MICHIGAN STATE UNIVERSITY | Extension

Southwest Michigan Field Crops Updates
October 2021

The Southwest Michigan Field Crops Newsletter is switching to a monthly delivery. More changes to the format to come this winter—stay tuned! 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.

Installing Tile Mains Near Existing Utilites

The following is a safety tip shared recently be the Pipeline Ag Safety Alliance.
Q: Can a tile main go under or over an existing pipeline?
A: Often tile can be placed in proximity to an existing pipeline, but not without prior consultation with the utility operator. Any proposed tile installation needs to be reviewed by the operator and will include a consideration of the depth of the pipeline, the required depth of the drain tile, the separation distance between the pipeline and drain tile, and any other precautions and requirements that must be followed when excavating near the pipeline. Anyone planning to install drain tile near a pipeline should contact the utility operator well in advance to ensure the necessary review is completed and permission is granted. In some cases, a formal crossing agreement may be required.

Grain Test Weight Considerations For Corn

The following was taken from a recent article by Purdue's corn agronomy professor emeritus Bob Nielsen. For more details on the causes of low test weight and other useful information, you can read the article in its entirety.

Growers worry about low test weight because local grain buyers often discount their market bids for low test weight grain. In addition, growers are naturally disappointed when they deliver a 1000 bushel (volumetric bushels, that is) semi-load of grain that averages 52-lb test weight because they only get paid for 929 56-lb "market" bushels (52,000 lbs ÷ 56 lbs/bu) PLUS they receive a discounted price for the low test weight grain. On the other hand, high test weight grain makes growers feel good when they deliver a 1000 bushel semi-load of grain that averages 60 lb test weight because they will get paid for 1071 56-lb "market" bushels (60,000 lbs ÷ 56 lbs/bu).

These emotions encourage the belief that high test weight grain (lbs of dry matter per volumetric bushel) is associated with high grain yields (lbs. of dry matter per acre) and vice versa. However, there is little evidence in the research literature that grain test weight is strongly related to grain yield.

Hybrid variability exists for grain test weight, but does not automatically correspond to differences in genetic yield potential. Grain test weight for a given hybrid often varies from field to field or year to year, but does not automatically correspond to the overall yield level of an environment.

Similarly, **grain from high yielding fields does not necessarily have higher test weight than that from lower yielding fields**. In fact, test weight of grain harvested from severely stressed fields is occasionally higher than that of grain from non-stressed fields, as evidenced in Fig. 2 for 27 corn hybrids grown at 3 locations with widely varying yield levels in Kansas in 2011. Another example from Ohio with 22 hybrids grown in common in the drought year of 2012 and the much better yielding year of 2013 also indicated no relationship between yield level and grain test weight (Fig. 3).

