

## Southwest Michigan Field Crops Updates March 2021

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 2021

Each year, the Michigan Soybean Promotion Committee conducts on-farm trials to answer questions about a variety of topics. The projects are selected by growers who attend their annual meetings, so all data generated should be directly applicable to any soybean farmer. Historically, MSPC has hired former Extension educators (including Dan Rajzer) to help conduct these trials in southern MI. Since Dan has now officially retired from this work, MSPC has agreed to partner with MSU Extension field crops educators to facilitate these on-farm trials. So, between Bruce MacKellar (Van Buren County) and me, we will be working with growers to set up these trials.

This year 13 projects were selected—these are described briefly below, [in more detail in this document](#), and the full protocol will be made available to interested cooperators. **Please contact me if you are interested in exploring any of these topics on your farm this year.**

- 1) Spring Tillage: This project will determine the yield and income benefits of performing one-pass tillage operations compared to no-tillage.
- 2) Planting Rates: This project will compare the effects of four planting rates on soybean yields and income.
- 3) Planting Date: This project will measure the effect that planting date has on soybean yield and income in 2021.
- 4) Saltro® Seed Treatment: This project will evaluate the performance of Saltro, a new seed treatment from Syngenta Choose sites that have a history of moderate to severe SDS and have SCN present.
- 5) Row Spacing: This project will compare soybean yield and income from two row spacings (15" vs 30") planted with the same planter.
- 6) In-furrow Biological and Humic Acid: This project will evaluate the yield and income benefits of applying two products distributed by Wilbur Ellis (Nutrio Unlock® and Puric™ Prime Max) in the seed furrow (products cannot be applied 2x2).
- 7) 2x2 Starter Fertilizer: This project will evaluate the yield and income benefits of applying 2x2 starter fertilizer when planting soybeans.
- 8) Planting System Comparison: This project will compare the yield and income benefits of different planting systems (unit planters, box drills and air seeders) in the row widths and planting rates selected by the cooperator.

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- 9) Rye Termination Timing (Planting Green): This project will compare the yield and income benefits of planting into a green small grain cover crop to terminating the cover crop prior to planting.
- 10) Foliar Fungicide (Miravis® Neo): This project will evaluate the effect of a single foliar application of a relatively new fungicide from Syngenta, Miravis Neo on soybean yield and income when applied in high-yield environments.
- 11) Foliar Fertilizer + Post-emergence Herbicide: This project will evaluate the yield and income benefits of adding a foliar fertilizer (NDemand® 88 from Wilbur Ellis) to a post-emergence herbicide application.
- 12) White Mold Application Timing: Three fungicide application timings will be compared to identify the optimum fungicide application timing and to help validate the new Sporecaster phone app.
- 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.

## Updated Handy Bt Trait Table

An updated version of the [Handy Bt Trait Table](#) is now available. The table is your one-stop shop to keep track of the many trait packages available in corn.

This from MSU Extension field crops entomologist Dr. Chris DiFonzo: “This year, **a new trait appears on the table**. The SmartStax Pro trait package, set for commercialization in 2022, has the same herbicide tolerances and Bt traits as SmartStax, but with one additional trait representing a unique mode of action: RNA Interference or RNAi. On page 1 of the updated table, I attempt to explain this mode of action. RNAi does not involve producing a toxin, as in Bt traits. Instead, RNAi interferes with or shuts down production of a particular protein. This process happens naturally in living things, but organisms can also be genetically modified for RNAi for a particular purpose. SmartStax Pro is a ‘first’ in several ways. It is the first use of RNAi technology for pest control, and the first use where one species interferes with another. SmartStax Pro plants make a double-stranded RNA molecule that shuts down production of a specific key protein in the rootworm gut, so that larvae slowly die as they feed on the roots. Both Bayer and Corteva have versions of SmartStax Pro coming soon, but you may see hybrids in field demonstrations this season.”

If you missed the video I highlighted in last month’s newsletter, ‘[When Good Bts Go Bad](#)’, recorded by Dr. DiFonzo and Pat Porter from Texas A&M, follow this link to check that out.

