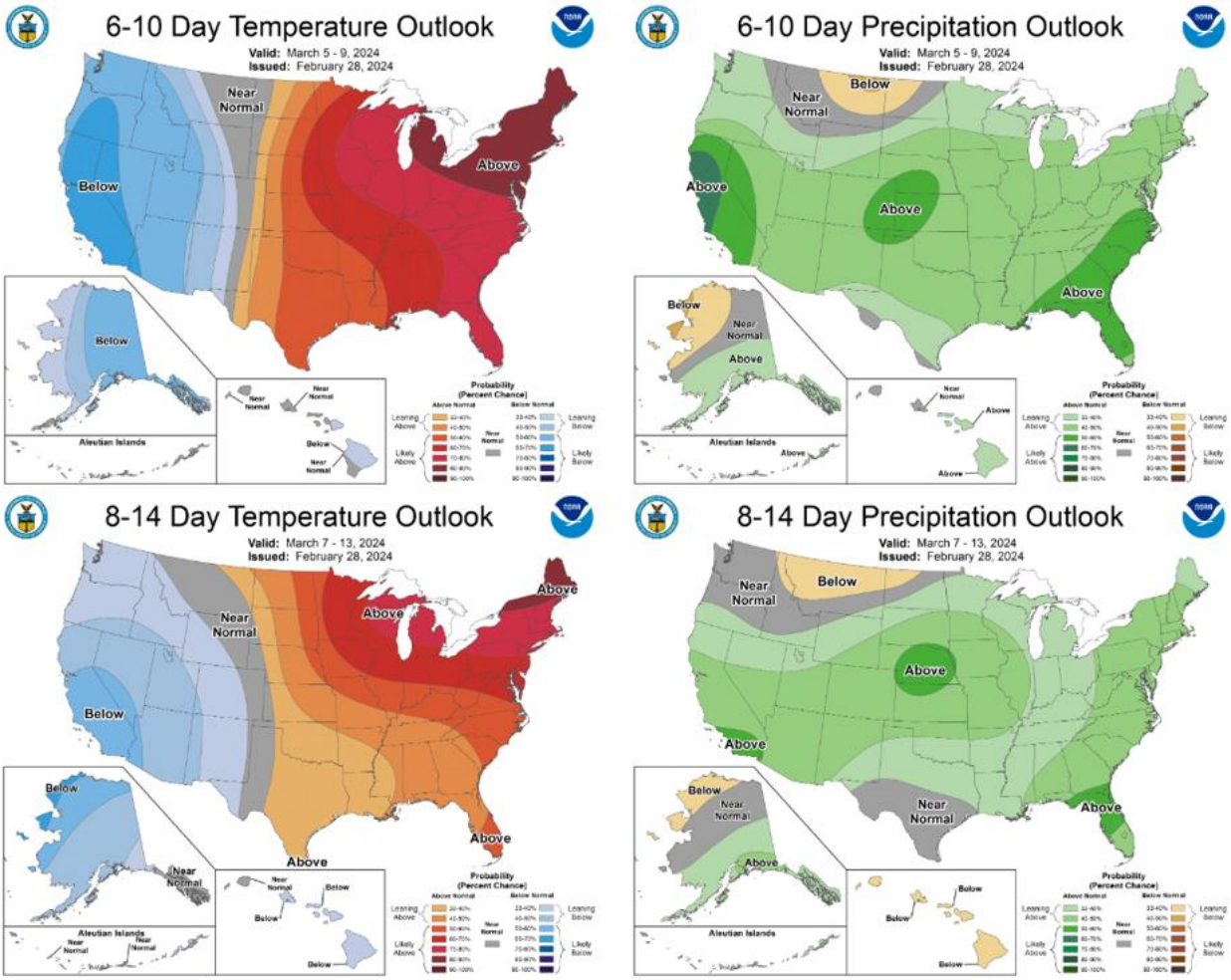
Precipitation forecast for Feb 29 – Mar 7.



US Drought Monitor issued February 29.



Ten-day weather forecast for Kalamazoo according to wunderground.com.



The 6-10 day (Mar 5-9, top) and 8-14 day (Mar 7-13, bottom) outlooks for temperature (left) and precipitation (right).

Calendar

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

Mar 4 - 25 **Field Crops Webinar Series 2024.** 7:00 pm. Cost is $20 for the entire series. This webinar focuses on farm management practices with a focus on navigating weather-related challenges to maximize agronomic management decisions. Sessions started Feb 5 and will end March 25. Late registrants will receive access to recordings of early sessions as well as links to upcoming sessions.

Mar 8 **Science for Success Webinar: Pre-Season Maturity Group, Planting Date, and Biological Seed Treatment Choices.** 1:00 pm. Science for Success is a national team of soybean Extension Specialists from land-grant universities and is funded by the United Soybean Board through the checkoff program. Register online.

