

Southwest Michigan Field Crops Updates May 15, 2022

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

2022 Avian Flu and You

As you are probably aware, several cases of Highly Pathogenic Avian Influenza (HPAI) have been reported in 9 counties in Michigan, including Branch and Kalamazoo, with additional counties in Indiana including three commercial duck operations in Elkhart. Most occurrences have been in backyard flocks in Michigan to date, but the first report came in last week from a commercial poultry facility in Muskegon County. The following information was excerpted from USDA articles and fact sheets.

HPAI is a highly contagious virus that can be spread in various ways from flock to flock, including by wild birds, through contact with infected poultry, by equipment, and on the clothing and shoes of caretakers. As new cases of HPAI continue to be identified across the nation and in Michigan, bringing in poultry from different flocks to a central location creates a significant risk. Michigan DNR has also recommended temporarily removing bird feeders to reduce the spread of the disease.

MDARD’s Director, Gary McDowell, has decided that, **effective May 10, 2022 poultry exhibitions are stopped until Michigan has 30 days with no new HPAI cases**. This stop does include (but is not limited to) shows, exhibitions, swap meets, petting zoos at fairs, and game bird/waterfowl fair displays. This stop does NOT include or affect egg hatching exhibits, pigeon races, or zoos.

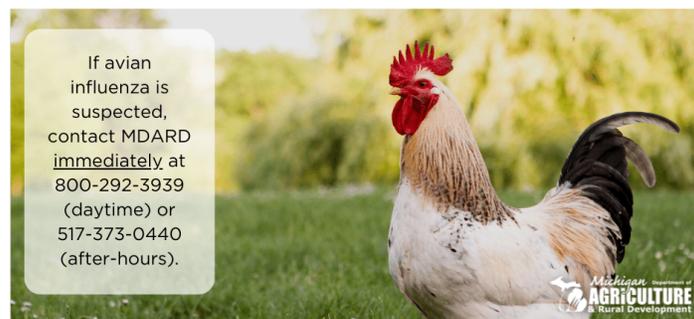
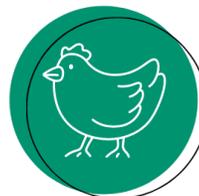
More information on this stop can be found in the [frequently asked questions](#) available at Michigan.gov/BirdFlu.

How to Recognize a Sick Bird

It's important to be able to recognize the symptoms of avian influenza.

Sick birds may experience...

- Sudden death
- Significant drop in water consumption
- Lack of appetite, energy, or vocalization
- Drop in egg production
- Diarrhea
- Swollen comb, wattles, legs, or head
- Nasal discharge, sneezing, or coughing
- Abnormal behavior like difficulty walking



If avian influenza is suspected, contact MDARD immediately at 800-292-3939 (daytime) or 517-373-0440 (after-hours).

Whether it's a few backyard birds or a large commercial flock, following [a few key steps](#) is fundamental to protect the health and vitality of Michigan's domestic birds:

- Backyard flock owners should practice strict biosecurity, including preventing birds from exposure and/or co-mingling with wild birds and other types of poultry. Shower, change clothes, and clean and disinfect footwear before entering your poultry housing areas.
- Respiratory protection such as a medical facemask would also be important and remember to always wear clean clothes when encountering healthy domestic birds.
- Carefully follow safe entry and exit procedures into your flock's clean area.
- Reduce the attractiveness for wild birds to stop at your place by cleaning up litter and spilled feed around poultry housing areas.
- If you have free range guinea fowl and waterfowl, consider bringing them into coops or flight pens under nets to prevent interaction of domesticated poultry with wild birds and their droppings.
- It is best to restrict visitors from interacting with your birds currently.
- Do not touch sick or dead wildlife and keep them away from domestic poultry.
- Try not to handle sick or deceased domestic birds (if you must, use proper personal protective equipment to minimize direct contact and cautiously disinfect anything that comes into contact with the deceased and or sick bird).