## Return of the Coronavirus Relief Programs for Agriculture Webinar Recording Available

A recording of the [recent MSU Extension webinar on coronavirus relief legislation](#) is now available online. The coronavirus relief legislation enabled programs that can provide additional financial support to a wide variety of agricultural businesses, **both with and without employees**. In this webinar, the MSU Extension farm management educators walked through how the programs work, how they can benefit agricultural businesses, and how to participate in them.

USDA’s review of the Coronavirus Food Assistance Program (CFAP) is ongoing and a decision is anticipated in the weeks ahead. CFAP Additional Assistance, which expanded eligibility for some agricultural producers and commodities, is under review. The Farm Service Agency has eliminated the February 26 deadline for CFAP Additional Assistance and will continue to accept applications during the evaluation period. Producers will be given at least an additional 30 days to sign up after any decision is announced. Payments from the CFAP 2 signup that ended December 11 have not been impacted in any way.

## Virtual Breakfast to Begin April 1

How can field crops producers get timely weather, crop management and pest information? **Every Thursday at 7 a.m. from April through September 2021**, you can get the latest information from our MSU field crop specialists and educators. The scheduled topics will be fluid, flexible and focused on the most current topics. All field crop producers, agribusiness professionals, government agency personnel and others interested in field crops production and management are encouraged to participate.

The virtual meetings have two segments each week - a short presentation focused on a specific topic from one of our field crops specialists or educators, followed by a weather update featuring MSU ag meteorologist Jeff Andresen. A Q&A session will round out the hour.

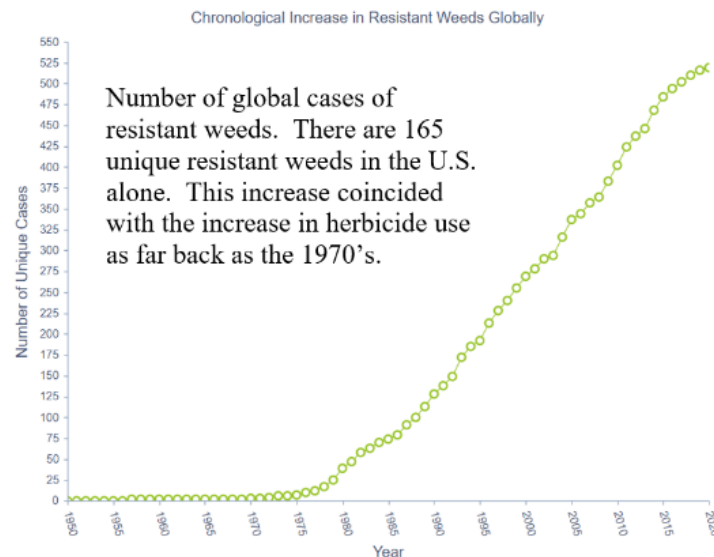
Participating is easy and free! You can join the live meeting via Zoom using a computer, tablet, mobile device or regular phone line. Participants must sign up to receive an email notification with instructions for joining the Virtual Breakfast. You only need to do this once and you will receive the Zoom link and call-in phone number, as well as weekly reminders every Wednesday. NOTE: if you have participated in the past, you only need to register if your email / contact information has changed.

