MICHIGAN STATE UNIVERSITY | Extension

Southwest Michigan Field Crops Update
November 2020

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.

MSU Extension Field Crops Team Needs Your Input

Every 3 years, the statewide MSU Extension Field Crops work team asks Michigan field crop producers to help us understand the current needs and interests of their industries. We do this by preparing a short questionnaire and seeking responses from farmers, processors, ag suppliers and support organizations.

We use the information we receive from throughout Michigan to assure that current MSU Extension programs are on-track, and to develop new programs that will be meaningful to the people we serve. Your individual response will be confidential.

This year, to encourage participation, you have the option to be included in a drawing for a $100 gas gift card. Three cards will be awarded to randomly selected people that complete the online questionnaire and 'opt-in' for the drawing.

To complete the online MSU Extension statewide field crops needs assessment survey, please visit https://tinyurl.com/2020FieldCropSurvey or use this QR code to access it on your smart phone. ***Note: You will likely be seeing this request from your commodity groups and other places—you only need to fill out the survey once…"vote early, vote often" doesn't apply here. ;)***

Renewing Pesticide Applicator's License

There are two ways to renew your Michigan pesticide applicator's license: taking a test or obtaining enough continuing education (a.k.a. RUP) credits before the end of the calendar year. To learn more about his process, how many credits are required, etc., check out these articles: "Obtaining and maintaining your Michigan pesticide applicator certification" Part 1 and Part 2. I think testing will be an issue this year, and I have not heard any updates from MDARD. If you go onto MDARD's paper-based test site, you'll see that there are no counties in MI currently offering onsite testing. The only option is the computer-based testing through Metro Institute. It's a bit of a process though—you have to set up an account on their website, then get approved by MDARD to test, then contact Metro to set up a location, date and time, then travel to take the test. I contacted them a month or so ago to find out what the locations and dates were, and they gave me a short-term list. There were more options than I thought, but they were still pretty spread out. MDARD may open up paper-based testing options, but I have not heard anything at this point.

I suspect that more folks will be opting to recertify via RUP credits this time around due to the limited availability of testing options. For those who do want to take that route, MSU Extension has a few different options for earning RUP credits yet before the end of the year. I am coordinating an online crop and pest update meeting for Dec. 16 in the morning that will hopefully be approved for 4 credits. Registration should be active this week—see the Calendar of Events below for details. The Great Lakes Fruit and Vegetable Expo will be held Dec. 8-10, and many sessions will have RUP credits available…it may be a stretch to find sessions of interest to row crop farmers, but you might learn something new. ;) Another good option will be an online course that several of our

Extension educators and specialists have put together that covers all of the topics included in the Private Core manual. They designed it for those looking to review prior to taking the test, but 12 RUP credits will also be available. That will be ready soon, and you can contact Christina Curell (curellc@msu.edu) for more information and to find out when it will be available.

EPA Announced New Dicamba Registrations

On October 27th, the Environmental Protection Agency (EPA) announced they are approving new five-year registrations for XtendiMax and Engenia and extending the registration of Tavium. EPA Administrator Andrew Wheeler said, "After reviewing substantial amounts of new information, conducting scientific assessments based on the best available science, and carefully considering input from stakeholders we have reached a resolution that is good for our farmers and our environment." EPA believes that these new analyses address the concerns expressed in regard to EPA's 2018 dicamba registrations in the June 2020 U.S. 9th Circuit Court of Appeals. The full report with the new registrations is 63 pages and can be accessed on the regulations.gov website along with the 2 ½ page summary.

Biologicals Roundtable Summary

A couple of years ago several agribusiness reps, Extension educators, and university faculty from the Upper Midwest participated in a roundtable discussion at the Kellogg Biological Station about the use of "biologicals" in field crop management. A summary of that discussion—"Biologicals: The New Green Revolution or Snake Oil for Ag? Reflections from Ag Stakeholders" (Doll, Ulbrich and Reimer 2020) —has been published and is available here.

I attended that roundtable, and at the time, interest was high among growers, and several field days focused on these products. Since then, it seems interest has waned and I just don't hear as much about biologicals. Has that been your experience? Are you interested in biological inputs? Have you used them, and what success have you experienced? Please reach out and let me know what you think.

Virtual Field Day Recordings Available

MSU Extension hosted several virtual field days this summer/fall on a wide range of topics. For those who were not able to join live - or if you did but wanted to revisit a portion of a program - the recordings are archived and available online on the Virtual Field Day website. The recordings are not listed in any particular order so you may need to scroll down a bit to find the one you want. The virtual field day recordings are also available on the AgBioResearch YouTube channel.

There may be other resources available for each field day. For example, for the cover crops program, the Google Map utilized during the virtual field day is available by clicking here. In addition to the videos viewed during that virtual field day, the map includes several additional videos and resources that were not shared in their entirety during the live virtual field day.

New EPA Proposed Guidelines for Managing Bt Traits

MSU field crops entomologist Dr. Chris DiFonzo recently sent out her Fast Fonz Facts which focused on the EPA's current proposed rules regarding a new 'framework' to manage Lepidopteran resistance to Bt traits in corn. Below, Dr. DiFonzo outlines the highlights of the situation and the proposal. The public comment period ends on November 9, 2020, so if you would like to add your comments to the public record, go to the Federal Register and click on the green button, "Submit a Formal Comment."