According to the [U.S. Centers for Disease Control and Prevention](#), the public health risk associated with these avian influenza detections remains low. No birds or bird products infected with HPAI will enter the commercial food chain.

Reporting Possible Cases

For Domestic Birds

Domestic bird owners and caretakers should watch for unusual deaths, a drop in egg production, a significant decrease in water consumption, or an increase in sick birds. If avian influenza is suspected in domestic birds, contact MDARD immediately at 800-292-3939 (daytime) or 517-373-0440 (after-hours).

For Wild Birds

If anyone notices what appears to be unusual or unexplained deaths among wild bird populations, please report these cases to the Michigan Department of Natural Resources (DNR) by:

- Using the DNR's [Eyes in the Field app](#). Choose the "Diseased Wildlife" option among the selections for "Observation Forms."
- Calling the DNR Wildlife Disease Laboratory at 517-336-5030.

Spongy moth, formerly gypsy moth, season starts soon.

The following is from a [recent article by several MSU Extension staff](#).

If your area experienced an outbreak of spongy moth, formerly gypsy moth, last summer, you may want to visit the newly revised [Michigan State University Extension Spongy Moth/Gypsy Moth website](#) with information on what to expect this summer and what you can do to protect your trees.

Many Michigan residents know first-hand how annoying and downright unpleasant it can be to live in an area during an outbreak of spongy moth. The most recent outbreak of this invasive insect began in a few regions of the state in 2019, affected more areas in 2020, and outbreaks were common in 2021 across much of Lower Michigan and even in some locations in the Upper Peninsula.

Caterpillars hatch from eggs in May, then feed on the leaves of oaks and many other types of trees for the next six to eight weeks. When an outbreak occurs, large hairy caterpillars are abundant until early or mid-July. Caterpillars, the immature stage, consume leaves on oaks, birch and other favorite host trees, often causing nearly complete defoliation. "High numbers of caterpillars, and the frass (excrement) they produce as they feed can disrupt outdoor activities and upset residents in affected areas," reported Julie Crick, MSU

Extension Natural Resources Educator in Roscommon County. “I try to focus on the benefit to birds and other wildlife that take advantage of all the caterpillars as a temporary food source.”

Options for protecting shade trees near homes might include the use of [Btk](#) to control young caterpillars and [hiding or barrier bands](#) when caterpillars are older,” said Dr. Deborah McCullough, the Professor of Forest Entomology at MSU. Fortunately, outbreaks usually collapse in three to four years and sometimes sooner, thanks to natural enemies, particularly two diseases that affect the caterpillars. James Wieferich, a Forest Health Specialist for the MI Dept. of Natural Resources, noted that some outbreaks, mainly in parts of northern lower Michigan collapsed last summer. “However,” he said, “other regions of the state have plenty of egg masses and will likely experience another year or two of abundant caterpillars and defoliation.

A wealth of information about spongy moth/gypsy moth is available on the newly revised and updated [MSU Spongy Moth/Gypsy Moth website](#). Resources include options to help reduce the number of caterpillars and protect trees around homes, information about the diseases and other natural enemies that affect this insect, and what to expect when trees have been defoliated. Information can be viewed online or downloaded, free of charge.



Photo by Karla Salp, Washington State Department of Agriculture, Bugwood.org

Sustainable Agronomy Conference Free to All Attendees in 2022



For the past few years, the American Society of Agronomy has hosted a conference on sustainable agronomy. I attended the first conference in Madison back in 2018 and found it to be a good mix of basic and applied science with a wide range of speakers from around the country. More recently, the event has been held virtually and will be again this year. However, this year the series will be freely available to the public regardless of your membership status in ASA.