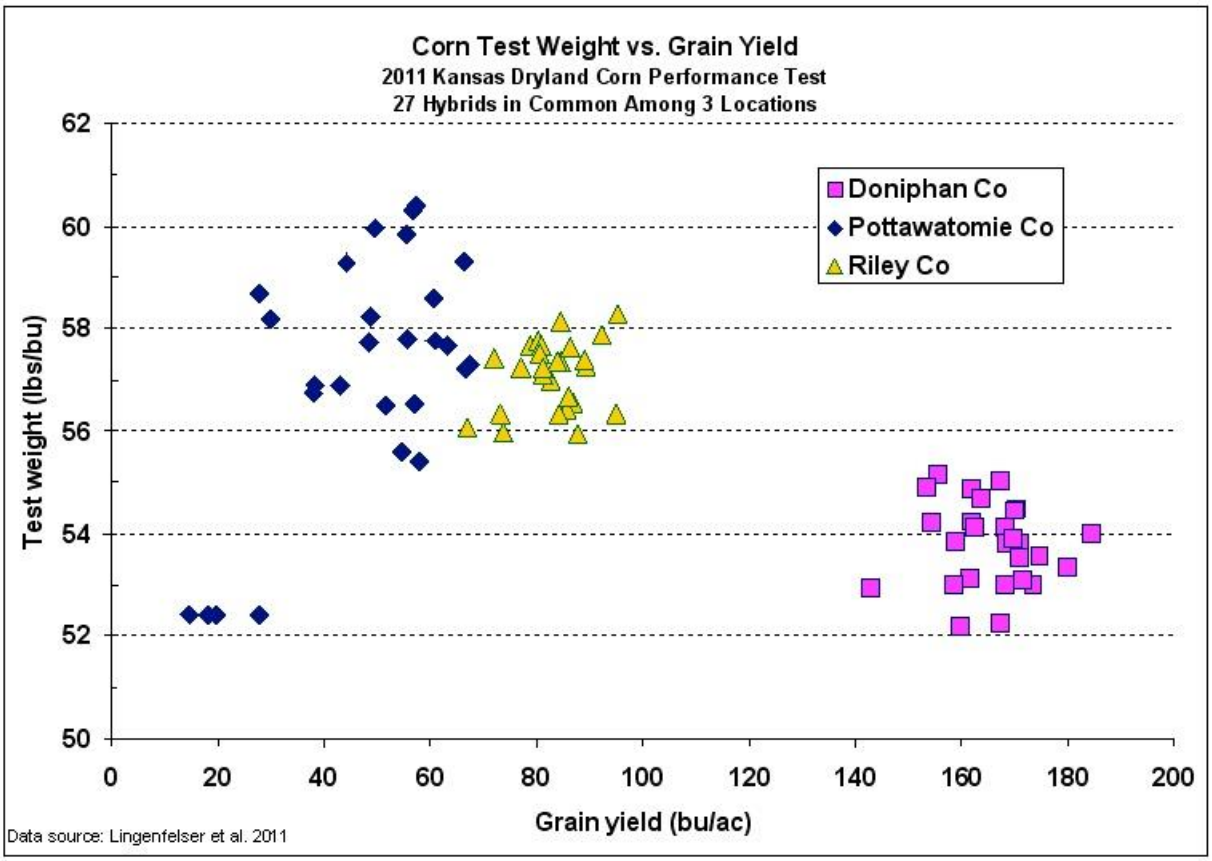


Fig. 2. Corn grain test weight versus grain yield for 27 hybrids grown at 3 Kansas locations (Lingenfelser et al, 2011).

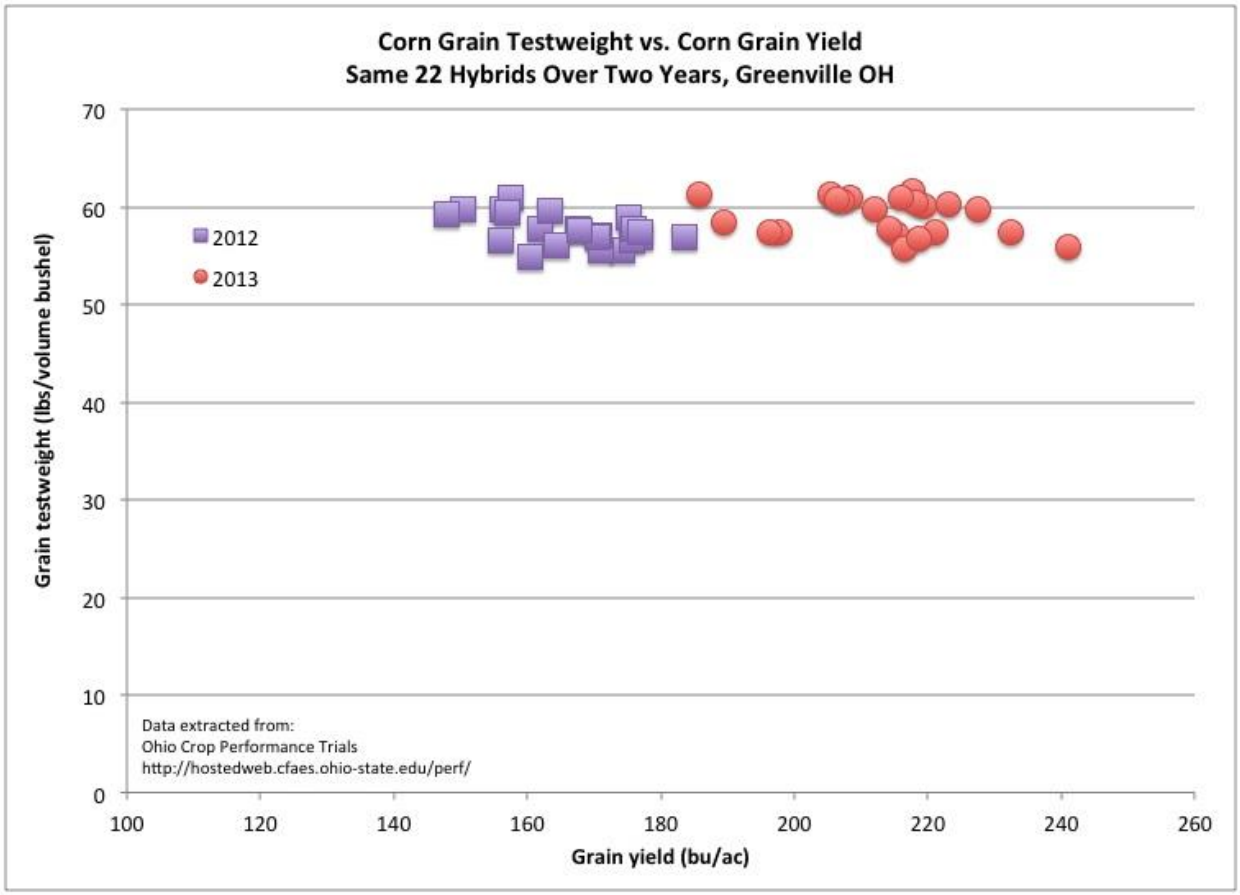
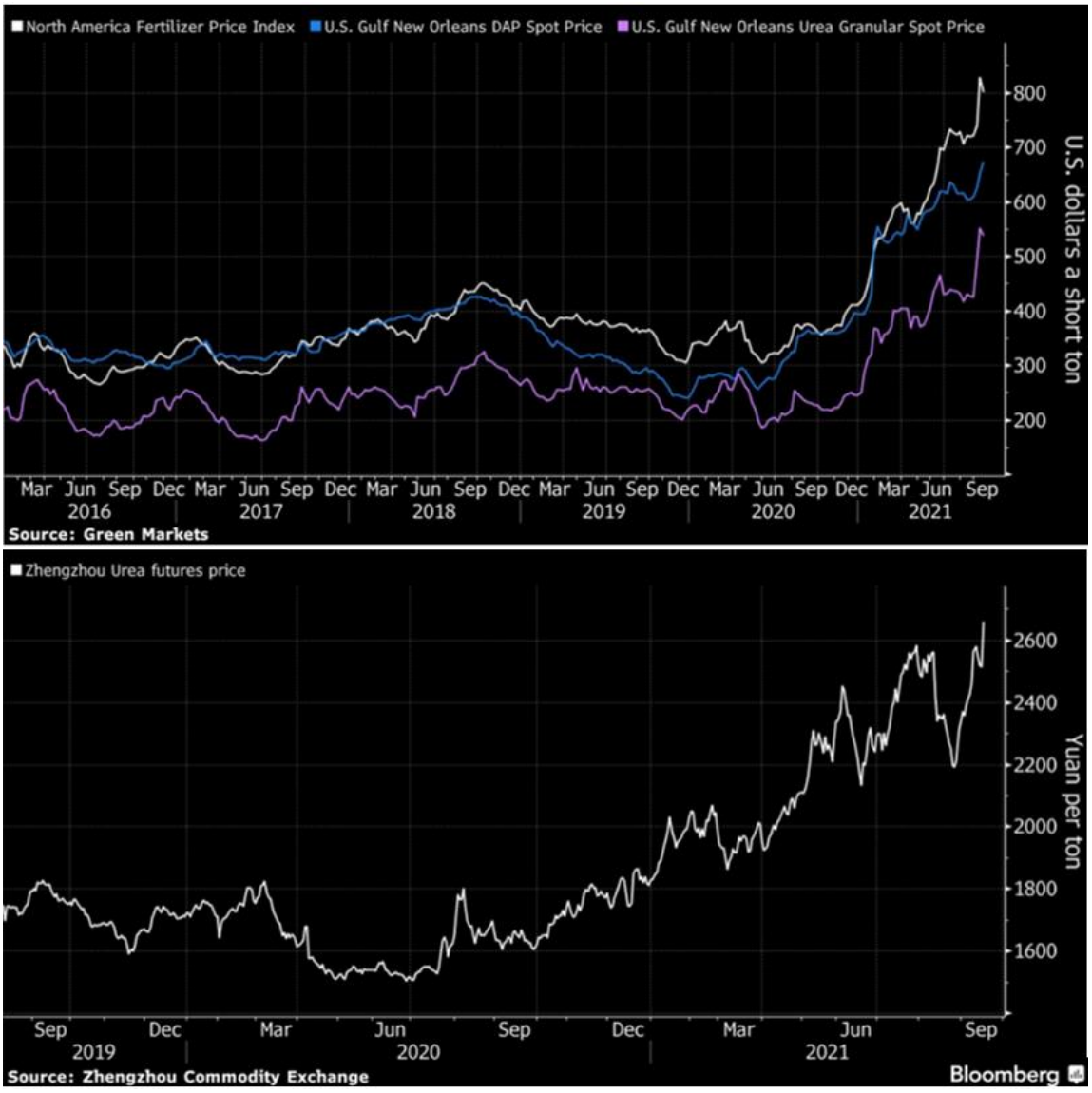