Lepidopterans (Leps) include the ear feeding and stalk boring caterpillars in corn. In Michigan, this is mainly western bean cutworm while in the southern US the focus in on corn earworm and fall armyworm, both of which attack corn and cotton. Way back in July 2018, the EPA held a scientific advisory panel to discuss the growing problem of Lep resistance in Bt crops. As you are aware, over the last decade cases of resistance to the Bt toxins were reported in many locations and for multiple insects. In Michigan, western bean cutworm rapidly became resistant to the Cry1F (Herculex I) protein, and hybrids with that toxin failed across the Great Lakes region in the 2016 & 2017 growing seasons. The failure was so complete that Cry1F is no longer marketed for WBC control, and we are left with the Vip toxin as the only effective trait against it.

Based on the panel report and input from industry, growers, and university entomologists, the EPA developed a new plan to delay resistance that can be accessed here. Here are a few summary points:

Western bean cutworm is finally getting its due! WBC is now the most important corn-feeding caterpillar in the Great Lakes region, impacting both yield and quality thru its link to ear molds. It is not, as some seed companies once claimed, a 'secondary' pest that doesn't need to be managed or tracked for resistance. The frequent mention of WBC in the proposal shows EPA recognizes it as a key pest and the Agency is requiring companies to address it from now on.

Changes to how companies respond to cases of **unexpected injury in the field. In the past, companies 'proved' resistance by collecting insects from fields, taking them back to the lab and running bioassays. This process often dragged out for months or never got done at all if it was too late in the season to collect live insects. Instead, EPA is proposing to set levels of damage or numbers of larvae in Bt fields which trigger an investigation. If a field indeed meets this elevated level of damage or critters, this is taken to be 'practical resistance' and the company must address the problem. Cases of suspected resistance would be addressed immediately, rather than letting companies kick the can down the road. This definition would have been helpful in 2016 when many Bt fields failed to control WBC.

Sentinel plots to monitor for pest resistance. Sentinels are strips of Bt and non Bt sweet corn hybrids planted each season in areas of high pest pressure to monitor for changes in damage or larval survival. A sentinel plot network is already in place for corn earworm; nearly 50 trials were monitored in 2020, including one in Michigan. Entomologists support this idea, and the development of Vip sentinel plots to monitor WBC resistance to that toxin (as proposed by EPA).

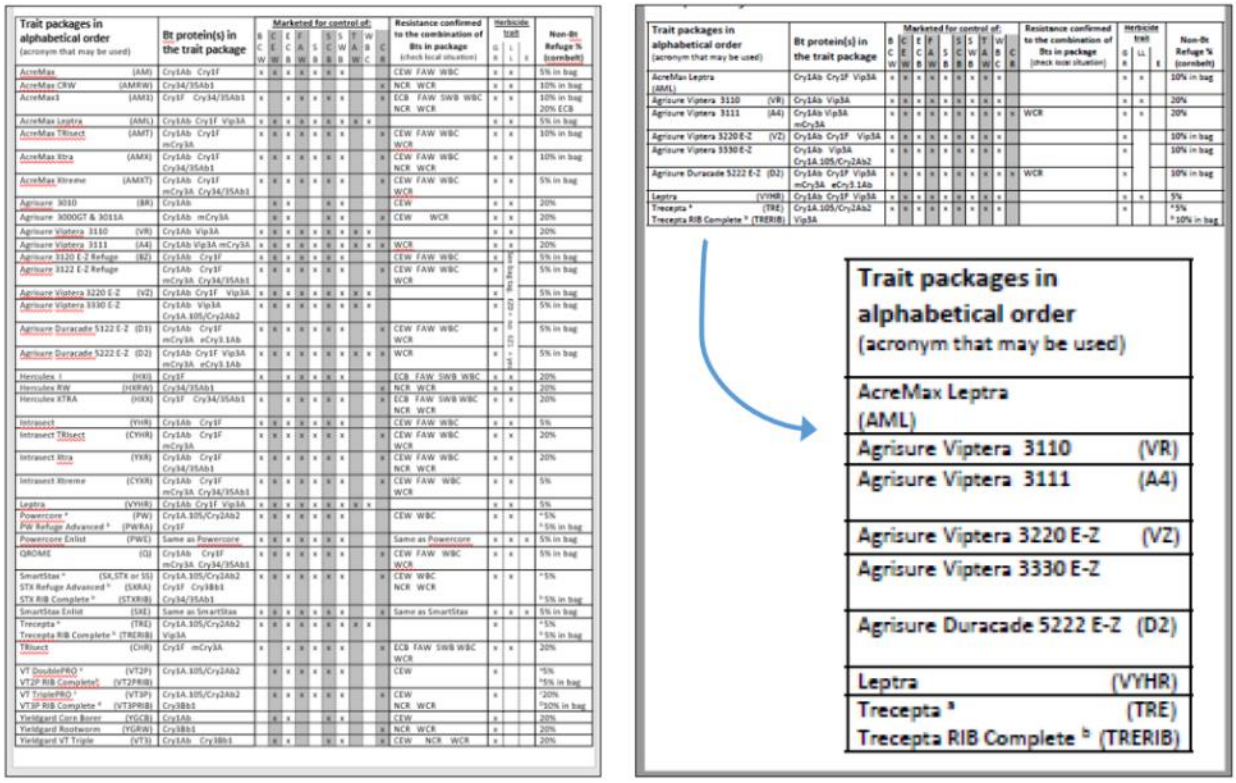
** Final **phase out of single-trait Bt corn** (corn hybrids with a single Bt toxin). To sell pyramids with multiple Bt traits, companies were supposed to phase out single-trait corn to reduce the chance for resistance. I'll be frank, I thought was done a few years ago. But it turns out single trait hybrids are still being sold in Michigan. Is this a problem? I think so. There is only one case of corn borer resistance to Bt corn, found last year in Nova Scotia, Canada. Where SINGLE TRAIT hybrids were planted. In my view, this phase out is long overdue.