The event this year will be held on four consecutive Tuesdays with two hours of programming each day for a total of 8 CEU’s available for Certified Crop Advisors. The general topics are as follows:

- July 19: Utilizing Precision Agriculture for Sustainable Crop Management
- July 26: Building Soil Health with 4R Nutrient Management
- August 2: Enhancing Sustainability through On-farm Research and Metrics
- August 9: Exploring the Present and Future of Carbon and Ecosystem Services Markets

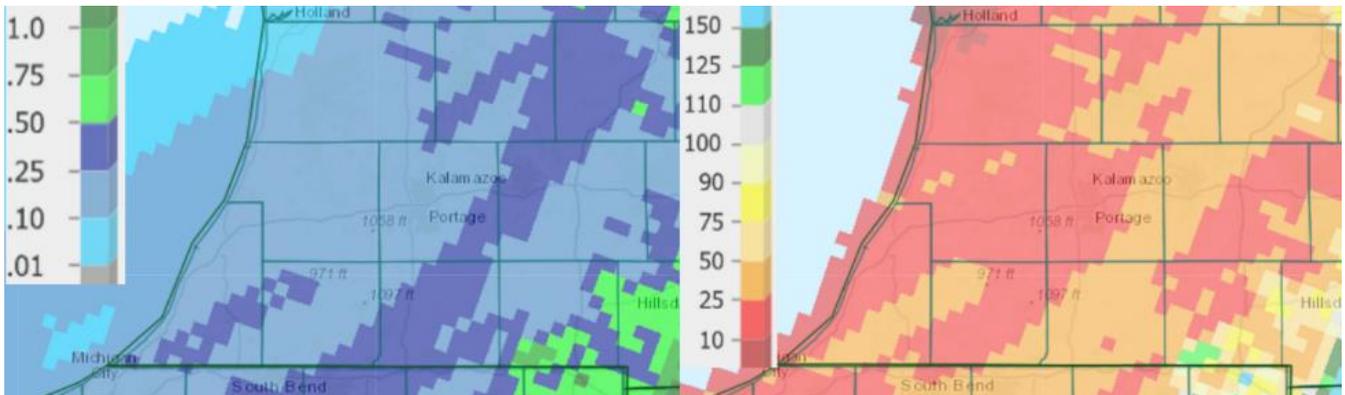
For more information, [view the conference website](#). Registration will be open soon.

Weather and Crop Update

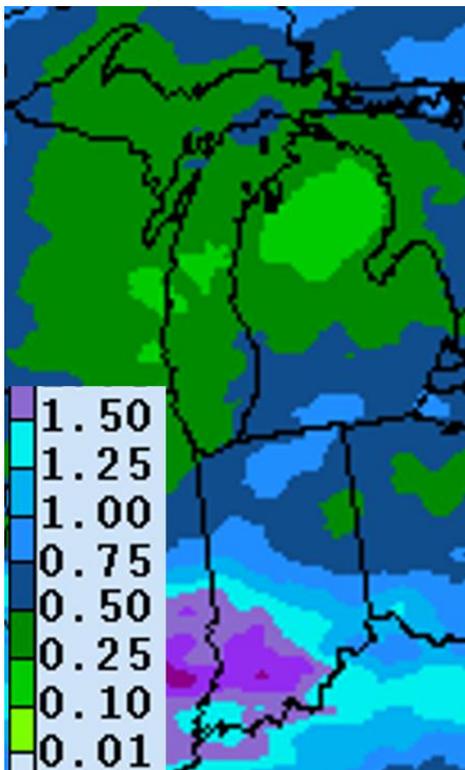
Weather

Temperatures this past week were well above normal. Growing degree day (GDD base 50) accumulation from this past week was 150 on average throughout the region and we are now back to being a few days ahead on heat units. Minimum 2” soil temperatures have stayed above 50 degrees this past week and this should continue to be the case moving forward. The weekly forecasted reference evapotranspiration (FRET) will be 1.1-1.2” for this coming week. The mid-range outlooks are calling for normal to below-normal temps for the last week of May.