Fig. 3. Corn grain test weight versus grain yield for 22 hybrids grown at Greenville, OH in 2012 (drought) and 2013 (ample rainfall).

Fertilizer Prices They Are A'Risin

Fertilizer prices have been increasing over the past 16 months with some product costs increasing by 60% from last year. Speculation has arisen about costs rising due to higher commodity prices this year, but increases have also occurred due to increased demand. According to Reuters, China is the world's top phosphate exporter, with shipments of 3.2 million metric tons of DAP in the first half of 2021 alone. They produce more than the next three producing nations combined. Chinese companies have announced over the past two months that they are suspending phosphate and urea exports in an attempt to curb rising domestic prices that have ocurred due to higher worldwide demand. This is predicted to cause a further increase of fertilizer prices throughout the rest of this year, and prices will likely remain high heading into the 2022 season.

Michigan Farm Bureau's Theresa Sisung recommends that farmers talk to their fertilizer dealers now about purchasing options rather than waiting until next year. According to John Ezinga, vice president of agronomy at Michigan Agricultural Commodities Inc., fertilizer prices are sure to increase over the next several months with increased volatility. Is this a year to hold off on additional phosphorus inputs? Perhaps, particularly if your soil test levels are at or above 20 ppm Mehlich-3 (15 ppm Bray-P). If you have fields that are in the rotation to have tested, consider getting that done as soon as possible after harvest and having those discussions with your retailer soon.



U.S. fertilizer price changes 2016-2021 (top) and urea price changes 2019-2021 (bottom). Images courtesy of University of Illinois Farm Policy News.

NCR-SARE Farmer Rancher Grant Program on October 6

The North-Central Region Sustainable Agriculture Research and Education (NCR-SARE) host a Farmer Rancher Grant Program grant webinar on Wednesday, October 6th, from 5-6:30 pm EDT. This webinar will help guide participants through submitting a grant proposal to NCR-SARE's Farmer Rancher grant program. Join the webinar at https://umn.zoom.us/j/91714725738. Registration is not required. If you cannot connect using Zoom, you may dial in at 1-651-372-8299, but you will not be able to see the slides being shared.