** **Phase out of 'non functional' pyramids**, multi-trait hybrids where insects are resistant to one of the toxins, essentially creating a 'functionally' single trait hybrid. This aspect of the proposal would gut the number of available trait packages, leaving only hybrids containing the still-effective Vip toxin. To illustrate how this would change the number of packages on the market, see the graphic comparing a before and after Handy Bt Trait Table (attached).

** **Increase non-Bt refuge in the bag (RIB) from 5% to 10%** nationwide. I won't comment, other than to say that I have never been a fan of seed blends. They are a convenient way to plant refuge and perform well for European corn borer. But RIB may have accelerated Cry1F resistance in western bean cutworm. I do not know the potential repercussions of an increase in RIB by an additional 5%.

DiFonzo's Handy Bt Trait Table, Feb 2020
Currently-available Bt trait packages

Bt Trait Table after proposed EPA changes
Eliminates singles & 'nonfunctional pyramids



How proposed EPA changes would impact Bt trait offerings.

Alternative Uses for Ag/Crop Residues – Your Help Needed

A group of MSU Extension specialists and educators have written a USDA NIFA proposal looking to develop alternative uses of agricultural crop residues and livestock wastes. The end goal is to generate new revenue streams for growers/producers. They have created a very brief (9 question, only a few minutes) survey for stakeholders to fill out to gauge your receptiveness to the concept of ag residue/waste valorization (i.e. increasing value of) and inform the proposed project on how best to proceed should they receive a final award. Your assistance in guiding their efforts would be greatly appreciated.

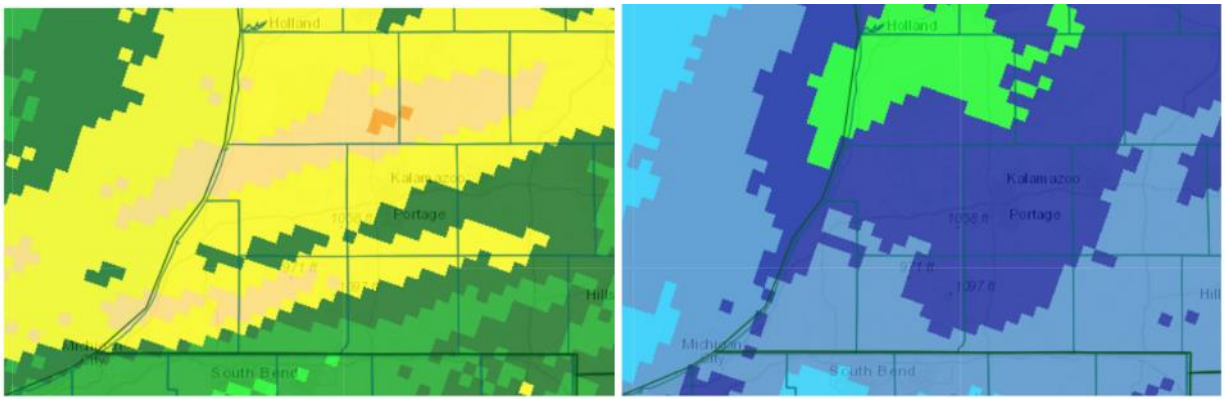
Crop and Weather Update

Temperatures this summer were much above normal which helped to accelerate crop development ahead of the expected curve. For example, average temperature in July was the 6th warmest on record in Michigan (1895-2020) and minimum temperatures from May through July ranked as the 13th warmest. Overall, the latter half of the 2020 growing season was dryer than normal. We had a brief reprieve from drought conditions with a few timely rains between August 9 and September 9, and in some cases that was enough to help finish rainfed crops with respectable yields. The next month was extremely dry throughout most of the Midwest, and that allowed for an early harvest window. Widespread rains came through Oct. 18-22 which put a stop to harvest efforts, but fields have slowly dried out, and with another upcoming week of dry and unusually warm weather in the forecast, harvest progress will hopefully find its second wind. Looking ahead, the 8-14 day outlook calls for above normal temperature and precipitation (6-10 day outlook is similar).

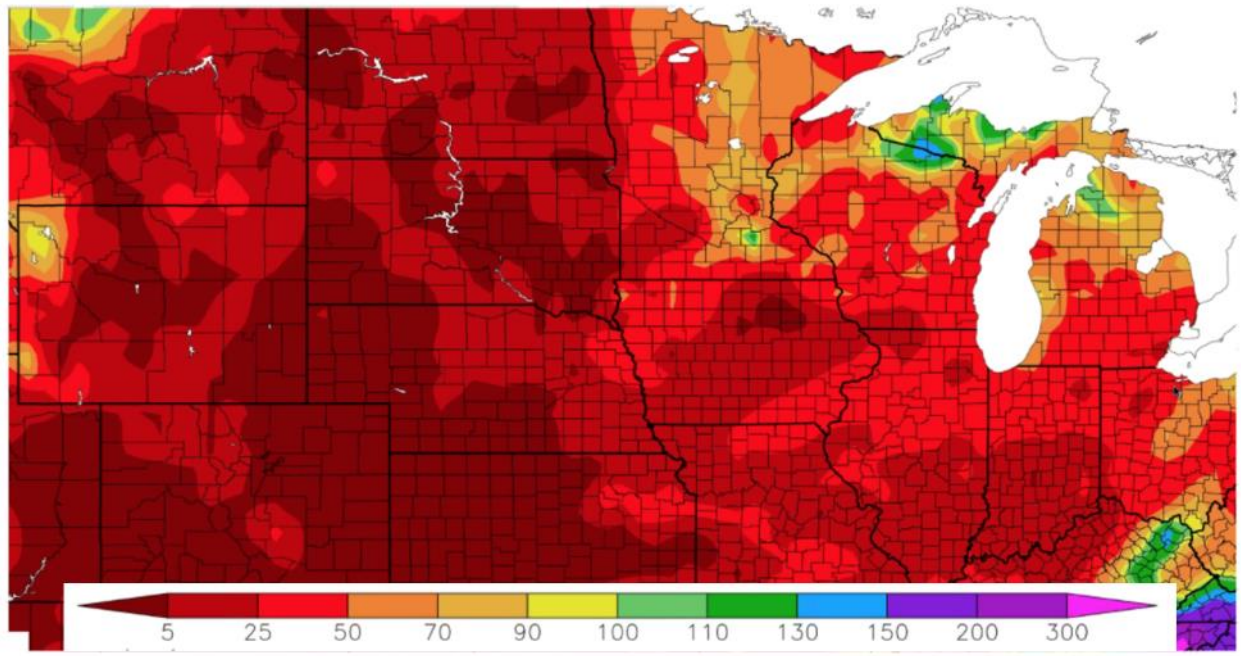
Southwest Michigan Field Crops Updates - November 2020 - 5

