

## Southwest Michigan Field Crops Updates September 15, 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. **Note: This will be the last bi-weekly edition of the newsletter for the season, they will be coming out monthly now until next spring.**

## Limited Pesticide Exam Schedule

Due to the many restrictions associated with COVID, MDARD cancelled all pesticide recertification exams this past spring until further notice. All three-year certificates for commercial and private applicators and registered applicators that were set to expire Dec. 31, 2019 were deemed unexpired “until 60 days after the end of the declared states of emergency and disaster” per Governor Whitmer’s [Executive Order 2020-52](#). Over the summer MDARD made [oral exams available to private applicators needing to obtain a license](#), but no in-person or computer-based exams were available.

Recently, MDARD began offering in-person testing in select locations around the state. The only exam being offered in our region is this **Friday, Sept. 18<sup>th</sup>, at 1pm and 3pm in Portage**. If you would like to sign up for a time slot, visit the [Online Pesticide Exam Scheduling \(OPES\) website](#), click “Continue to OPES Welcome page”, then either log in or select “Enter as Guest” to view the statewide map. Counties where upcoming exams are offered are highlighted in green—click on the county to view testing dates and register. You will want to check this site regularly for open exams as there is not a way to receive notifications when new exams get scheduled.

Limited opportunities for computer-based testing are also available through [Metro Institute](#), the proctoring company that MDARD has contracted with to offer these tests. The test would be taken at one of their facilities, not on your computer at home. Visit their website to learn more about the procedure for registering for a computer-based test.

## EPA Proposed Major Changes for Bt Corn

EPA just released its interim proposal for resistance management in B, “[EPA Draft Proposal To Improve Lepidopteran Resistance Management; Notice of Availability](#).” The public comment period opened Sept. 8 and will close Nov. 9, 2020. You can submit a comment on the website linked above by clicking on the green button at the top, “Submit a Formal Comment.” Among the proposed changes, EPA is considering: phasing out hybrids with a single resistance gene and some more “challenged” pyramids that they feel are practically acting as single-gene; increasing refuge-in-the-bag (RIB) percent of non-traited seed from 5% to 10%; and more stringent rules and penalties for planting block refuges. The following is an excerpt from the executive summary.

EPA developed a proposal to bolster current resistance management strategies for Lepidopteran target pests of Bt corn and cotton plant-incorporated protectants (PIPs). EPA's proposal addresses the following aspects of resistance management:

- A proposed new resistance definition for “non-high dose” Lepidopteran pests, based on unexpected injury (UXI) levels in Bt corn and cotton;
- Enhanced resistance monitoring using sentinel plots in regions at high risk of resistance and investigations of UXI cases with standardized pest damage thresholds;

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- Improved resistance mitigation for cases of confirmed resistance by implementing best management practices (BMPs) once UXI has been detected;
- Increased communications among stakeholders to provide “early warnings” on potential cases of resistance to Bt PIPs;
- Industry reporting to EPA on UXI investigations and BMP implementation.

EPA believes these proposed enhancements are consistent with the SAP's guidance and will prolong the effectiveness of Bt corn and cotton PIPs by reducing selection pressure for resistance, improving resistance monitoring, and better mitigating populations that do develop resistance. The Agency's goals are to prolong the durability of Bt corn and cotton PIPs while maintaining the environmental benefits of these management tools.

In addition to the above elements, EPA has identified three further Start Printed Page 55450 measures for public comment, but will not take a position on them until it has reviewed all stakeholder input:

- Phase down of single traits and non-functional pyramids;
- Increasing percent refuge in seed blend products; and
- Measures to improve refuge compliance.

## Bean Leaf Beetle Feeding on Soybean Pods in Green Fields

Reports have come in from Indiana and Michigan of bean leaf beetle feeding on soybean pods as foliage begins to turn yellow and become less palatable to the beetles. Adult beetles continue feeding while temperatures are warm before burrowing to overwinter. Feeding itself does not typically impact yield or seed quality. However, when the pod is opened, it can provide an access point for opportunistic fungi, and these can result in shriveled and diseased seed that can reduce yield and quality. If beetle populations are high enough and pods are still green, treatment may be beneficial. An [article from Purdue entomologists Christian Krupke and John Obermeyer](#) contains good information and detailed photos to help identify the insect and assess population numbers. A [video from Purdue entomologist Christian Krupke](#) explains what to look for and how to determine whether threshold levels are present in your field.