I Can Help! If you are interested in a project that NCR-SARE is likely to consider and you would like help getting the proposal through the submission process—or if you would like help with the project overall—contact me (Eric Anderson, eander32@msu.edu) and I will be happy to help. Proposals are due on December 2, 2021, at 5pm EST.

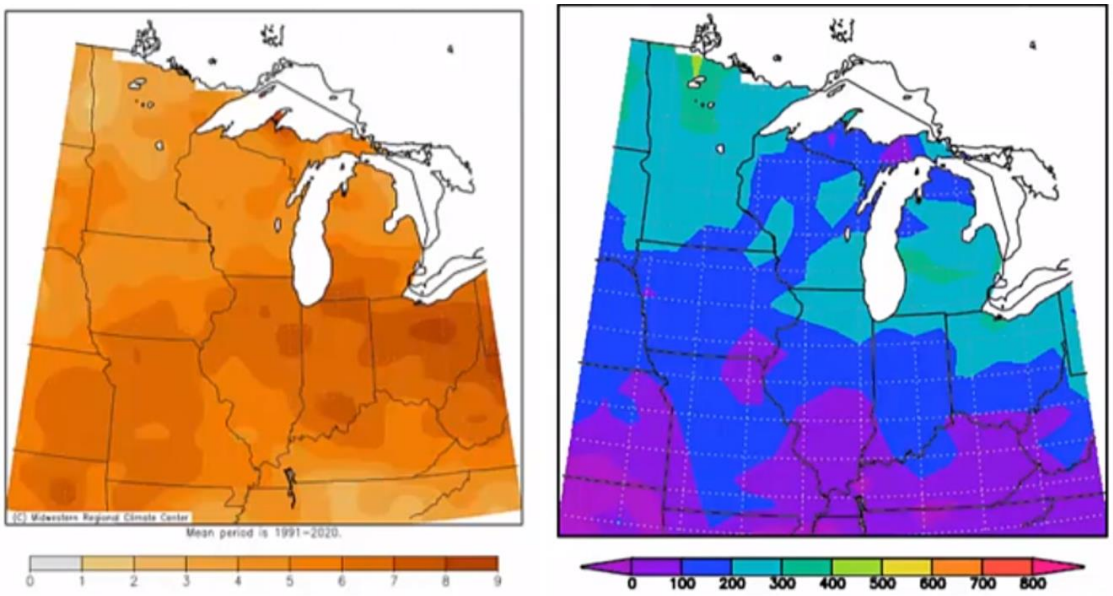
NCR-SARE's Farmer Rancher Grant Program is a competitive grants program for farmers and ranchers who want to explore sustainable solutions to problems through on-farm research, demonstration, and education projects. Proposals should show how farmers and ranchers plan to use their innovative ideas to explore sustainable agriculture options and share project results. Sustainable agriculture is good for the environment, profitable, and socially responsible.

Farmer Rancher grants are for ideas initiated by farmers and ranchers. They are offered as individual grants ($15,000 maximum) or team grants for two or more farmers/ranchers working together ($30,000 maximum). NCR-SARE expects to fund about 40 projects in the twelve-state North Central Region with this call. A total of approximately $720,000 is available for this program.

NCR-SARE is accepting online submissions for the Farmer Rancher Grant Program. You can find more information about the online submission system in the call for proposals; find the call for proposals online. Tutorials for using the online application system are available as well. Visit https://northcentral.sare.org/Grants/Apply-for-a-Grant/Farmer-Rancher-Grant/ for everything you need to know about NCR-SARE's Farmer Rancher Grant Program.

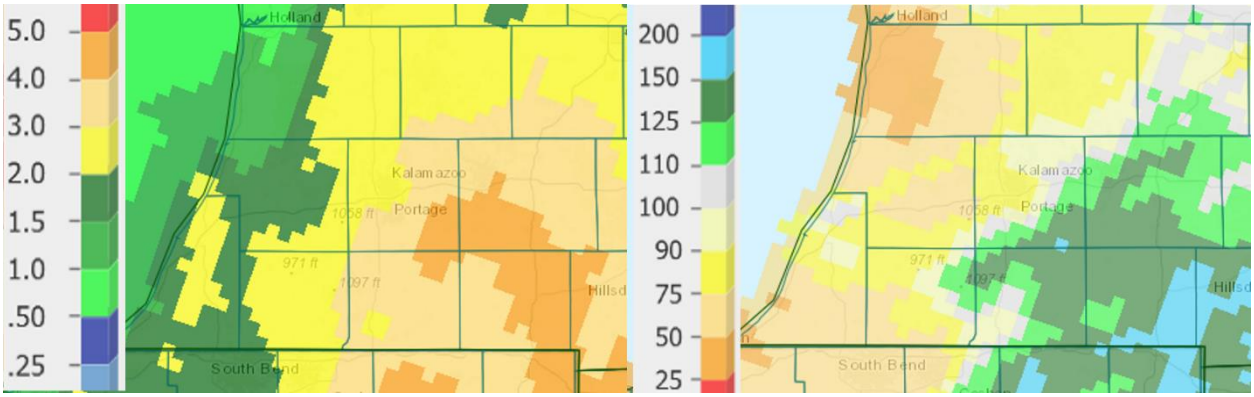
Weather and Crop/Pest Update

Temperatures were mostly above normal in September aside from unusually cool weather that followed storms Sept. 20-22. Temps will again dip following a weather system that will be passing through over the weekend but will rebound next week, resulting in above-normal temps for the first half of October. The long-lead outlook for the month predicts above-normal temperatures. Another La Niña winter is predicted with a high level of confidence (~80%), but it remains to be seen how these conditions will actually impact Michigan.