According to the latest USDA Crop Progress report released Nov. 2, 53% of corn and 79% of soybean in Michigan has been harvested, both slightly ahead of average. Current average yield estimates for Michigan are 167 bu corn and 48 bu soybean, although the next WASDE report next week should give us a much better estimate for the season.

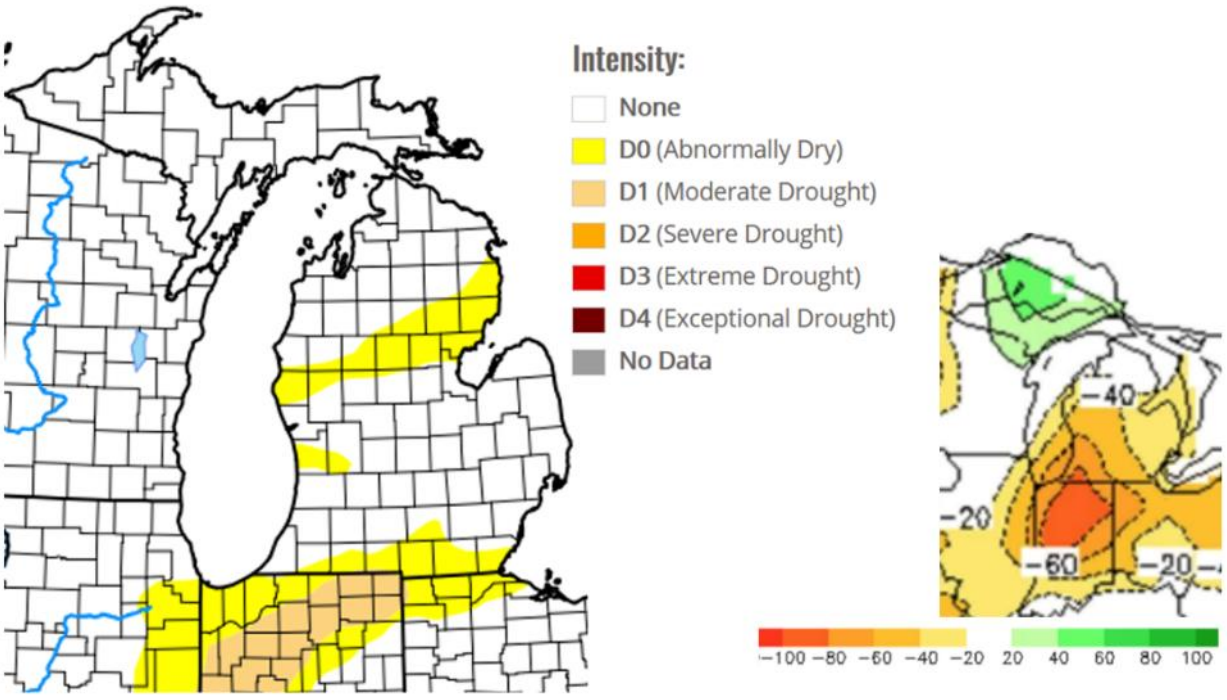
Looking ahead to this winter, the confidence levels for La Niña conditions are now very high. As I mentioned in the last newsletter, that typically means colder and wetter winter weather for Michigan, which is the current prediction. But what has history shown? As you look at the graphics below, don't spend a lot of time trying to find any patterns in temperature or precipitation in even strong La Niña years…you won't find much. Apparently there are other key factors that go into these weather patterns besides the ENSO, Pacific air circulation cells, and others. We'll have to just sit back and wait. It will be exciting…sort of like waiting to see what sex your baby will be.



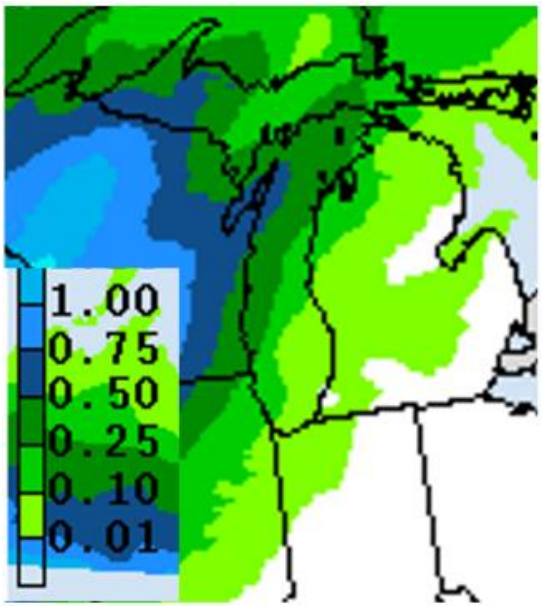
Precipitation totals for the last 14 days (left) and the last 7 days (right).