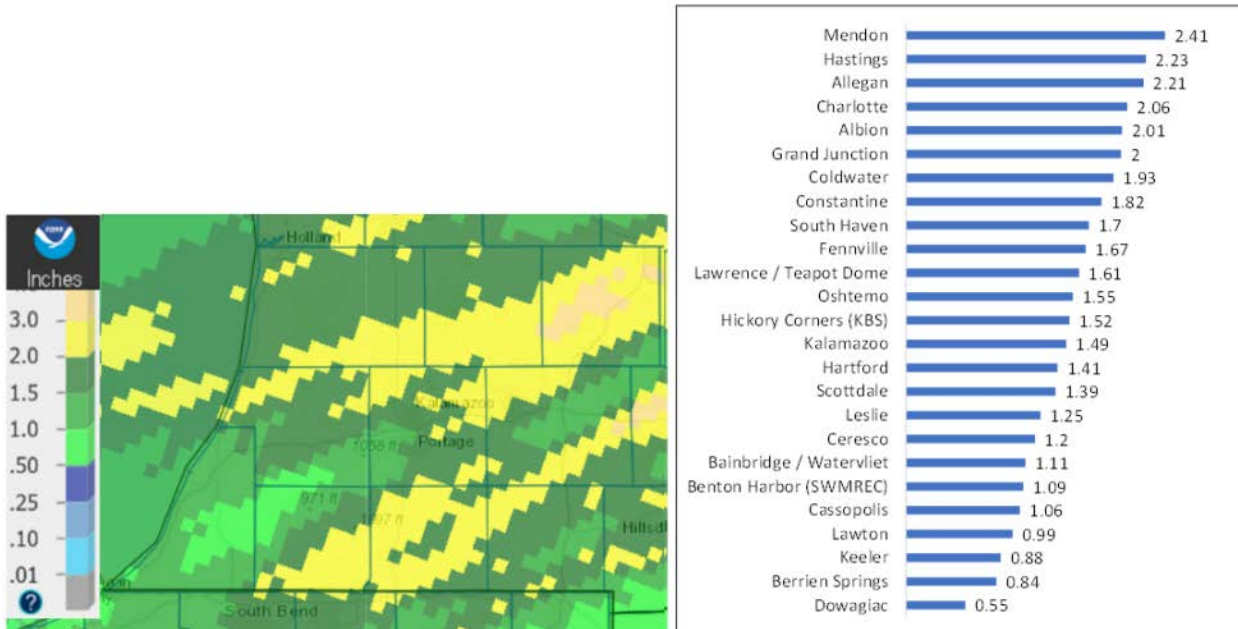
Bean leaf beetle feeding on surface of soybean pod (left). Color of the beetle can vary with grayish to orange being most common, with the inverted black triangle behind the head being confirming identification (center). Pod feeding will result in lesions (right) that turn color and create access points to pathogens. Left and right photos courtesy of Purdue entomologists Christian Krupke and John Obermeyer, center photo courtesy of Mississippi State University Extension.