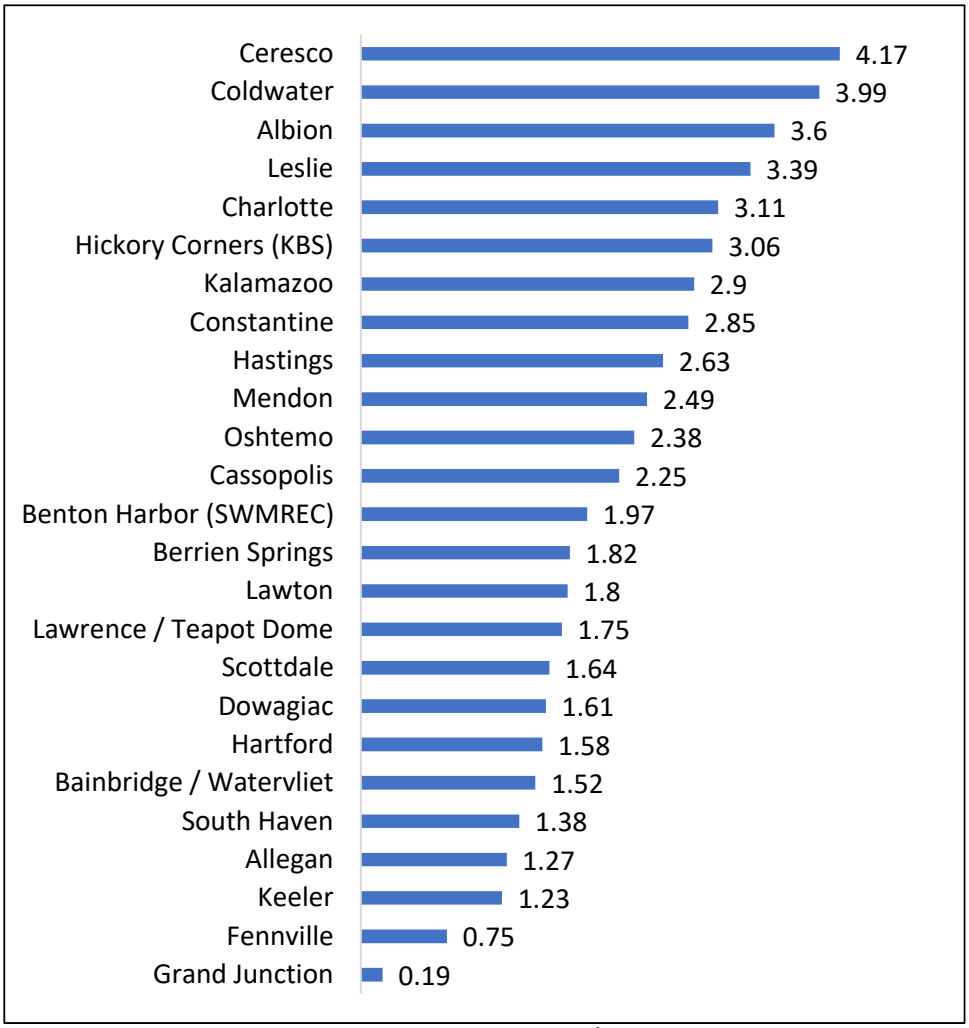


Mean temperature departure from normal from Sept 15-21 (left) and growing degree days (base 50) departure from normal for May 1 through Sept 21 (right). Graphics courtesy of Jeff Andresen.

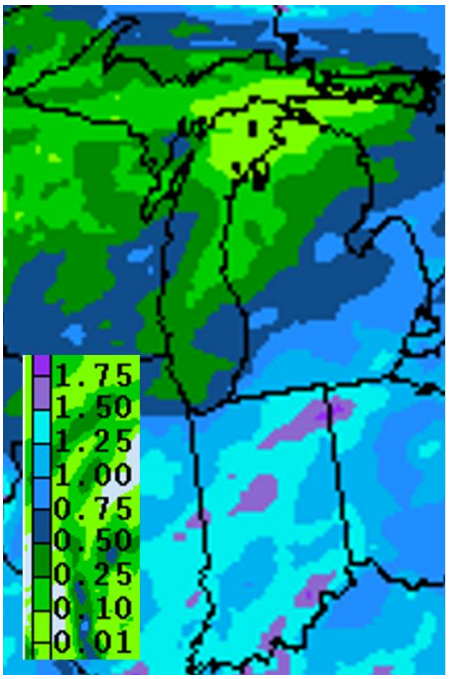
Precipitation the past two weeks was significant, particularly in the south-central region with rainfall totals of well over 3 inches, most of which fell Sept. 20-22. On heavier soils, that slowed harvest progress for several days after the storm system came through, but dry weather has prevailed since then. A weather system moving through the state this coming Saturday evening through Sunday will provide the next chance of widespread rain showers, but warm and dry weather will return for the first half of October. However, the October monthly outlook currently predicts wetter than normal conditions, so we will need to monitor that as the month progresses.