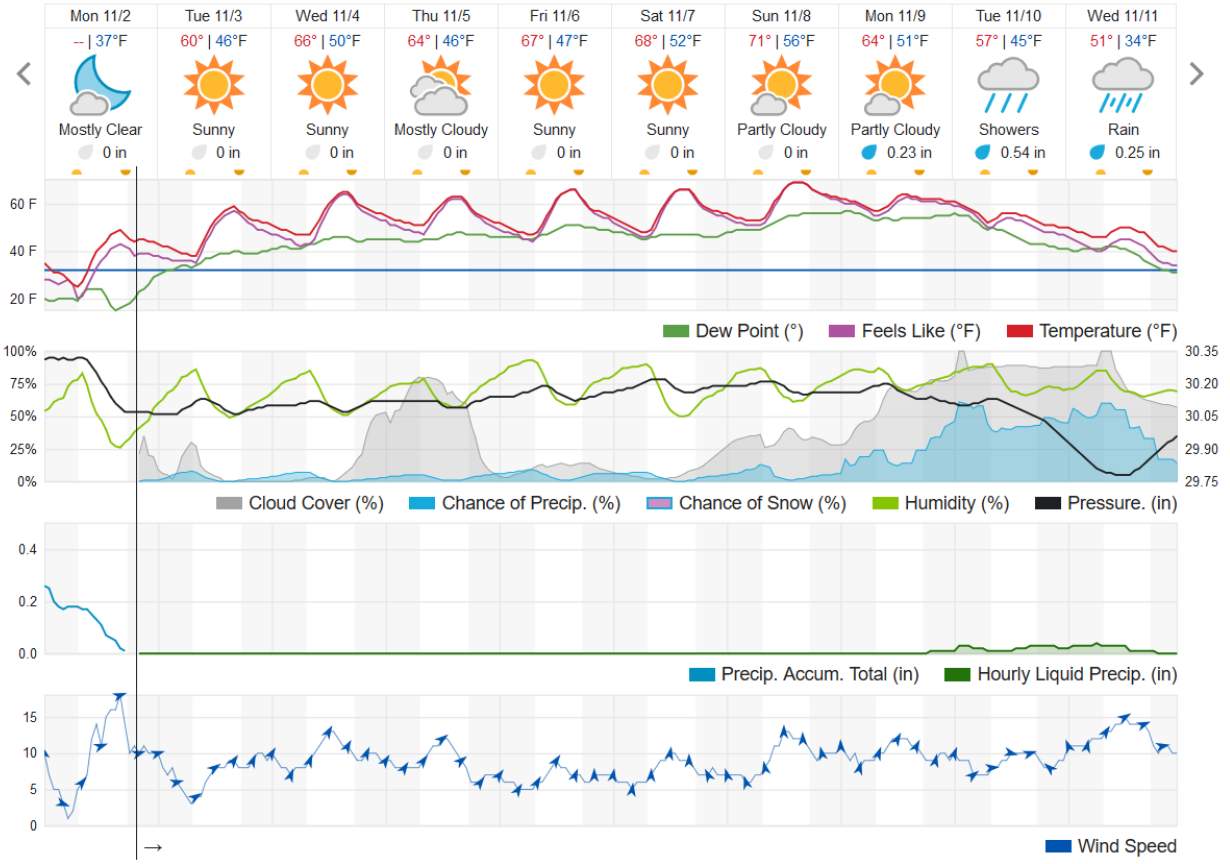
Percent of normal precipitation from Sept. 14 through Oct. 13.



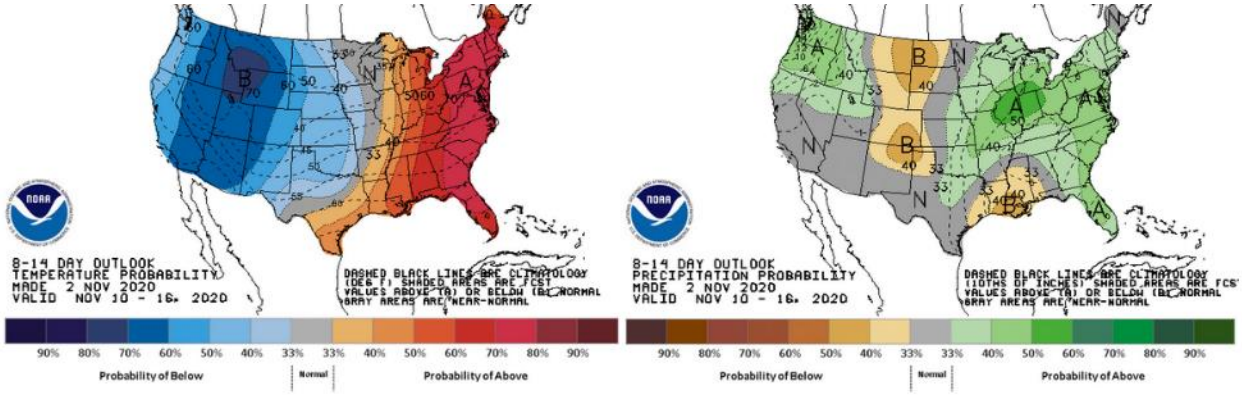
Drought monitor as of Oct. 27, released Oct. 29 (left) and soil moisture departure from normal as of Oct. 14 (right, in mm).