Precipitation this past week was well below normal for this time of year which was just fine with most farmers making the most of the opportunity to finally get field work done. Rainfall ranged from nearly 0.75” in the southeast to less than 0.10” in the northwest part of the region—most of that falling overnight on Sunday. The forecast calls for 0.5-1.0” this coming week with chances of rain Wednesday and again on Friday into Saturday. The mid-range outlooks are currently forecasting wetter than normal conditions for the last week of May.

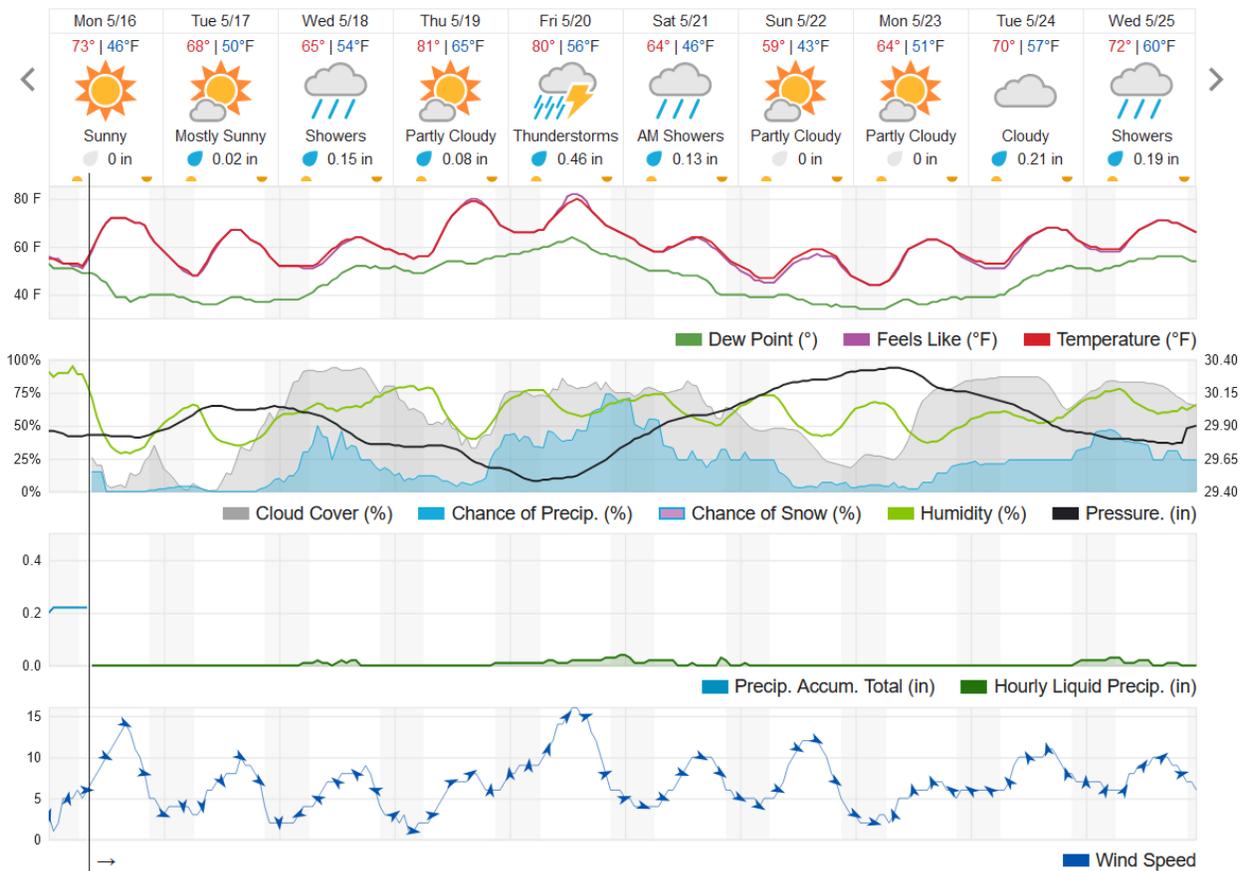


Precipitation totals (left) and percent of normal (right) for the past 7 days as of May 16