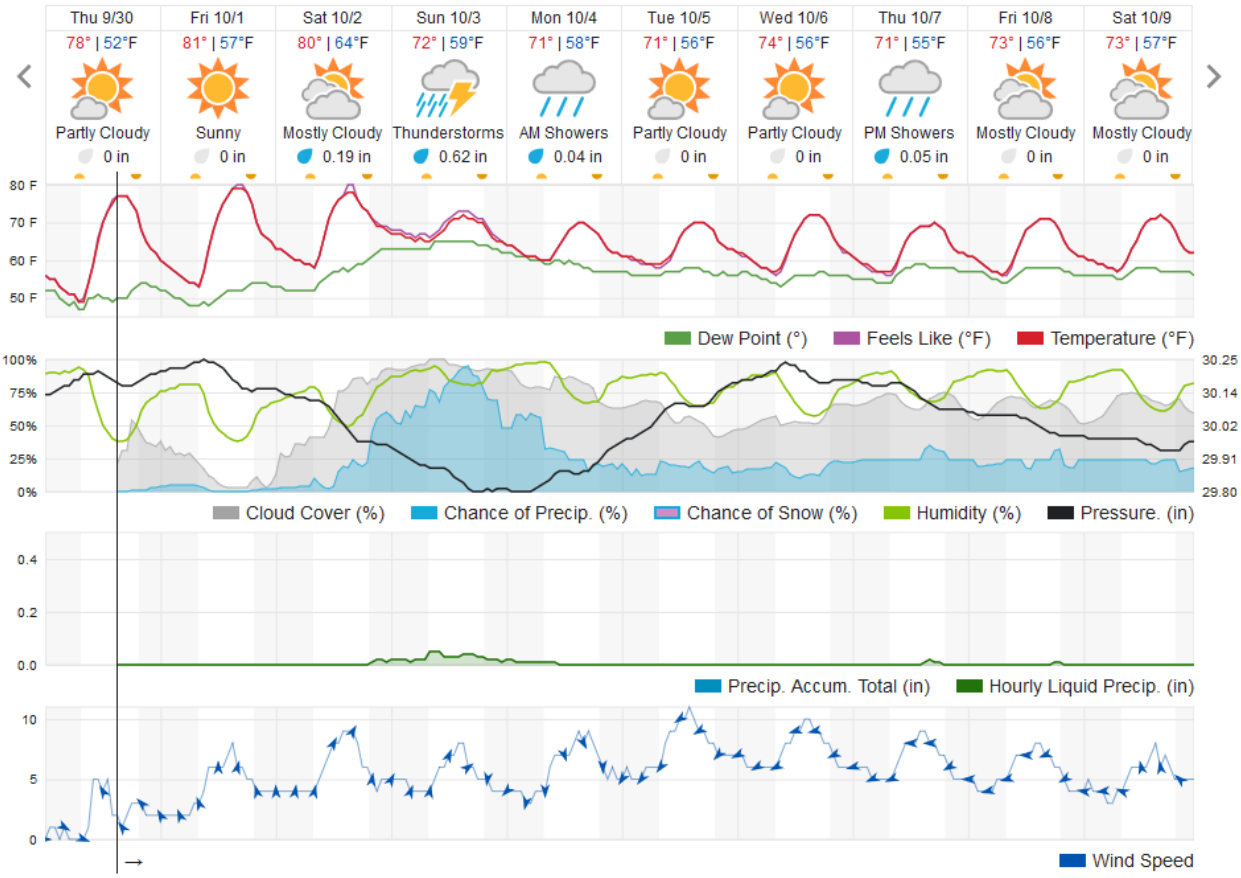
Precipitation totals for the past 14 days (left) and departure from normal for the past 30 days (right) as of September 30.



