

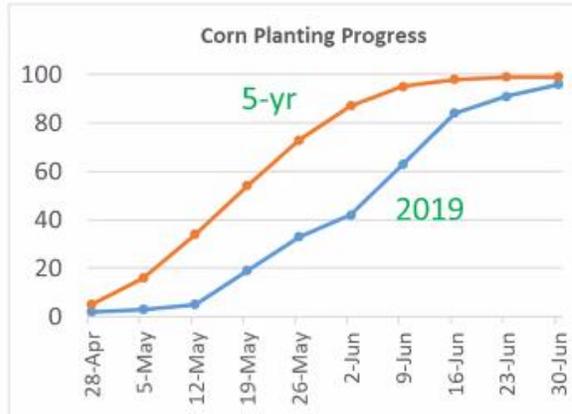
Southwest Michigan Field Crops Updates **August 23, 2019**

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.

Corn Maturity and Immature Silage

The Field Crops team's Virtual Breakfast session this week featured MSU's cropping systems agronomist Manni Singh talking about corn maturity with an emphasis on corn silage. Most farmers started the season obviously in a late, compressed planting window. By late May, corn in Michigan was only 40% planted compared with 80% in a normal year. The question is whether we have accumulated enough growing degree days, or GDD's, to be able to mature the crop before the first frost. We caught up on GDD's since the cool, late spring and are actually a week ahead of normal overall. However, depending on the corn maturity rating and when the corn got planted, we may not have enough GDD's to finish the crop. It takes about 900 heat units to get from silking to the 50% milk line which is the ideal time for harvesting for silage, assuming that whole-plant moisture is 65-70%. Using the Useful to Usable, or U2U, tool is helpful in predicting what stage your corn crop will be in based on historic GDD and first frost data. Nitrate levels can increase if leaves die from frost, typically accumulating at the base of the stalk. Consider increasing cutting height, not harvesting right after a frost event, and ensiling to allow nitrate levels to decrease. There are quality concerns with clostridial fermentation when silage is over 70% moisture, so it is important to let the crop dry down to below 70%. However, a long dry-down period increases the possibility of mold development in ears. Anaerobic ensiling will minimize mold level and mycotoxin production.

2019 Season so far...



- 1100-1200 GDD from Silking to Black layer (~900 to half milkline)

Heat accumulation compared with normal (in degree days): March 1 - August 20, 2019



East Lansing	
Plant Date	GDD
1-May	1873
15-May	1796
1-Jun	1598
15-Jun	1418
1-Jul	1131

Plan Now for Applying for Deer Depredation Permits

During the recent field day we hosted, DNR wildlife biologist Ken Kesson talked to attendees about deer management issues and, specifically, how to obtain in-season and out-of-season depredation permits. These topics have also been addressed in MSU articles ([“How to keep your crop field from becoming a wildlife food plot”](#), [“Do I need a permit to control wildlife on my farm?”](#)), a bulletin ([“Wildlife Damage Management Series for Midwestern Farmers, White-tailed Deer”](#)), and webinars ([“Deer Management”](#), [“Farmer Interviews About Deer Management”](#)). Your first step is to begin collecting evidence of deer damage to your crop, including pictures, videos, and, if possible, estimates of revenue lost. Also document your efforts to manage deer with non-lethal methods like fencing, repellents, habitat modification and shooting or other scare tactics. Then call your local DNR office to begin the application process and explain which permit type you are seeking. The Plainwell Customer Service Center (621 North 10th Street, Plainwell, MI, 269-685-6851) services most counties in the southwest. They may come to your property to talk with you and inspect or they may initiate the application process right away. Be sure

you have hunters, processors, meat-eaters, etc. lined up as you are not allowed to leave carcasses lie.

Industrial Hemp Update

The Michigan Department of Agriculture and Rural Development (MDARD) recently released emergency rules for testing industrial hemp samples as required under the Ag Pilot program and the 2014 (and 2018) Farm Bill. Licensees are required to submit tissue samples to MDARD for analysis to ensure THC levels are 0.399% or below (actually the law states 0.3%, but they are taking the liberty of rounding down) to distinguish the crop from marijuana. The difference between hemp and marijuana is a legal one—they are the same species but have been bred to select for very high (15-30%) or very low ($\leq 0.3\%$) levels of the psychoactive compound Δ -9-tetrahydrocannabinol, a.k.a. THC.