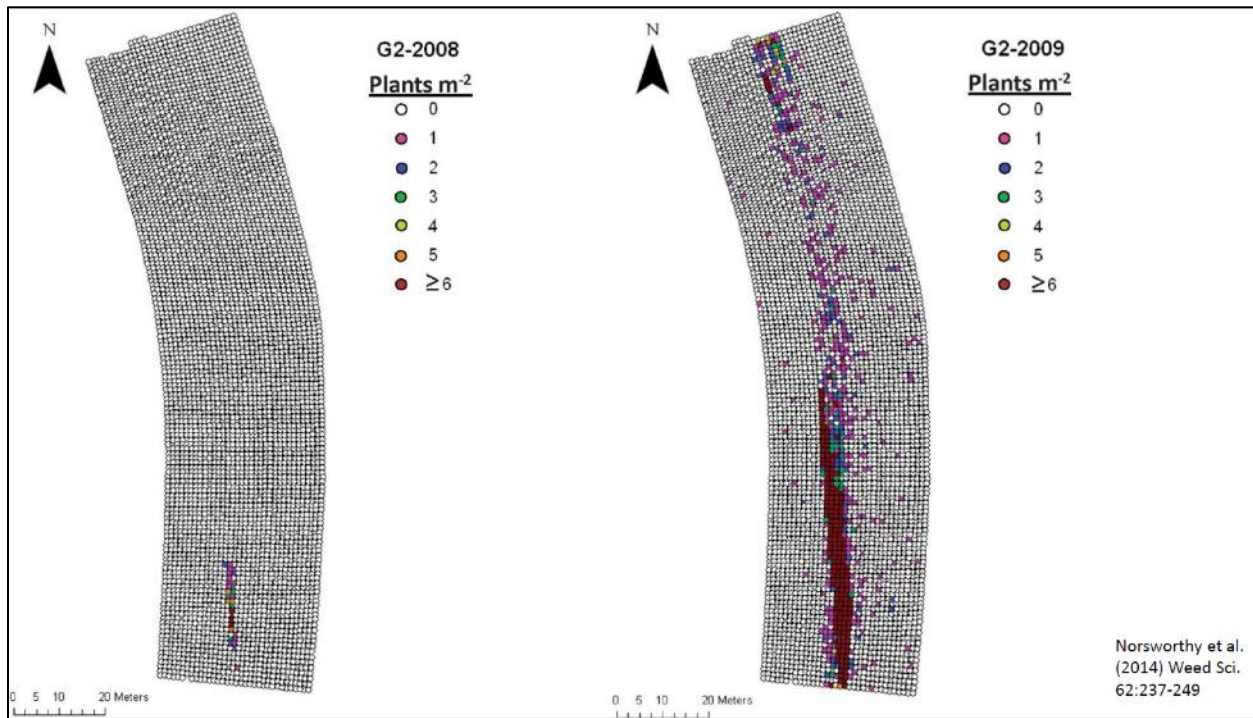


For those who plan to renew their MI pesticide applicator's license with recertification (RUP) credits, each weekly session will offer **1 RUP credit for attending the live session** (not the recordings). If you miss a session, they will be recorded and made available as videos and podcasts on the [MSU Extension Field Crops Team webpage](#).

## Using Cover Crops to Manage Hard-to-Control Weeds

In a recent webinar from the American Society of Agronomy, University of Nebraska-Lincoln weed science Extension educator Chris Proctor shared about research that has been done on the use of cover crops to manage challenging weeds. He focused primarily on waterhemp and Palmer amaranth. Below are some screenshots from his presentation with my comments.