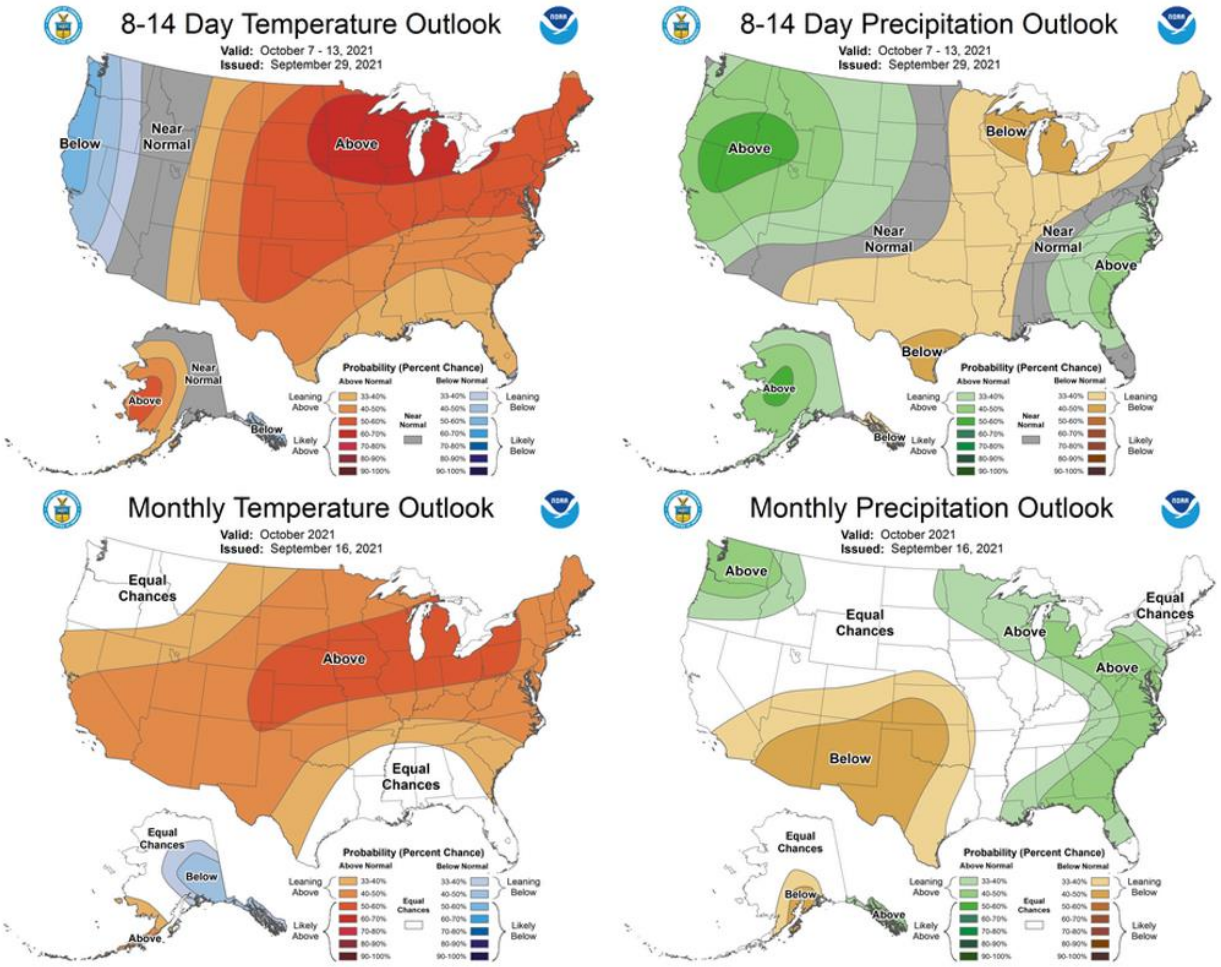
Rainfall totals over the past 14 days as of Sept. 30th as measured at Enviroweather stations in south central and southwest Michigan.



Precipitation forecast for October 1-8. Essentially all of the rain is predicted to fall Saturday night into Monday.



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



The nifty new format for the 8-14 day outlook (Oct 7-13) for temperature (top left) and precipitation (top right). The 6-10 day outlook (Oct 5-9) is essentially the same. The long-lead outlook for October temperature (lower left) and precipitation (lower right) shifts to above-normal precipitation according to numerical models.

Crops and Pests

Corn and **soybean** harvest has been in full swing for the past 1-2 weeks. As of last Friday, 7% of the corn and 12% of the soybean in the state had been harvested, but with dry conditions since last Saturday, much more progress has been made this week. Thus far reports for corn have been highly variable with yields ranging from well below-normal to above-normal. As predicted, tar spot has taken a toll on the crop this year in many fields, even those receiving a fungicide application. Test weights as low as 50-52 and as high as 54-56 pounds per bushel have been reported. This is likely due to a combination of dry conditions in some areas during grain fill and the effects of diseases such as tar spot.

Some fields appear to have completely senesced (turned brown) before black layer was reached. Bob Nielsen, Purdue's corn agronomist emeritus, says that corn grain can dry down under these conditions with percent moisture into the low 20's before black layer. In those cases where the plant has completely lost all photosynthetic capacity, the black layer can still form but it will take time, depending on how far along the crop was prior to total death. He warns that early harvest when the ears are still rubbery will likely result in increased kernel breakage (foreign matter) and in greater harvest losses with more volunteers in the field next year.

At the beginning of September, Michigan corn stocks were 32% lower than a year ago and soybean stocks were 37% lower. Hopefully this results in continued high grain prices heading into harvest and post-harvest season.

Winter wheat planting is proceeding according to historical norms with 17% planted and 4% emerged as of last week. Wheat in Michigan this year averaged 81 bushels per acre, up 6 bushels from last year according to USDA NASS statistics. Wheat was harvested from 560,000 acres with production at 45.4 million bushels, up 34 percent from 2020. Nationally, winter wheat production for 2021 was up 9% from the revised 2020 total of 1.17 billion bushels. The United States yield, at 50.2 bushels per acre, was down 0.7 bushel from 2020.

Calendar

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

Oct 12 **CFAP 2 Deadline.** USDA is updating the Coronavirus Food Assistance Program 2 (CFAP 2) for contract producers of eligible livestock and poultry and producers of specialty crops and other sales-based commodities. Newly eligible producers who need to submit a CFAP 2 application or producers who need to modify an existing one can do so by contacting their local FSA office. Producers can find their local FSA office by visiting farmers.gov/service-locator. Producers can also obtain one-on-one support with applications by calling 877-508-8364.