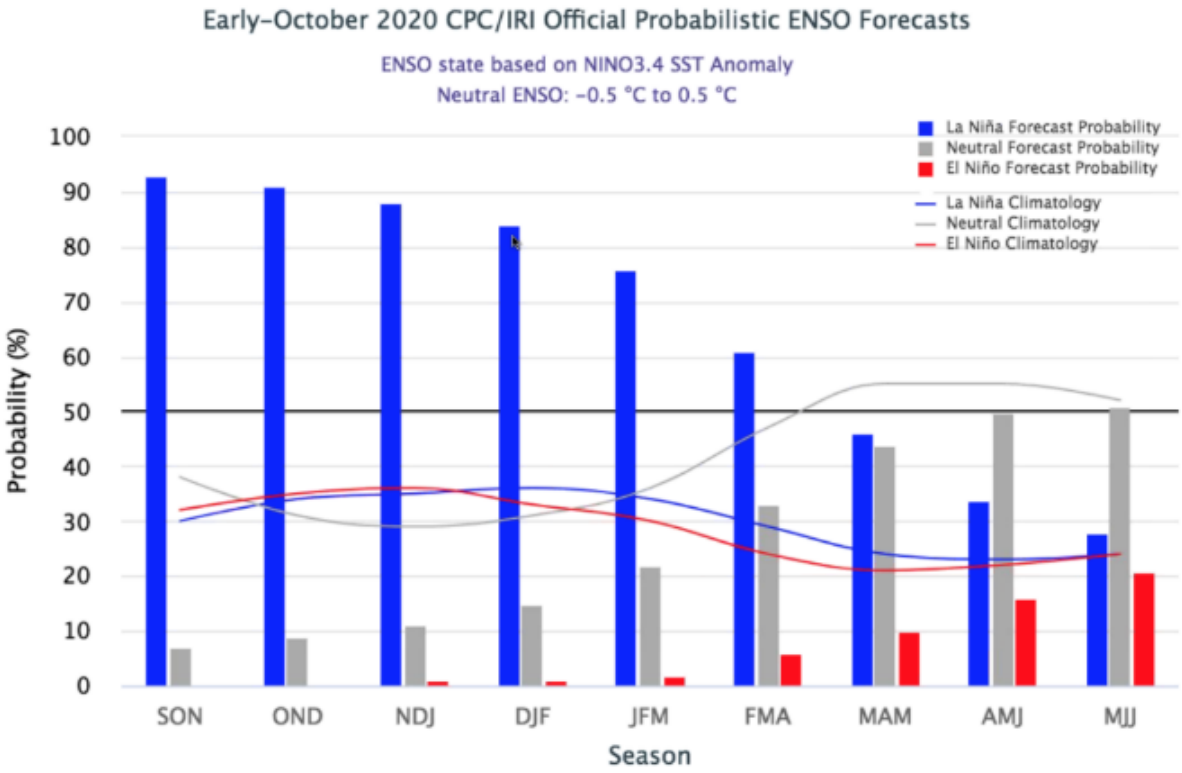
Precipitation forecast for Oct. 3-10.



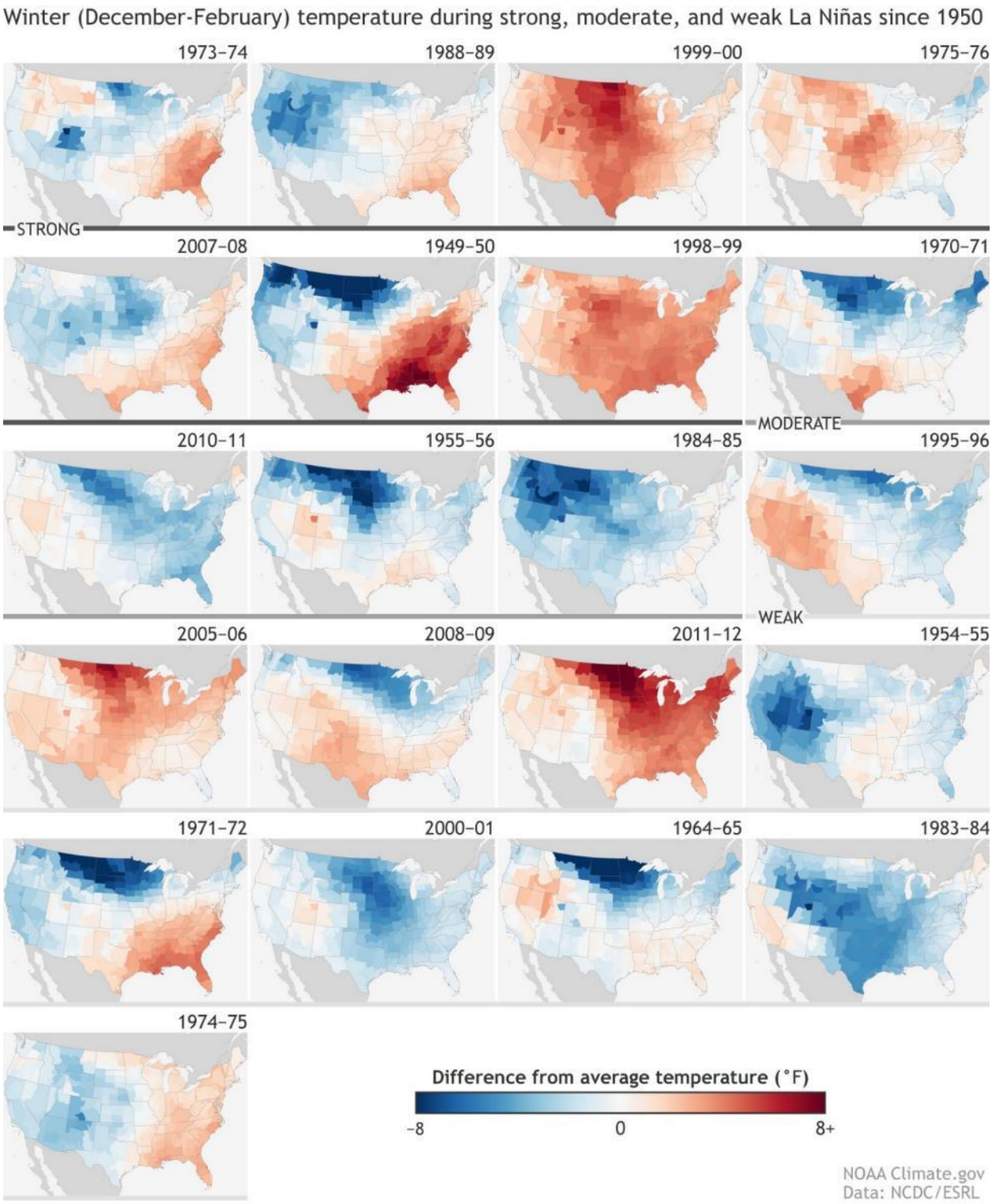
The 10-day weather forecast for Kalamazoo according to wunderground.com.