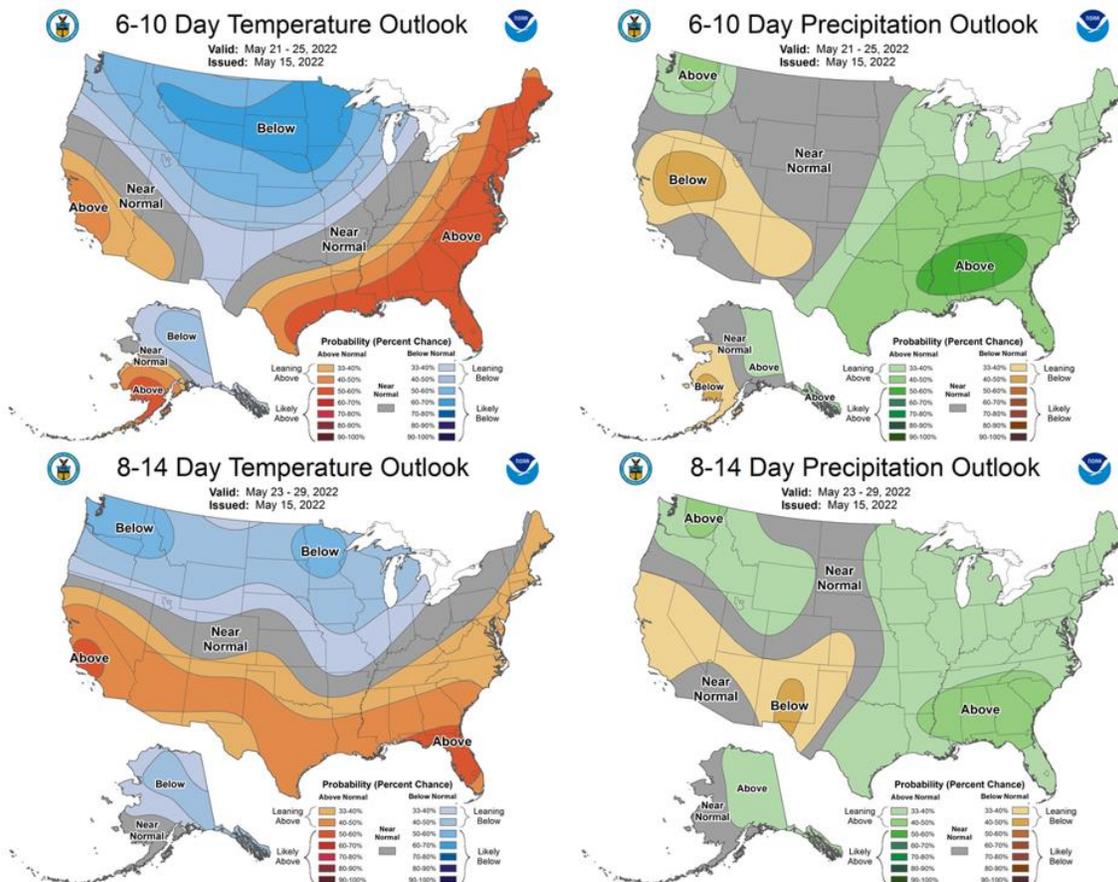


Precipitation forecast for May 16-23.

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



The 6-10 day (May 21-25, top) and 8-14 day (May 23-29, bottom) outlooks for temperature (left) and precipitation (right).

Crops and Pests

Wheat in Michigan was holding steady with 45% of the crop rated good to excellent last week. The warm temperatures last week have resulted in significant development, and late-planted fields have now reached Feekes 7 (second node visible). From now on, developmental differences due to planting date will begin to even out. The next timing for a fungicide application would be when the flag leaf is fully emerged (Feekes 9) which could be as early as the end of May according to current weather forecasts.