## Weather

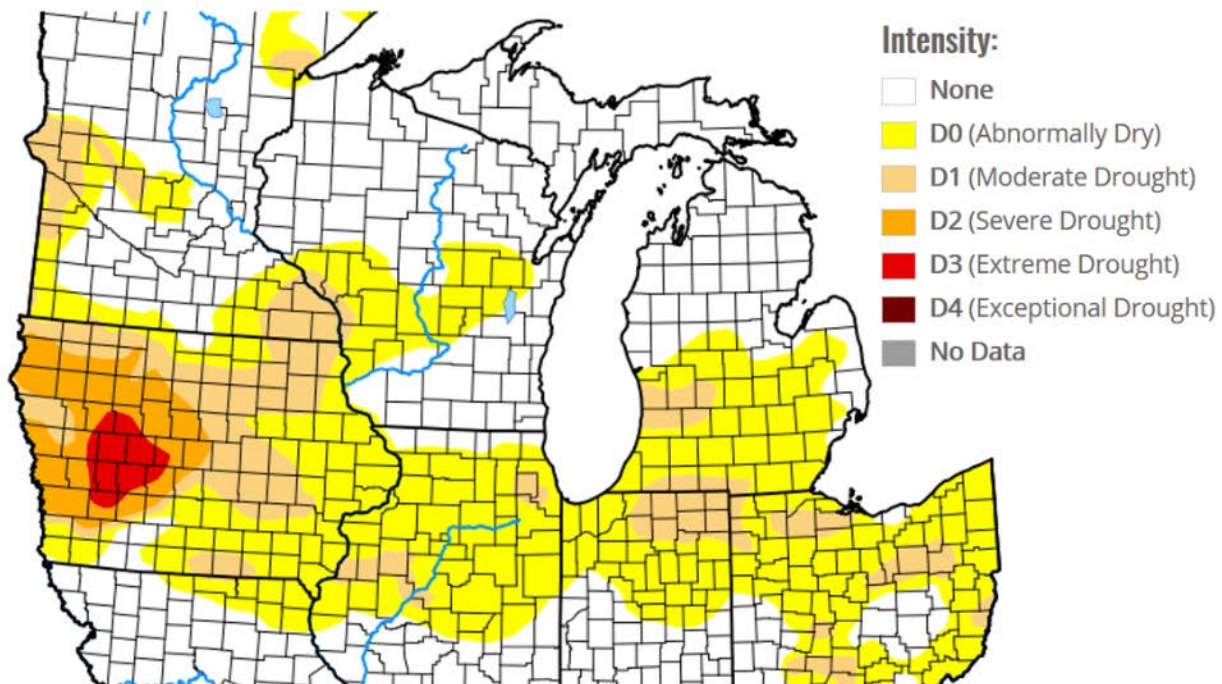
Temperatures this past week were slightly cooler than normal for the region. Rainfall over the past week has helped to make up for moisture deficits, particularly in counties that missed out on previous rains. The system that moved through early last week was widespread with an average of 1.5 inches received at Enviroweather stations in south central and southwest Michigan. The current version of the Drought Monitor does not appear to

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include impacts from rainfall earlier this week. The precipitation forecast calls for...wait for it...NO rainfall for the coming week. The 6-10 and 8-14 day outlooks are both forecasting below-normal for temps and rainfall. The Climate Prediction Center recently announced that La Niña conditions were present in the southern Pacific in August with a 75% chance that they will persist into the winter. What would that mean for Michigan? Though every winter is different, La Niña conditions tend to bring colder and wetter weather to Michigan. Stay tuned.

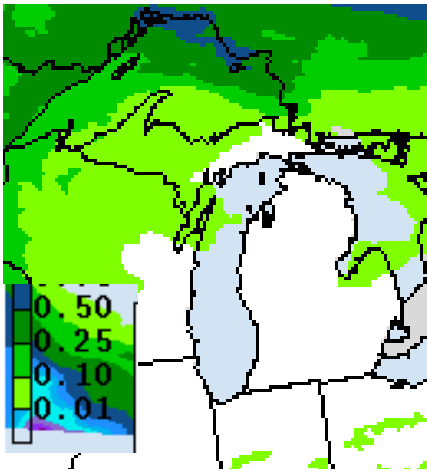


Precipitation totals for the last 7 days, most of that falling on Tuesday, Sept. 8. The bar graph on the right depicts rainfall received at Enviroweather stations throughout the region during this time period.