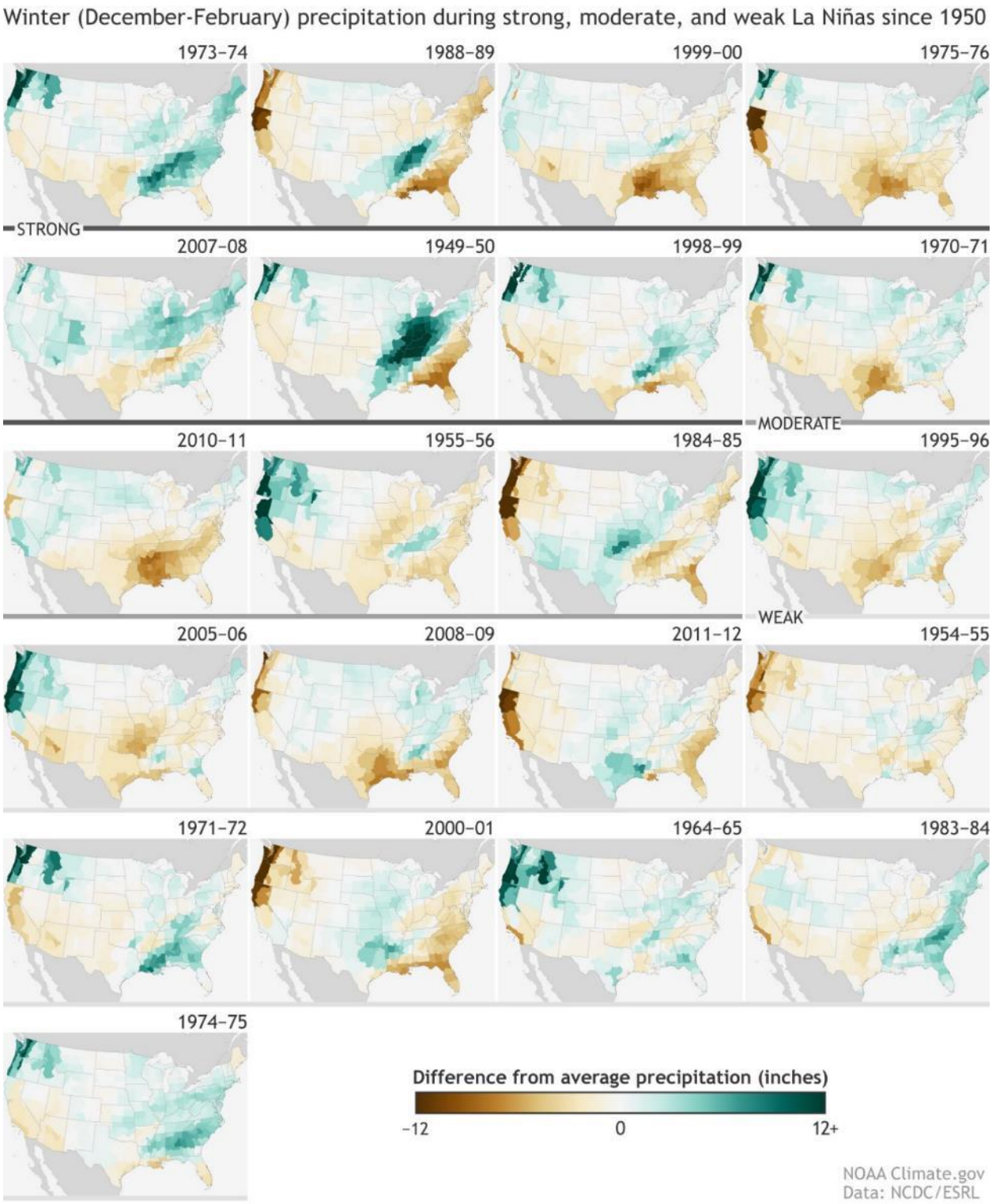
The 8-14 day outlook (Nov. 10-16) for temperature (left) and precipitation (right).