Winter wheat has reached Feekes 7 (second node visible, see inset) in later-planted fields. Photos courtesy of Eric Anderson.

Forages. Alfalfa crowns have heaved as much as one inch above the soil surface in some fields with higher clay content according to forage educator Phil Kaatz. He has visited several fields in the Thumb where ice sheeting in low areas this winter has caused significant die-back. Grasses can be drilled into large patches where alfalfa has not survived to increase forage yield.

Corn and soybean were 4% and 8% planted, respectively, as of the beginning of last week, but those numbers have been left in the dust (get it?) as planting has begun in earnest for most farms in the region. Soil moisture at seeding depth coupled with a timely rain last night will help to get last week’s plantings out of the ground. Corn planted a couple of weeks ago in the region was spiking at the end of last week.

Insects. Moth trap counts in the region this past week were binary—1’s and 0’s—for both black cutworm and true armyworm, and MSU Extension field crop entomologist Chris DiFonzo says the same was true further north. She also said there are lots of grubs in fields right now. Catches for BCW were similar in Elkhart County but did not drop off in other northern counties (LaPorte, Lake, St. Joseph, Whitley) in Purdue’s trapping network. Counts for TAW in northern Indiana were on par with those from the previous week.

Moth trap counts for true armyworm (A1-4) and black cutworm (B1-3) in St. Joseph and Kalamazoo counties.

	12-Apr	19-Apr	26-Apr	3-May	10-May
A1	3	1	3	9	1
A2	0	0	5	4	0
A3	1	1	0	0	0
A4	0	0	0	1	0
B1	0	1	4	1	1
B2	0	0	4	30	1
B3	0	0	5	4	1

Wheat disease management was the topic of last week’s [MSU Extension Field Crops Virtual Breakfast](#) with field crops pathologist Marty Chilvers. Powdery mildew—a disease favored by mild winters, cool and humid conditions, lack of rainfall and excess nitrogen—has not been an issue so far this season. Stripe rust, which was rampant a few years ago, will not likely be a major concern early this season based on reports from the southern U.S.

Head scab, a.k.a. fusarium head blight, was the focus of most of the presentation. Head scab is highly dependent on wet and humid conditions during flowering. Variety selection is key along with fungicide selection, timing, and application with adequate coverage. Chilvers highlighted the [Fusarium Risk Tool](#) which can give a sense of disease risk with varieties of different resistance levels given the weather outlook. The pathogen, *Fusarium graminearum*, also attacks corn and can overwinter on corn residue, so it is generally advised to avoid planting wheat following corn.

Head scab attacks wheat flowers, so optimal control with fungicide applications is achieved when applications are made within 7 days of beginning flowering (Feekes 10.5.1) with the ideal being 4 days after. An integrated head scab management plan will include selection of resistant varieties, making a timely fungicide application of an effective fungicide with good coverage, rotation to crops that are not hosts to *F. graminearum*, and managing fields for uniform wheat development to maximize efficacy of fungicide applications. The Crop Protection Network has [resources showing fungicide efficacy](#) for wheat diseases including head scab.

Chilvers highlighted a meta-analysis of research conducted in Michigan aimed at identifying the ideal timing for fungicide applications in wheat. The three timings included just prior to jointing (Feekes 5-6, T1), at full flag leaf (Feekes 9, T2), and at beginning flowering (Feekes 10.5.1, T3). The analysis showed that the highest yields were obtained with a T3 application in combination with either a T1 or T2 application. His lab is planning to investigate a treatment including all three timings. Chilvers noted that these results were averages and may not be seen on individual fields, so he advised the use of check strips to determine local impacts. He also stressed that increased risk of fungicide resistance occurs with more frequent applications, so rotating effective fungicide modes of action is important.

Yield response of winter wheat to fungicide applications at various timings. Table courtesy of Marty Chilvers.