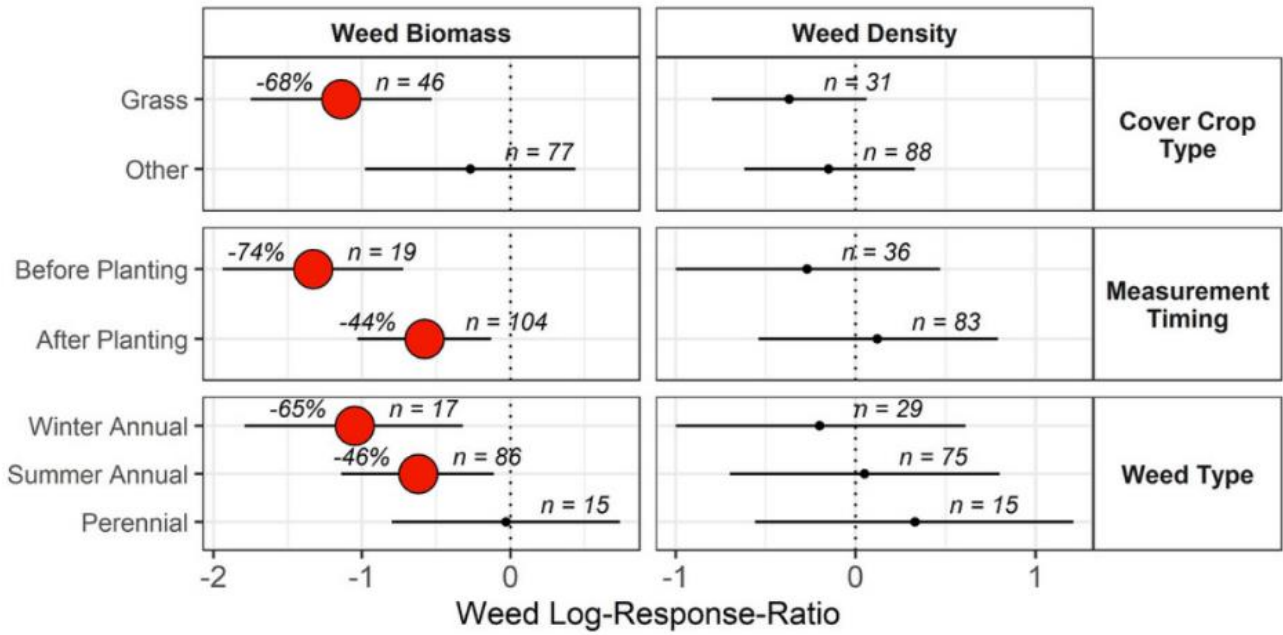




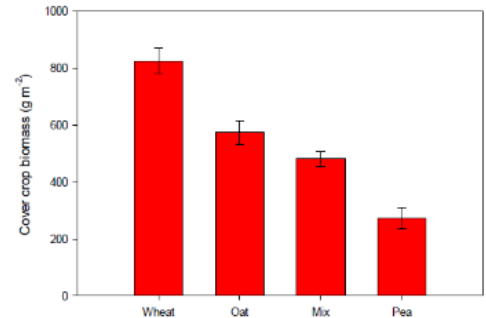
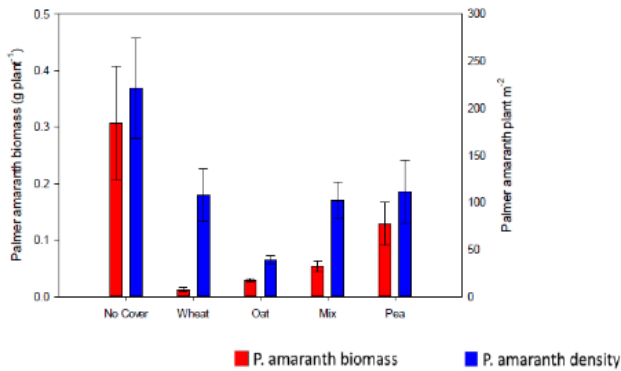
On the left is a field with a small number of Palmer amaranth in 2008. On the right is the same field with a heavy infestation of Palmer that clearly follows the path of the combine. It doesn't take many plants going to seed to create a major mess.



These photos show how adaptable Palmer amaranth can be. On the left, it forms a short bush with many branches with no competition and a “beanstalk” when planted into corn. On the right, the timing of emergence made all the difference. It is key to note that all three plants on the right produced viable seed.



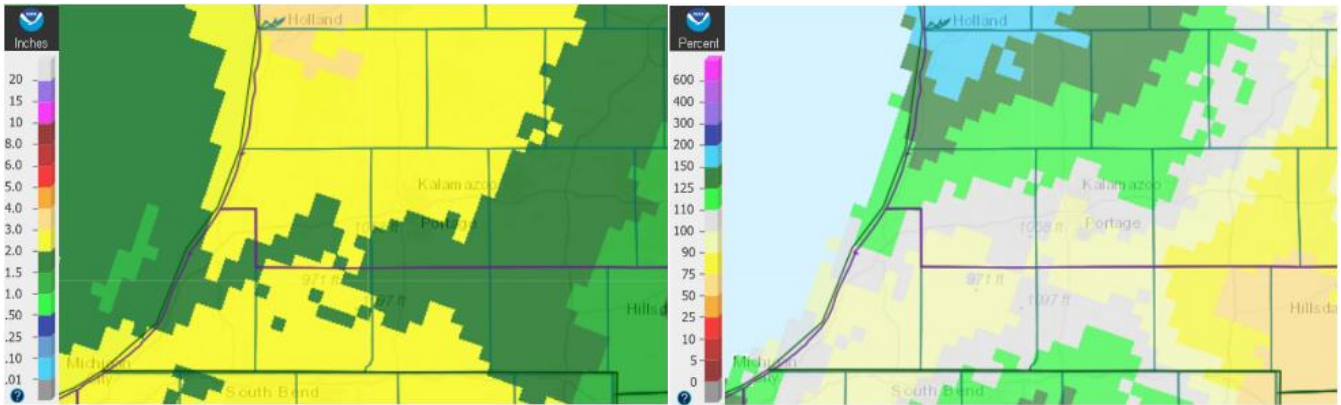
These data were compiled from a meta-analysis of 15 different studies with ~120 comparisons of weed biomass and weed density. This is a fairly busy graphic, but the main points are noted by the red dots. Two main take-aways: 1) while cover crops tended to decrease weed biomass in annual weed species, the weed density (i.e. actual number of weeds) was not changed when planting into cover crops; and 2) annual weed species biomass production was significantly reduced with cover crops while perennial weed species were not.