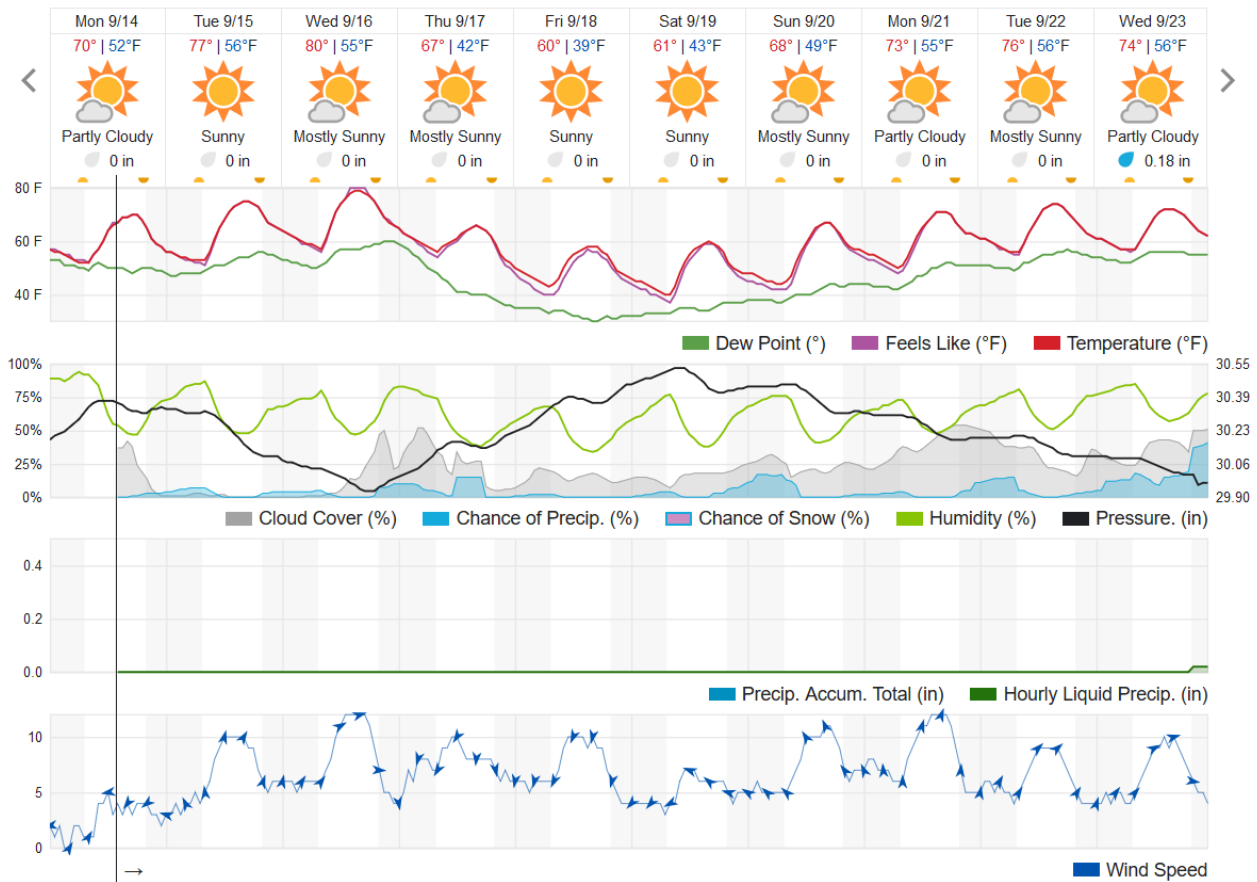


[Drought monitor](#) for the Midwest as of Aug. 25, released Aug. 27.