Timing	Yield response bu/ac (\bar{D}_t)	Among-study variance $\hat{\sigma}^2$
T1	4.01 A	8.65
T2	6.93 B	37.16
T3	7.41 B	40.79
T3_L	6.65 B	31.72
T1_T3	10.53 C	60.76
T2_T3	9.48 CB	64.14

If you were not able to join the session, the recordings will be 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](#)

Announcements & Jobs

- [County Executive Directors in Training](#) with USDA, open until May 20. Visit the website linked here for more information and to apply.
- [Loss Adjustment Contractor](#) with USDA, open until June 6. Position is on an hourly basis, contact your local FSA office for more information.
- [MSU Cropping Systems Agronomy Research Assistant II](#), East Lansing. B.S. in agronomy-related field required, M.S. preferred. Address any questions to Dr. Maninder Singh (msingh@msu.edu). Submit application documents to careers.msu.edu, Posting# 778675. Applications will be reviewed starting May 25, 2022, until suitable candidate is identified.

Calendar

Titles are clickable links to online content when highlighted and underlined

- May 19** [Virtual Breakfast - Sidedress Corn Recommendations with Kurt Steinke](#). 7-8am. This hour-long broadcast from the MSU Extension Field Crops Team will run throughout the cropping season and feature a brief weather forecast and a presentation from a MSU specialist or educator on a timely topic. One RUP and one CCA credit will be available with each session. Cost is free. Register to receive the link that will be used throughout the season.
- May 20-21** [Midwest iHemp Expo](#). Lansing Center, Lansing, MI. Register online.
- May 26** [Virtual Breakfast - Dry Bean Planting with Scott Bales](#). 7-8am. Register online once for the entire series.
- May 31** Last Day to Request Commodity Loans 2021 Corn, Soybeans & Sorghum
- June 2** [Virtual Breakfast - Hot Topic Q& A Session](#). 7-8am. Register online once for the entire series.
- June 9** [Virtual Breakfast - How to Get the Best out of Your Drainage System with Ehsan Ghane](#). 7-8am. Register online once for the entire series.
- June 16** [Virtual Breakfast - White Mold Management in Soybean with Marty Chilvers](#). 7-8am. Register online once for the entire series.
- June 23** [Virtual Breakfast - Irrigation in Michigan with Lyndon Kelley and Younsuk Dong](#). 7-8am. Register online once for the entire series.
- June 30** [Virtual Breakfast - Cover Crops After Wheat with Brook Wilke](#). 7-8am. Register online once for the entire series.
- July 15** Final Date to Report Crop Plantings & CRP

MSU Extension Digest Briefs

MSU EXTENSION PROVIDES VIABLE OPTIONS FOR AG AND SOLAR INTEGRATION

PUBLISHED ON MAY 12, 2022

Michigan aims to achieve economy-wide carbon neutrality by 2050 and maintain net negative greenhouse gas emissions thereafter.

PROPER TRACTOR TIRE PRESSURE SAVES FUEL AND TIME

PUBLISHED ON MAY 12, 2022

Inflating tractor tires properly is an important way to save fuel and time during field operations.

WHAT SHOULD I DO IF I FIND A SWARM OF BEES?

PUBLISHED ON MAY 10, 2022

Contact a local beekeeper if you find a swarm of honey bees.

SOYBEAN PRODUCERS SHOULD BE PATIENT YET PRUDENT ABOUT THE WET WEATHER

PUBLISHED ON MAY 5, 2022

Waiting for good soil and weather conditions and making plans for speeding up planting operations will benefit soybean producers this spring.

REDUCING SIDEWALL COMPACTION IN FIELD CROPS

PUBLISHED ON MAY 5, 2022

The potential for sidewall compaction occurring during planting operations is high this spring and the following information will help you reduce this yield-limiting phenomenon.

WHEAT FEEKES STAGE 6: WHAT DOES IT MEAN?

PUBLISHED ON MAY 5, 2022

Feekes Stage 6 in wheat is an important stage for many management decisions.

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