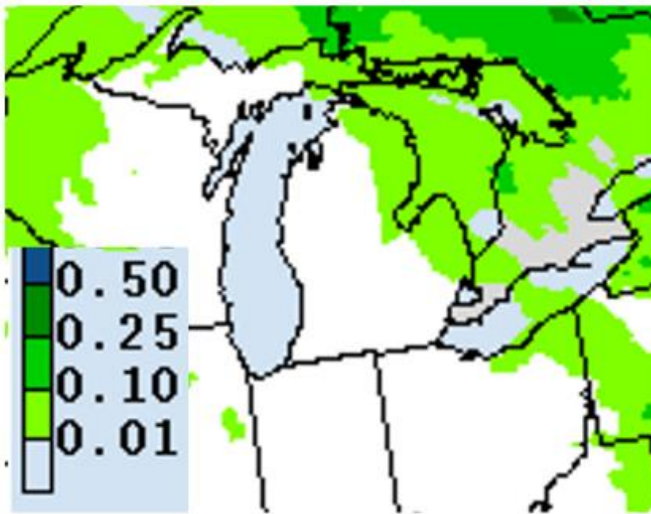
800 g/m<sup>2</sup> = 7137 lbs/ac

These graphs show the impact of cover crops on Palmer amaranth. On the left, oat and wheat reduced Palmer biomass the most, but again, weed density was not decreased to the same extent. The graph on the right explains the reason for this effect—these different cover crops produced different amounts of biomass and so were able to out-compete Palmer to different degrees.