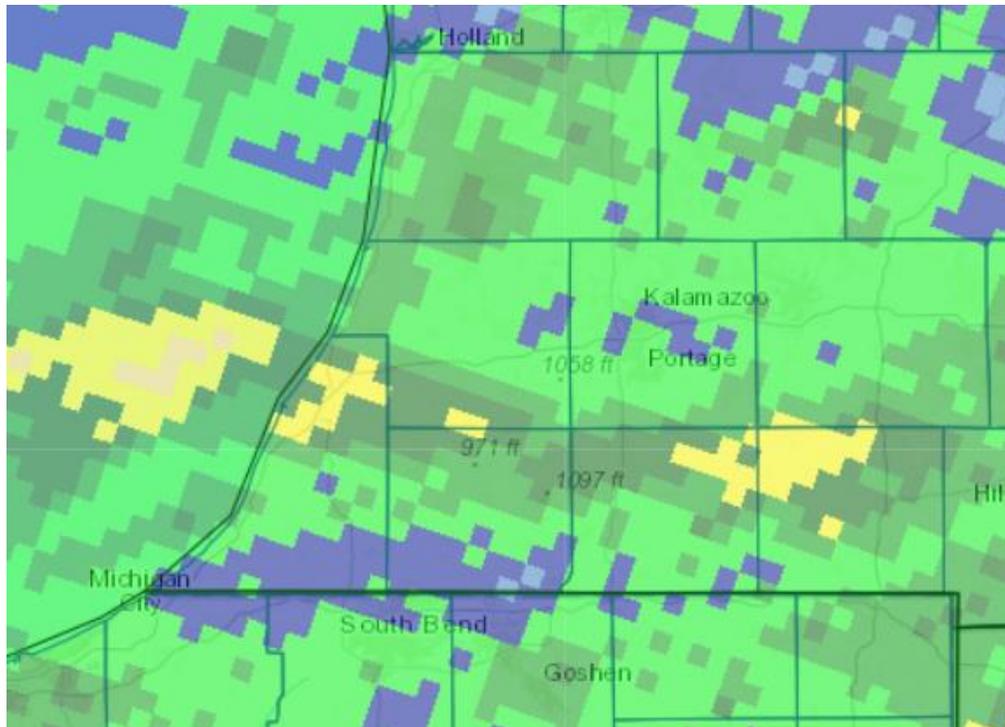
Full details of the testing protocol can be found on [MDARD's Industrial Hemp website](#) under "[Hemp Sampling Procedure for Growers](#)" and "[Emergency Rules for Industrial Hemp Testing](#)", but here is an overview. Growers must call MDARD's Geagley Lab (517-292-3939) to schedule testing. The cost is \$125/test, and they will test for THC only (no other cannabinoids). A separate sample is required per variety and per non-contiguous field. For those growing hemp for CBD (cannabidiol), you must collect 2" of flower per plant from representative plants in the field. The required number of plants to sample depends on the total number being grown but is capped at 25 plants. Samples must be submitted not less than 15 days before the intended harvest date. Samples can either be taken directly to the Geagley Lab in Lansing or mailed. As with all tissue samples submitted to testing labs, you should send them in paper bags and ensure they arrive quickly (don't ship over the weekend, ship next-day air if needed, etc.). Compliant plots (those testing $\leq 0.3\%$ THC) must be harvested within 15 days of testing as THC concentrations will creep upward over time. Non-compliant plots (those testing $> 0.3\%$ THC) may be resampled (although it is unlikely that the crop will retest compliant) or must be destroyed. MDARD will indicate the method of destruction at that time. For those growing hemp for seed or fiber, there are no specific guidelines for what plant part to sample, but the Purdue hemp specialist said their state chemist says to use the top 6" of the plant.

Contact me if you have any questions about hemp production or testing.