Winter outlook based on La Niña models.



Winter temperature during past La Niña events. Severity of historic La Niña events decreases from strong (top) to weak (bottom) for each parameter.



Winter precipitation during past La Niña events. Severity of historic La Niña events decreases from strong (top) to weak (bottom) for each parameter.

Calendar

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

Nov 15 **Deadline to report 2021 fall-seeded small grains**. Maps are available your county FSA office for acreage reporting purposes. If you wish to receive your maps by e-mail, please contact your local USDA's Farm Service Agency (FSA) staff members for assistance.

Nov 15 **MSU Farm Taxation Webinar**. This webinar reviews agricultural tax issues and reviews topics in IRS Publication 225, the Farmers Tax Guide: Family members working for each other on farm or ranch, including the reinstated kiddie tax rules; Farm or ranch employer-provided meals and lodging; Special use valuation; Depreciation of farm property; Self-employment tax on agricultural activities. Register online, fee is $70.

Dec 8-10 **GLExpo.** Great Lakes Fruit and Veg Expo will be held online this year. Visit the website to register or for more information.

Dec 11 **CFAP 2 Signup Ends.** Contact your local USDA's Farm Service Agency (FSA) staff members for assistance.

Dec 11 **Michiana Irrigation Association Annual Meeting.** More information TBA, contact Deanna Mumby (mumbyde@yahoo.com) for more information.

Dec 16 **Virtual Integrated Crop and Pest Management Update.** Normally held at the MSU Livestock Pavilion, this program for agribusiness and farmers features 2021 MSU Extension crop and pest management recommendations, on-farm research data and pesticide certification credits. Cost is $30, register online. Contact Eric Anderson (eander32@msu.edu or 269-359-0565) for more information.

MSU Extension Digest Briefs

FLUSHING PHOSPHORUS DOWN THE DRAIN TILE

PUBLISHED ON NOVEMBER 12, 2020

Learn more about practices to keep phosphorus in your field and out of the water.

LOOKING FOR CCA CREDITS? INTEGRATED PEST MANAGEMENT (IPM) CATEGORY CREDITS ARE AVAILABLE!

PUBLISHED ON NOVEMBER 2, 2020

Certified Crop Advisor (CCA) credits are available through the Crop Protection Network resource quizzes and the Fusarium Head Blight Management Conference.

PHIL DURST ELECTED VICE PRESIDENT OF THE NATIONAL ASSOCIATION OF COUNTY AGRICULTURAL AGENTS

PUBLISHED ON OCTOBER 28, 2020

During the 2020 virtual annual meeting of the National Association of County Agricultural Agents Phil Durst was elected to the position of vice president. Durst becomes only the fourth individual to serve in this role from Michigan in NACAA's history.

FARMERS NEEDED TO HELP GUIDE DIRECTION OF FUTURE MSU EXTENSION FIELD CROP PROGRAMMING

PUBLISHED ON OCTOBER 23, 2020

The MSU Extension field crops team is asking farmers for guidance by filling out a brief online needs assessment.

TIPS FOR LATE PLANTED WHEAT

PUBLISHED ON OCTOBER 20, 2020

Planting wheat in late October or early November? Make sure to follow these tips.

IS AVAILABLE GRAIN STORAGE A CONCERN ON YOUR FARM?
PUBLISHED ON OCTOBER 14, 2020
Availability of storage may be a limiting factor for those farms expecting average to above average yields.

IS THE MARKET TELLING YOU TO SELL OR STORE YOUR GRAIN?
PUBLISHED ON OCTOBER 14, 2020
Are you in a position to take advantage of potential marketing opportunities?

FIELD CROPS VIRTUAL BREAKFAST RECORDINGS ARE AVAILABLE FOR VIEWING ONLINE
PUBLISHED ON OCTOBER 12, 2020
Field Crops Virtual Breakfast recordings cover topics on crop management, integrated pest management and soil and fertility management.

WATCH NEW VIDEO ON SOYBEAN HARVEST LOSS
PUBLISHED ON OCTOBER 5, 2020
A newly produced soybean harvest loss video will help producers learn where harvest losses occur and how to measure and reduce them.

RECOMMENDATIONS FOR HARVESTING LODGED SOYBEANS
PUBLISHED ON OCTOBER 1, 2020
Specific recommendations for reducing losses and improving efficiency when harvesting lodged soybeans.

IN THE WEEDS PODCAST ON WATER QUALITY FARMING
PUBLISHED ON OCTOBER 1, 2020
“In the Weeds” podcast kicks of the 2020 season with experts on water quality farming.

MYTH-BUSTING PHOSPHORUS IN YOUR FIELD
PUBLISHED ON SEPTEMBER 30, 2020
This article will break down the myths and the truths about phosphorus in your field

USDA RELEASES 2020 FARMLAND CASH RENT VALUES
PUBLISHED ON SEPTEMBER 24, 2020
Understanding the processes of county rental rates.

GUIDANCE FOR FARMERS ON PANDEMIC PREPAREDNESS PLANS AND THE CHAMP TOOL
PUBLISHED ON SEPTEMBER 18, 2020
Find answers to common questions about operational requirements specified by Michigan Executive Orders.

ON-FARM CONSERVATION PRACTICES TO BUILD RESILIENCE
PUBLISHED ON SEPTEMBER 16, 2020
Recoded virtual field day discusses relay cropping, interseeding covers and no-till dry beans planted into cover crops.

Eric Anderson
Michigan State University Extension
Field Crops Educator - St. Joseph County
612 E. Main St., Centreville, MI 49032
(269) 467-5510 (Office)
eander32@msu.edu