# Weather Update In graphic form

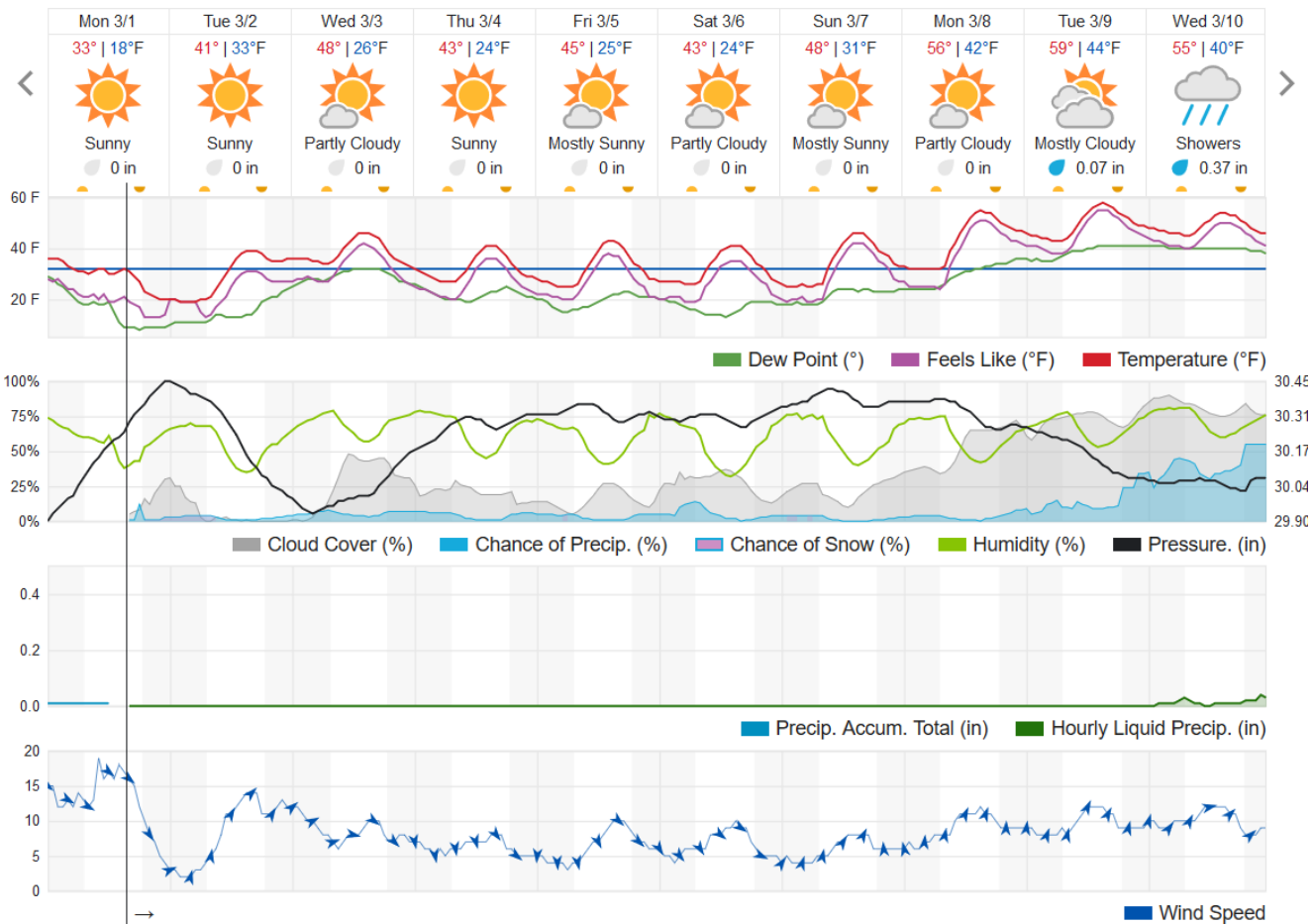


Precipitation totals (left) and percentage of normal (right) for the last 30 days. With the widespread winter storms that swept through Michigan in February, precipitation accumulation came much closer to normal levels for the winter.