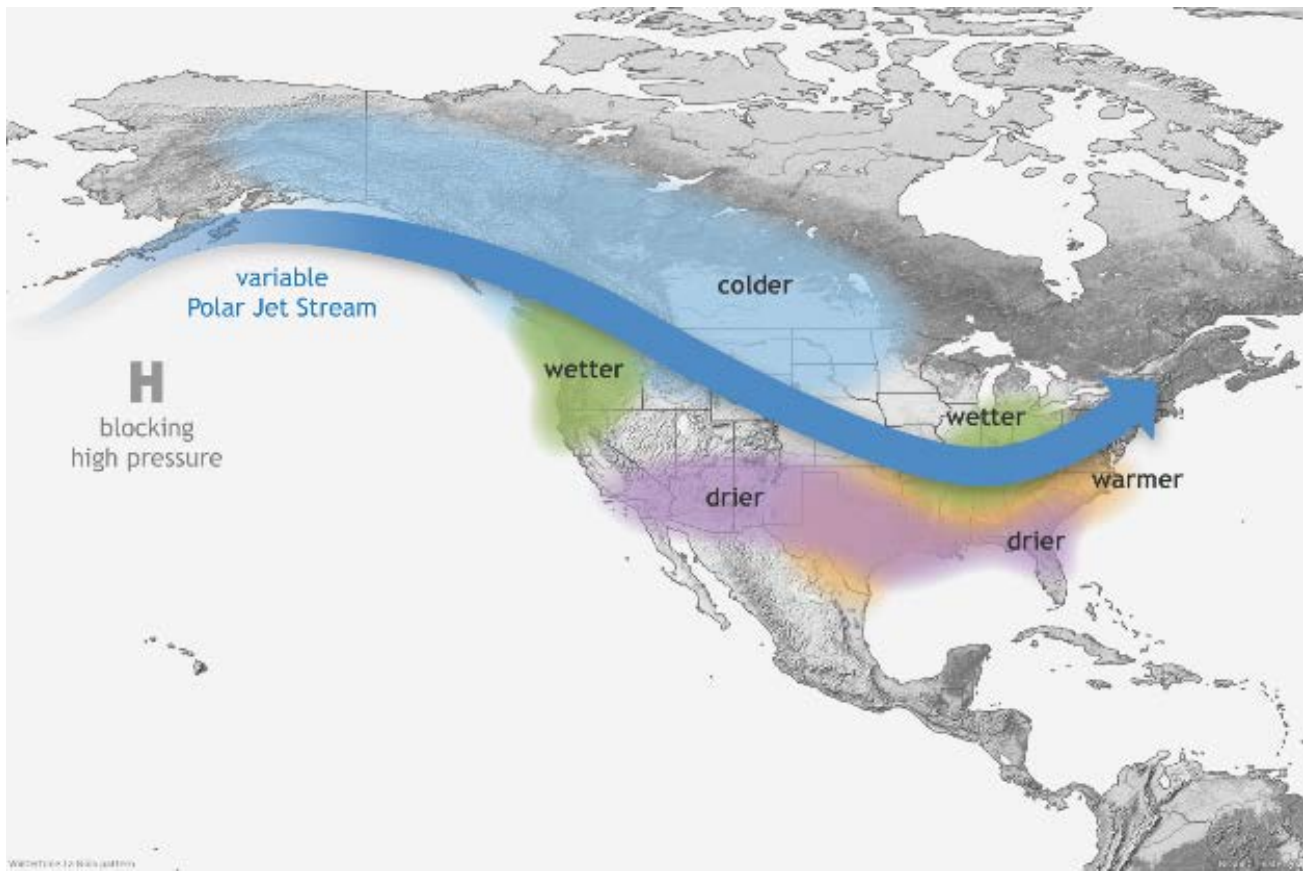
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Precipitation forecast for Sep 14-21.



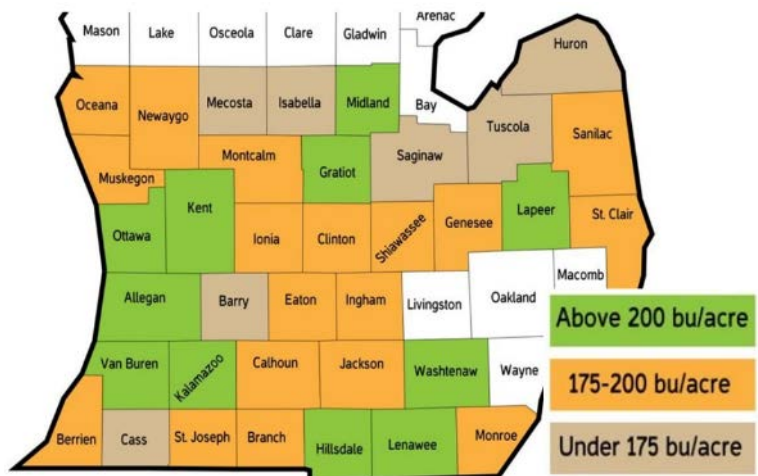
The 10-day weather forecast for Kalamazoo according to wunderground.com.



Average location of the jet stream and typical temperature and precipitation impacts during La Niña winter over North America. Map by Fiona Martin for NOAA Climate.gov.

## Crop and Pest

Each year, the Corn Marketing Program of Michigan (CMPM) conducts sampling throughout the southern Lower Peninsula to estimate the yield potential of corn for the season. These results are typically disseminated via the Between the Rows events they host. This year, the events had to be conducted virtually, and these webinars were run earlier this month. The results are in and you can see from this map where your county stands. These of course are estimates based on a certain number of fields in these counties, but it will be interesting to see how this year stacks up to previous years. The Sept. 1 crop forecast from USDA estimated corn yields at 162 bu/ac for Michigan, down 6 bu from Aug. 1 due to the dry conditions in the state last month.



As the 2020 growing season draws towards a close, there are some important things that we can learn from field observations before the crop leaves really degrade with maturity. This window has probably already closed for early planted soybeans, but later planted longer maturity variety fields can still be evaluated for issues.