Oct 26 **Michigan Agricultural Credit Conference**. 8am-3pm. Big Ten C - Kellogg Hotel and Conference Center – MSU, 219 S Harrison, East Lansing. The Michigan Agricultural Credit Conference provides agricultural lenders, agribusinesses, policy-makers, and other interested parties across the state, with updates on the economy and agricultural industries in Michigan and outlooks for the future. Hear from experts about farmland markets, farm energy audits, commodity and dairy outlooks, and much more. Register online, cost is $130 per person, includes continental breakfast and lunch. Recordings will be available.

Nov 15 **Final Date to Report Fall-Seeded Crops.** Contact your local FSA office.

Dec 20 **Integrated Crop and Pest Management Update**. 9am-4pm. MSU Livestock Pavilion. Will be offered in-person and virtually, registration to open soon.

MSU Extension Digest Briefs

PUBLISHED ON SEPTEMBER 29, 2021

- MSU EXTENSION CO-HOSTS MICHIGAN BEEKEEPERS' ASSOCIATION VIRTUAL 2021 FALL CONFERENCE 10/22-10/23 - The Michigan Beekeepers' Association Fall Virtual Conference promises content sure to interest beekeepers, people considering beekeeping, honey bee enthusiasts, and hive product developers.

PUBLISHED ON SEPTEMBER 23, 2021

- RECOMMENDED PROCEDURES FOR A COMPLETE, TOP-TO-BOTTOM AND FRONT-TO-BACK COMBINE CLEANOUT - This factsheet lists the recommended steps required to perform a thorough, top-to-bottom and front-to-back combine cleanout.
- REDUCING SPREAD OF HERBICIDE-RESISTANT WEED SEED DURING HARVEST AND TILLAGE OPERATIONS - Recommendations for reducing the spread of herbicide-resistant weed seed this fall in Michigan soybeans.
- SPEEDING UP SOYBEAN HARVEST OPERATIONS - The advantages and disadvantages of various options for increasing soybean harvest efficiency.

PUBLISHED ON SEPTEMBER 20, 2021

- HOW TO USE THIS GUIDE - This publication is set up as a series of chapters with information on biology, damage, management recommendations, and insecticides related to insect pests in field crops in Michigan and Ohio.
  - INSECT GUIDE FOR FORAGES - This guide covers insecticide recommendations for forages.
  - INSECT GUIDE FOR SMALL GRAINS - This guide covers insecticide recommendations for small grains.
  - INSECT GUIDE FOR SOYBEANS - This guide covers insecticide recommendations for soybeans.
  - INSECT GUIDE FOR FIELD CORN - This guide covers insecticide recommendations for field corn.
- SOLAR WELL IRRIGATES SOF FIELDS IN COLLABORATION WITH BIOSYSTEMS ENGINEERING - A blog post from student crew member who merged his work at the SOF with an internship in his Biosystems Engineering major.
- PLANNING FOR IRRIGATION EXPANSION STARTS NOW - High commodity prices and short stints of drought have many producers thinking about expanding irrigation.

PUBLISHED ON SEPTEMBER 16, 2021

- TRACKING SOUTHERN RUST: A NEW DISEASE FOR MICHIGAN CORN GROWERS - Calling all citizen scientists! Scout your fields and submit samples to track this new disease in Michigan corn.
- HARVEST CONSIDERATIONS FOR OVERLY DRY SOYBEANS - Should producers harvest overly dry soybeans or wait for rain to increase moisture levels?
- FROGEYE LEAF SPOT SURVEY FORM - Along with the samples, please include this form filled out with information about the field where the sample was collected in your shipment.
- FUNGICIDE RESISTANCE IN FROGEYE LEAF SPOT OF SOYBEAN IN MICHIGAN- A new project from MSU researchers aims to better understand the distribution of resistance of frogeye leaf spot to strobilurin fungicides.
- RECOMMENDATIONS FOR HARVESTING LODGED SOYBEANS - Specific recommendations for reducing losses and improving efficiency when harvesting lodged soybeans.

PUBLISHED ON SEPTEMBER 15, 2021

- UPDATES ON THE ECONOMY, AGRICULTURAL INDUSTRIES AND OUTLOOKS FEATURED AT THE 2021 AG CREDIT CONFERENCE - Hear from experts on agricultural trade, macroeconomic outlook, grain, carbon, specialty crop, dairy and livestock markets, while networking with MSU faculty, MSU Extension educators, industry representatives, and others.

PUBLISHED ON SEPTEMBER 14, 2021

- MSU-LED TEAM RECEIVES NEARLY $2 MILLION EPA GRANT TO EXPLORE BIOSOLID TREATMENTS, EFFECTS OF CHEMICAL POLLUTANTS SUCH AS PFAS - The group will investigate the impact of current biosolid treatment methods used by wastewater treatment facilities on a variety of pollutants in soil, water and plants.

PUBLISHED ON SEPTEMBER 10, 2021

- INTRODUCTION TO GRAIN MARKETING FOR BEGINNING FARMERS BULLETIN AVAILABLE - A bulletin aimed at new farmers and those who are new to grain marketing.
- USDA RELEASES 2021 FARMLAND CASH RENT VALUES - Land rent prices vary tremendously from county to county.

PUBLISHED ON SEPTEMBER 7, 2021

- USDA FARMLAND CASH RENTAL RATES - Rental rates per county taken from USDA's National Agricultural Statistics Services
- BULLETIN E-3416 INTRODUCTION TO GRAIN MARKETING - Introductory bulletin on grain markets with educational information on marketing tools and strategies.

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