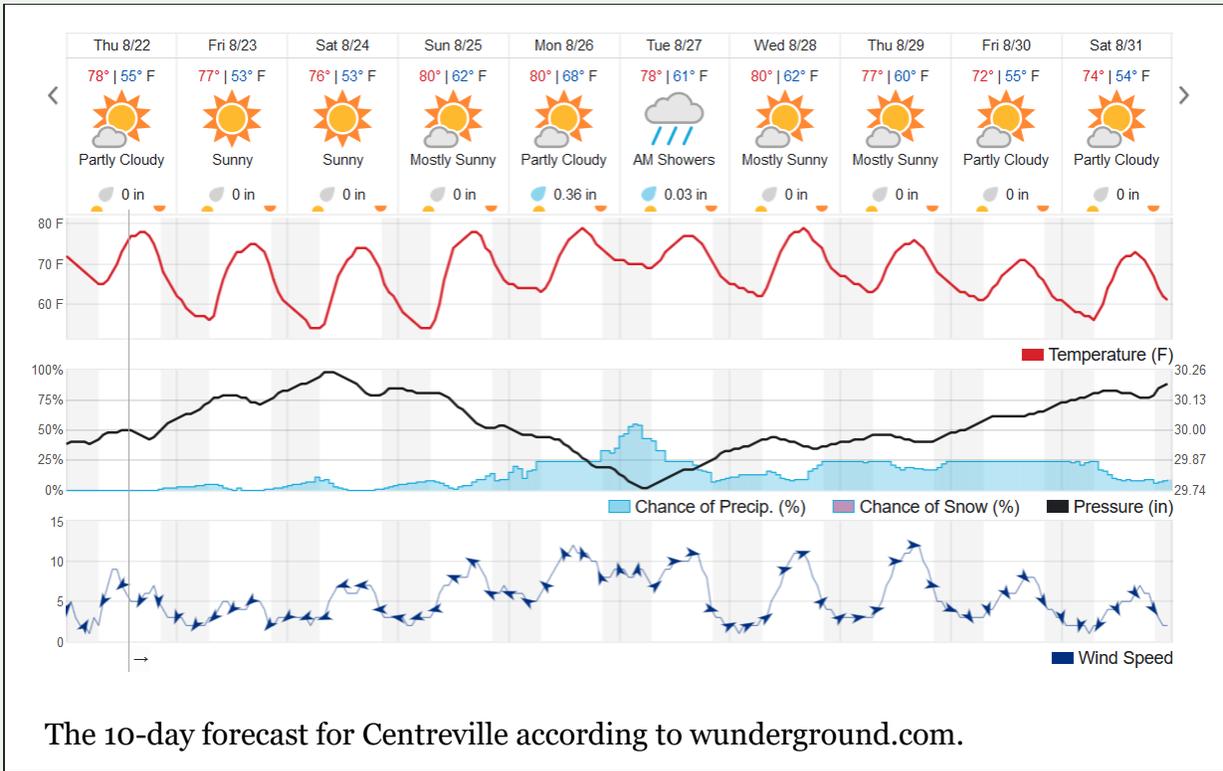
Weather Update

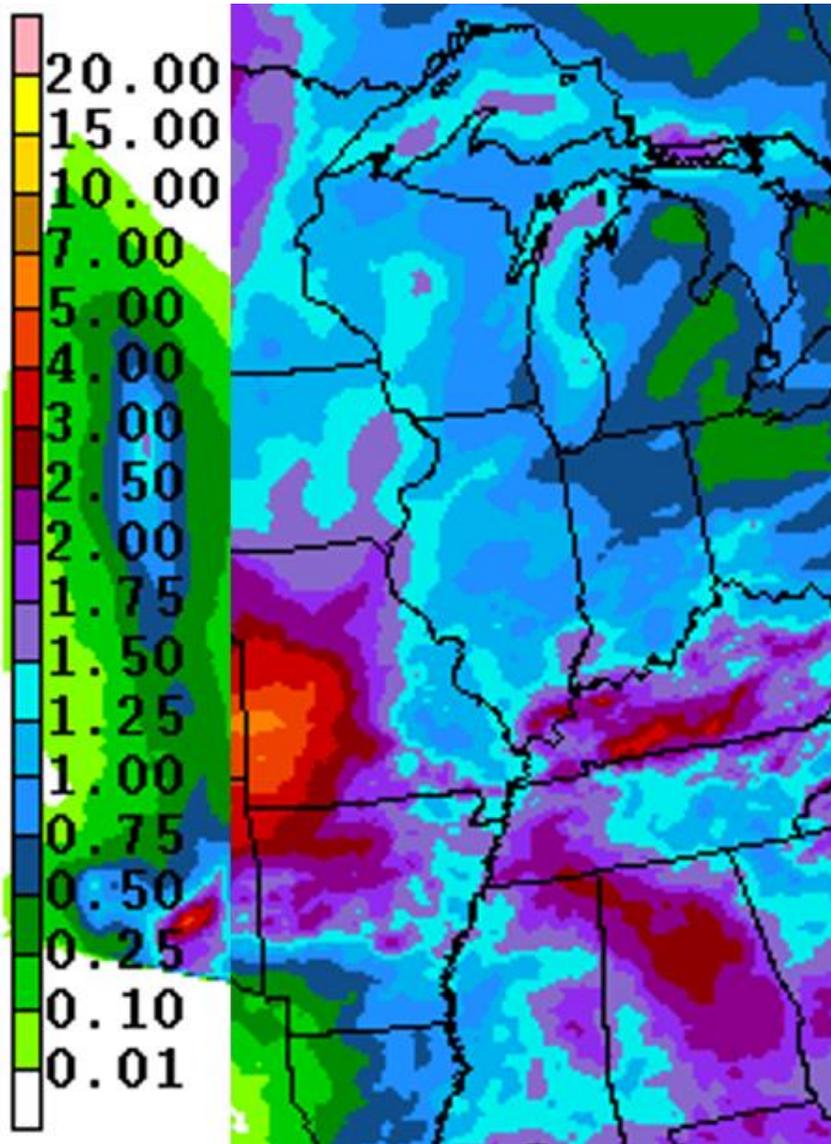
Rainfall was highly variable this past week with a range of 0.18" in Hastings to 2.3" in Mendon, and temperatures were above normal. MSU's ag climatologist Jeff Andresen says the forecast is very straightforward: a Canadian-origin high pressure system will keep things cooler and drier for the next week with the next chance of