**Tar spot** has once again spread widely across southwest Michigan corn fields. The growth stage reached when the lesions infect the leaves and the leaf area impacted are probably the most significant indicator of potential yield loss from corn. There are wide variations between hybrids in terms of susceptibility to tar spot, with some

hybrids able to withstand quite high levels of severity before the plants begin to collapse from the disease, while others may collapse quite quickly. Dry conditions helped to reduce infection in dryland fields this late summer, but timing and amount of rainfall has left patterns of infection across swaths of the region that follow the thunderstorm tracks. A lot of the infection we are seeing now is in fields that were scouted regularly and were “clean” up until the first few days of September. A return to rainfall spurred this later infection period. The degree of damage from these late infections will depend upon the plant growth stage, time of infection, and how long the crop will take to reach black layer.

Corn that is at R5.5 (half milk line) at the time of infection most likely will escape with limited yield loss. Corn closer to R5.0 (early dent) will probably have reductions in test weight and are very likely to have decreased stalk strength and lodging issues as we approach harvest. We still have a lot to learn about this disease. MSU research is being focused on trying to evaluate optimal timing for fungicide application, determining critical levels of the duration of leaf wetness that trigger infections, and at what growth stage at the end of the season a profitable application of fungicide can be made to protect the crops.

Martin Chilvers, MSU Field Crops Pathologist, is conducting a large-scale research project near Decatur (Cass County) to help answer some of these questions for our region. MSU Field Crops Agronomist Manni Singh is conducting research investigating crop development under our more current climate conditions, looking at yield potential for planting corn earlier as well as yield potential of shorter maturity hybrids that may help corn to reach physiological maturity earlier. This may help corn to evade damage from tar spot because the shorter days, higher humidity and more frequent rainy weather in late August and early September often tend to amplify the spread of the disease widely during this period. We would encourage growers to look over their fields, determine the level of corn tar spot, and look at what leaves on the plant show signs of the lesions from the disease. If there is significant tar spot, the field should be evaluated for stalk strength regularly and prioritized for early harvest to avoid excessive lodging.

**SDS/SCN** Sudden death syndrome (SDS) continues to spread across the region. Look for areas that have lost their leaves early, or for later planted or longer maturity varieties, those that turn to mature leaf colors early. There are a couple of things in play this season: spider mites as well as SDS and soybean cyst nematode (SCN). Spider mite infected fields should have some evidence of damage along the edges of fields while SDS/SCN often are in pockets in the interior of fields that may have increased incidence at the field entry points for equipment into fields. Consider taking soil samples of areas of low yields or stunted plant heights by collecting soil samples through the root masses of soybeans in areas of the field that have reduced growth. Split the samples, send half in for a soil fertility analysis, the other half for SCN analysis. If the field has a history of SDS/SCN, consider having a bio-type analysis for SCN run on the sample. There is increasing evidence that there is spread of nematodes that are able to overcome the Peking source of SCN resistance in fields in southwest Michigan. If you have SDS in a given field that has not been sampled for SCN, consider sampling those fields this fall. Cost of testing is covered by Michigan’s soybean checkoff program and the [form can be found here](#).

We have a limited window of opportunity to look at fields and look for the telltale signs of these diseases. Taking samples, noting when infections are likely to have occurred, and conducting sampling for SDS can really help you to make management decisions on how best to control these challenges in the years to come.

**Water Use.** Forecasted weekly reference evapotranspiration (FRET) through Sept. 20<sup>th</sup> is significantly reduced from previous weeks at 0.88 to 0.96 inch due to cooler temperatures. With much of the corn crop approaching full dent and the early-planted and lower maturity group soybean in beginning mature pod stage, that amount is close to actual crop need according to the [MSU Soil Water Balance factsheet](#). Turning off the irrigation too soon could lower corn and soybean yields or reduce test weight. However, irrigating beyond the crop’s water need wastes time, energy and money. Applying water only when needed (irrigation scheduling) is environmentally and economically important. September rainfall in most years alleviates the late-season irrigation scheduling questions. The typical crop water usage drops quickly as average rainfall increases making late-season irrigation less important. However, many of the areas where crops were planted late may have substantial water needs well into September, signaling the need for some type of irrigation management either by a scheduling program or crop monitoring to determine timing and volume of irrigation application.