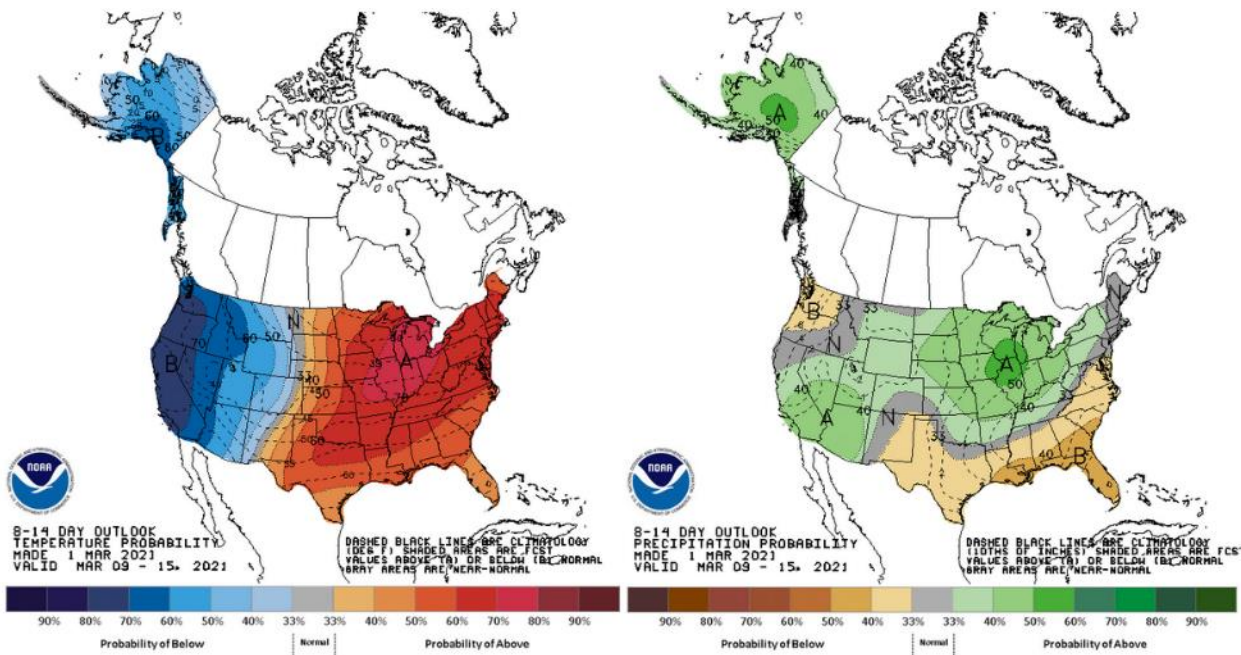


Precipitation forecast for Mar. 2-9. Looks pretty dry....

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The 10-day weather forecast for Kalamazoo according to wunderground.com. The forecast is for dry weather for the coming week followed by warmer and wetter than normal weather later in the month.



The 8-14 day outlook (Mar 9-15) for temperature (left) and precipitation (right). The 6-10 day and 3-week outlooks are essentially the same.

## Calendar

Titles are clickable links to online content when highlighted and underlined

- Mar 1+** [MSU Extension Field Crop Webinar Series](#). Monday nights, Feb. 15-Mar. 22, 7-8pm. The series this year will focus on "Management Decisions that Pay." Cost is \$20 for the 6-week series or \$5 for each session, register online. One RUP and one CCA credit available for each live session.
- Mar 3+** [Wheat Wisdom Webinar Series](#). Wednesdays from 8-9:30 a.m. Six-week series including: Wheat Marketing; Fall Wheat Management and Combine Residue Management; Research on High-Yielding Wheat in Kansas; Enhancing Wheat Yields in Europe and the US; Fine Tuning Wheat; and Wheat Crop and Research Update. One CCA and one RUP credit will be awarded at the conclusion of each workshop, except marketing.
- Mar 2-25** [Hay Production 101](#). Tuesdays and Thursdays, 7-8:30 p.m. EST. This course is designed for participants to build a foundation of knowledge about growing hay. The course will cover a variety of topics, including the unique challenges of growing and managing hay in Michigan. Because of the systematic structure of the course and the importance of building foundational knowledge about hay, participants should attend all sessions. CEU and RUP credits are available for participants who attend live sessions. Cost is \$85. Register online.
- Mar 3/12** [Ableism 101 Webinar](#). Mar 3 1-4pm OR Mar 12 9am-12pm. In this workshop we will introduce the basic concepts of ableism and explore how the language we use around disability can either support equality or perpetuate stigma. Participants will be challenged to identify their own unconscious bias around disability. Register online. Note: there is also an Ableism 102 two-part webinar that is full for March but will be offered again in June.
- Mar 8** [Loan Preparation for New and Beginning Farmers](#). 12-1pm online. Loans are an important tool for growing any business. This session will prepare new and beginning farmers with the tools needed to approach a lender. Hosted by USDA-FSA. Register online.
- Mar 11** [2021 "Virtual" Great Lakes Forage & Grazing Conference](#). 9am-12pm. Keynote Speaker: Dr. Dennis Hancock, Director, U.S. Dairy Forage Research Center— "The Baleage Balance: Moisture, Fermentation, and Risks". Other session topics: Value-added Straw; Hot Air in Forages; MSU Forage Research Update; Dairy Grazing Industry Trends; Details for Forage Excellence; and Michigan Hay Supply Update Cost is free, register online.
- Mar 15** [ARC & PLC Election Deadline](#). Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) signup for the 2021 crop year opened Oct. 13, 2020 and closes Mar. 15, 2021. Contact your local FSA office for more information and to apply.
- Mar 15** [CRP Grasslands Signup](#). CRP Grasslands signup runs from Mar. 15 to Apr. 23. Contact your local FSA office for more information and to apply.