Mar 15 **Science for Success Webinar: In-Season Fertilizer and Fungicide Applications.** 1:00 pm. Science for Success is a national team of soybean Extension Specialists from land-grant universities and is funded by the United Soybean Board through the checkoff program. Register online.

Mar 21 **Virtual Breakfast: Optimizing Planting Decisions.** 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.

Mar 22 **Science for Success Webinar: Late-Season Desiccation Decisions.** 1:00 pm. Science for Success is a national team of soybean Extension Specialists from land-grant universities and is funded by the United Soybean Board through the checkoff program. Register online.

Mar 28 **Virtual Breakfast: Repairing Damaged Fields.** 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.

Apr 4 **Virtual Breakfast: Early Weeds Management.** 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.

Apr 10 **In-Person Core Pesticide Review and Core Testing.** 8:00am. GreenMark Equipment, Three Rivers, MI. Cost is $15 for morning training payable to MSU, cost for testing dependent on license type. Morning training session is required before afternoon testing, only core and standards exams (no commercial categories) offered. Other locations and dates available. Register online.

Apr 11 **Virtual Breakfast: Soil Fertility.** 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.

Apr 18 **Virtual Breakfast: Wheat Conditions.** 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.

Apr 25 **Virtual Breakfast: Conservation Practices.** 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

MSU EXTENSION FIELD CROPS VIRTUAL BREAKFAST SERIES KICKS OFF SEVENTH SEASON MARCH 21, 2024

PUBLISHED ON FEBRUARY 29, 2024

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.

THE FIELD CROPS WEBINAR SERIES CONTINUES WITH A DISCUSSION ON AGRONOMY AND WEATHER-RELATED CHALLENGES FOR 2024 PRODUCTION

PUBLISHED ON FEBRUARY 27, 2024

This webinar focuses on farm management practices with a focus on navigating weather-related challenges to maximize agronomic management decisions.

SOIL MICROBIAL COMMUNITY DYNAMICS ACROSS MICHIGAN FARMS

PUBLISHED ON FEBRUARY 26, 2024

A look at overall soil health through Michigan.

WHAT YOU NEED TO KNOW ABOUT EPA'S "BULLETINS LIVE! TWO"

PUBLISHED ON FEBRUARY 23, 2024

How to create up to date "Bulletins Live! Two" based on EPA's Pesticide Use Limitation Area for your field locations.

2022 AG CENSUS REVEALS SURPRISING TREND IN ACREAGE OF TILE DRAINAGE IN THE MIDWEST
PUBLISHED ON FEBRUARY 23, 2024
Some Midwest states reported a reduction in acreage of subsurface tile drainage from 2017 to 2022.

MICHIGAN AGRABILITY 2023 UPDATES
PUBLISHED ON FEBRUARY 19, 2024
Michigan's AgrAbility program works with people in the agricultural industry who have an illness, injury or disability to help them keep working on the farm.

ONLINE HAY PRODUCTION 101 SHORT COURSE IS BACK BY POPULAR DEMAND IN 2024
PUBLISHED ON FEBRUARY 13, 2024
Join our team of Michigan State University Extension specialists and educators online in February and March to learn the ins and outs of growing, harvesting and marketing your hay crop.

CONTROLLING EROSION WITH COVER CROPS
PUBLISHED ON FEBRUARY 09, 2024
Stop losing your most valuable asset. Plant cover crops.

NEW MSU EXTENSION FIELD CROPS EDUCATOR IN SOUTHWEST MICHIGAN
PUBLISHED ON FEBRUARY 09, 2024
Nicolle Ritchie has a strong background in integrated pest management and is passionate about managing pest resistance and improving soil health.

KBS LTAR 2023 HIGHLIGHTS - READ OUR NEWSLETTER
PUBLISHED ON FEBRUARY 07, 2024
Read for an overview of the agronomic, research, and engagement highlights from 2023. Email kbs.ltar@msu.edu to be included on our list-serv and get more frequent project or event updates.

FIELD HORSETAIL: A PLANT AS OLD AS TIME
PUBLISHED ON FEBRUARY 02, 2024
Field Horsetail overview and control options.

EDUCATIONAL SERIES OFFERS INSURANCE BASICS ON MANAGING PRODUCTION AND PRICE RISK
PUBLISHED ON FEBRUARY 01, 2024
Session recordings now available from Michigan State University Extension.

NEW CLIMATE RESILIENCY PROGRAM TO ADDRESS LONG-TERM PLANT AGRICULTURE CHALLENGES IN MICHIGAN
PUBLISHED ON FEBRUARY 01, 2024
The Agricultural Climate Resiliency Program is a partnership among MSU, the Plant Coalition, and the Michigan Department of Agriculture and Rural Development.

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