## Calendar

Titles are clickable links to online content when highlighted and underlined

- Sept 30** [Final Date to Update 2020 PLC Yields.](#) Contact your local USDA's Farm Service Agency (FSA) staff members for assistance.
- Oct 21** [Prepare Your Farm for Tax Season Now - Online Workshop.](#) 10-11AM. The goal of this program is to help farmers who do not have a good recordkeeping system in place yet, get their records straight in preparation for tax filing, or for their annual meeting with their tax preparer in the next tax season. It is intended for producers who are not ready to buy an accounting software or pay a recordkeeper, and prefer spreadsheets or pen and paper, or have been using the shoebox method. This will be the first of a series of webinars. Cost is free, register online.

## MSU Extension Digest Briefs

### [Planting the 2021 wheat crop](#)

*PUBLISHED ON SEPTEMBER 14, 2020*

Much of wheat's yield potential is determined at planting. To attain top yields, timely planting coupled with appropriate seeding practices can be critical for ensuring an even and uniform stand.

### [USDA's disaster program available for weather-related crop losses](#)

*PUBLISHED ON SEPTEMBER 11, 2020*

Producers with crop losses due to drought in 2018 or excessive rain in 2019 may qualify for USDA's WHIP+ disaster program.

### [Midwest Cover Crop tool has been updated to better help farmers](#)

*PUBLISHED ON SEPTEMBER 11, 2020*

Friendlier interface, more accurate seeding dates and assistance with cover crop decisions are all good reasons you should try this tool.

### [Irrigate all the way to the end](#)

*PUBLISHED ON SEPTEMBER 9, 2020*

August drought conditions will have many irrigating into September.

### [National Cover Crop Survey Report is released](#)

*PUBLISHED ON SEPTEMBER 8, 2020*

2019-2020 National Cover Crop Survey Report details farmer trends and perspectives on cover crop use.

### [Thinking about cover crops after corn silage?](#)

*PUBLISHED ON SEPTEMBER 8, 2020*

New recipes provide an introductory approach to integrating cover crops into a corn silage rotation going to corn or soybean.

### [Hunting female deer a better population management strategy](#)

*PUBLISHED ON SEPTEMBER 3, 2020*

Sept. 19-20 is the first chance in the 2020 hunting season to harvest does to control crop damage.

### [Understanding soybean discount schedules](#)

*PUBLISHED ON SEPTEMBER 3, 2020*

Understanding soybean discount schedules can help producers minimize shrink and discount deductions and increase net payments received on delivered soybean loads.

### **Smuts and bunts of small grains**

*PUBLISHED ON SEPTEMBER 1, 2020*

Learn more about dwarf bunt and common bunt, also known as stinking smut, and their management.

### **Michigan agricultural safety grants**

August 4, 2020 | Stanley Moore and Aleks Schaefer

Michigan State University Extension has developed and recently released the COVID-19 Hazard Assessment and Mitigation Plan (CHAMP), an easy to use downloadable e-tool aimed at assisting the Michigan agricultural community in protecting themselves, their employees, and their customers from COVID-19 while maintaining business continuity.

### **Protect your farm from a serious disease outbreak**

August 3, 2020 | Elizabeth Ferry and Dale Rozeboom

Secure food supply planning is the effort of animal industries to protect as much of an industry as possible from losses if a highly contagious animal disease with severe consequences were to occur.

### **Court clarification on Right to Farm and local regulation**

July 16, 2020 | Brad Neumann

This case was partly concerned about whether the activity taking place on 30-acres was farming or not. Those guidelines are now case law for all of Michigan.

### **Am I running a commercial farm?**

July 17, 2020 | Florencia Colella

The Internal Revenue Service (IRS) defines a farmer as someone who operates a farming business with the intent of making a profit. You can find the definition of farmer on the cover of the Farmer's Tax Guide, IRS Publication 225.

### **New version of the MSU Extension Farm Records Book for Management is now available**

July 16, 2020 | Florencia Colella

The Farm Records Book for Management is a free tool to keep track of your farm income and expenses. The book can be used in Excel, Google Sheets, or printed off to fill out by hand. In addition to income and expenses, it also allows you to keep track of labor payments, capital purchases, production, and even develop a balance sheet.

### **Beginning Farmers DEMaND**

March 23, 2020 | Jonathan LaPorte

Introducing the Beginning Farmer DEMaND (Developing and Educating Managers and New Decision-makers) series, a line of publications from Michigan State University Extension, designed to help beginning farmers learn about financial and business management strategies.

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