## MSU Extension Digest Briefs

### GROWER SURVEY TO ASSESS HERBICIDE DRIFT DAMAGE IN THE NORTH CENTRAL U.S.

**March 1 | Sushila Chaudhari**

A special project group of the North Central Integrated Pest Management (IPM) Center wants to learn about your concerns and experiences with herbicide drift. The group is surveying growers of fruits, vegetables and other specialty crops in the upper Midwest.

### FIELD CROPS WEBINAR SERIES ADDRESSES EFFECTIVE WEED CONTROL OPTIONS AND THEIR ECONOMICS ON MARCH 8

**PUBLISHED ON FEBRUARY 23, 2021**

The fourth session of the Field Crops Webinar Series on March 8, 2021, will feature MSU weed scientists Christy Sprague and Erin Burns.

### FIELD CROPS WEBINAR SERIES ADDRESSES IMPROVING WHEAT PRODUCTION INCOME ON MARCH 1

**PUBLISHED ON FEBRUARY 22, 2021**

The third session of the Field Crops Webinar Series on March 1, 2021, will feature MSU Extension wheat specialist Dennis Pennington.

### ROMULO LOLLATO WILL PRESENT AT WHEAT WISDOM WEBINAR SERIES ON MARCH 3

**PUBLISHED ON FEBRUARY 22, 2021**

Romulo Lollato will cover topics related to his research on high yielding wheat in Kansas.

### RETURN OF THE CORONAVIRUS RELIEF PROGRAMS FOR AGRICULTURE - WEBINAR RECORDING AVAILABLE

**PUBLISHED ON FEBRUARY 19, 2021**

Through this recorded webinar you will learn about new legislation and program changes to assist farmers.

### MSU RESEARCH TEAM RECEIVES USDA GRANT TO EVALUATE EFFECTIVENESS, COST OF NEW BLUEBERRY PEST MANAGEMENT STRATEGIES

**February 19 | Cameron Rudolph**

A team of researchers from Michigan State University has received a \$325,000 grant from the U.S. Department of Agriculture's National Institute of Food and Agriculture to examine the effectiveness and cost of new blueberry pest management approaches.

### INTRODUCTION TO MICHIGAN SITE SELECTION AND ODOR CONTROL GAAMPS FOR NEW OR EXPANDING LIVESTOCK FACILITIES

**February 18, 2021 | Kevin Gould, Josh Appleby & Dean Letter**

The Site Selection GAAMPs are an opportunity to cushion your investment from nuisance lawsuits. These generally accepted practices supersede local zoning.

### HIGH GRAIN PRICES – HOW MANY BUSHELS SHOULD I MARKET?

**PUBLISHED ON FEBRUARY 17, 2021**

Insurance tools allow you to reach your potential revenues by pre-harvest marketing your grain up to the coverage level.

### MSU RESEARCHER AWARDED GRANT TO DEVELOP LOW-COST SENSOR MONITORING SYSTEM FOR GREAT LAKES FARMERS

**PUBLISHED ON FEBRUARY 17, 2021**

Younsuk Dong, specialist in the MSU Department of Biosystems and Agricultural Engineering, is leading a project to make sensors more accessible for farmers in Michigan and Indiana.

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### 2021 “VIRTUAL” GREAT LAKES FORAGE & GRAZING CONFERENCE FEATURING KEYNOTE SPEAKER DENNIS HANCOCK

**PUBLISHED ON FEBRUARY 11, 2021**

The Great Lakes Forage & Grazing Conference on March 11 is going virtual. Keynote topics include U.S. Dairy Forage Research Center: Focusing on Impact, and The Baleage Balance: Moisture, Fermentation, and Risks.

### AGRICULTURAL PROFESSIONALS IN EXTENSION SERVICES WORLDWIDE BUILD NEW RELATIONSHIPS BETWEEN CULTURALLY DIVERSE SYSTEMS

**PUBLISHED ON FEBRUARY 9, 2021**

Michigan State University and India’s National Institute of Agricultural Extension Management collaborate on a new book, “Innovations in Agricultural Extension.”

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