rain coming Monday through Tuesday next week with $\frac{1}{2}$ to $\frac{3}{4}$ of an inch predicted. Both the 6-10 and 8-14 day outlooks call for cooler than normal temperatures with normal to below normal precipitation. These cooler temps are concerning for those who will be close in getting crops to maturity. The new long-lead outlooks for September through November continue to call for above-normal temperatures which offers some hope. Jeff also shared historic first-frost dates for Michigan. The median for our area has been October 21st through 29th, with a 1-in-10 year chance of having it as early as October 4th or as late as November 12th.

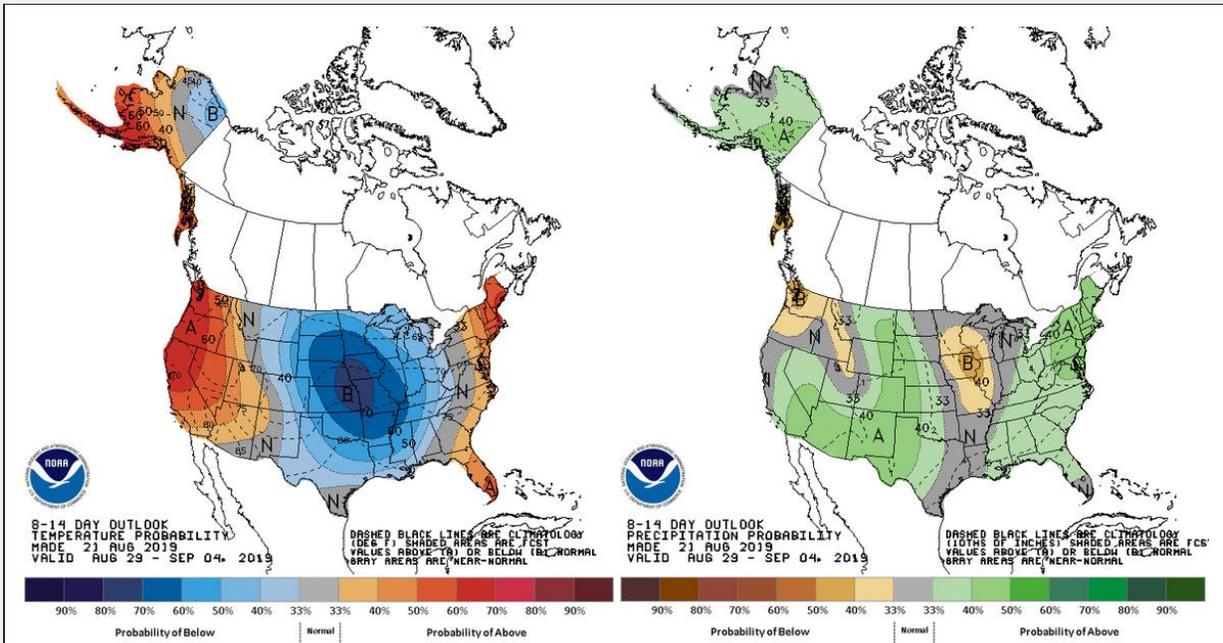


Rainfall totals for the past 7 days as of August 21st in southwest Michigan.

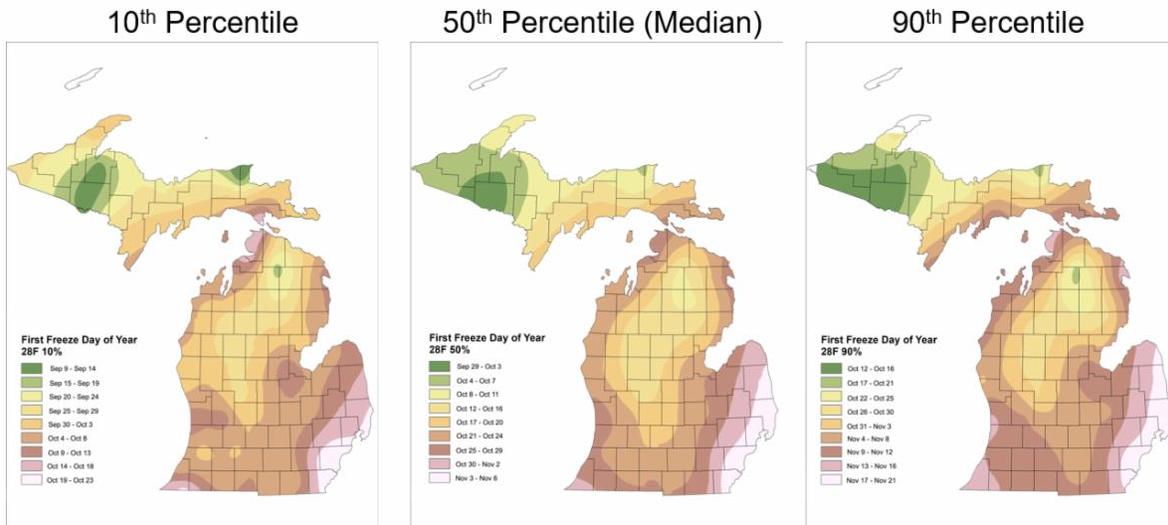




Forecast for precipitation totals for the week of Aug 22-29, 2019....1/2" to 3/4", most of that predicted for Monday through Tuesday next week.



National Weather Service 8-14 day outlook (Aug 29-Sep 4) for temperature (left) and precipitation (right). We are in store for cooler than normal temps with normal to below-normal precip according to MSU's ag climatologist Jeff Andresen.



Average first killing fall freeze (28 °F) dates in Michigan (1981-2018). Images courtesy of Jeff Andresen.

Calendar

Titles are clickable links to online content when highlighted and underlined

Aug 29 **Field Crops Virtual Breakfast Free Webinar.** Thursdays 7:00-7:30 AM. This week: MSU's weed diagnostic specialist Erin Hill will talk about "Harvesting Weed Seeds". Join via computer or mobile device (audio and video, <https://msu.zoom.us/j/552324349>) or by phone (audio only, **669-900-6833** and enter meeting ID **552-324-349**). To receive a weekly reminder of the Virtual Breakfast, sign up at <http://eepurl.com/gm-PIv>.

Sep 5 **Cass MAEAP Field Day.** 4-7pm. Crane Pond DNR office, 60887 M-40, Jones, MI. Managing for Forestry Health and Profit. Program offers 2 RUP credits. Co-sponsored by SWMLC, DNR, SWxSW CISMA & MAEAP. Dinner provided to registrants. Call Erez Brandvain, the Cass County MAEAP Technician, at 269-228-7084, to register or email Erez.Brandvain@macd.org.

Sep 25 **Calhoun County Cover Crop Demonstration Plots.** MSU Extension in cooperation with the Homer FFA is planning a short field tour of cover crop demonstration plots in Homer, MI on Wednesday, Sept. 25 from 10am-12pm. The plots are located at 24425 M-60, Homer, MI. Plots will include a replication of statewide strip plots as well as several recommended mixes for a variety of goals. More details to come.

MSU Extension Digest Briefs

GreenSeeker tool might help reduce your nitrogen costs

PUBLISHED ON AUGUST 19, 2019

Handheld crop sensors such as the GreenSeeker can be used to estimate in-season nitrogen needs in corn.

Pricing standing corn silage

PUBLISHED ON AUGUST 19, 2019

This article describes a method to help determine a starting point for short-term sales; it is not intended to be used for long-term contracts.

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