

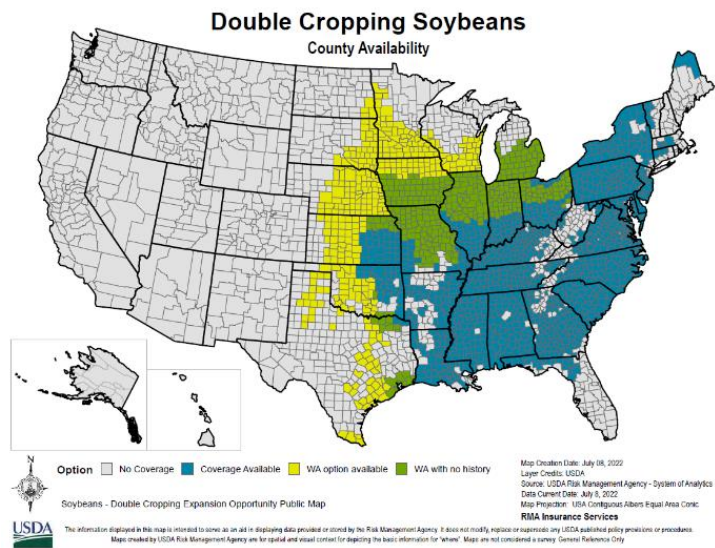
## Southwest Michigan Field Crops Updates September 15, 2022

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.

### Double Cropping Soybeans in Southern Michigan?

Earlier this summer USDA’s Risk Management Agency (RMA) issued an update on regions of the country where double-cropped soybeans could be feasibly raised and insured under federal crop protection. This was in part in response to the food shortage caused by recent world events, but soybean growers have wanted this approval long before now. The southern half of the Lower Peninsula of Michigan (shown in green) is now eligible with no historical yield data which is now allowable under the program.

But is double-cropping really an option in Michigan? Can soybeans be grown after winter wheat reliably and profitably? That is one of the topics to be discussed at the Michiana Irrigated Corn and Soybean Workshop that is held annually in Shipshewana in cooperation with Purdue Extension. The planning committee has begun working on this program which is tentatively being scheduled for the first week of March. Watch for more details about this program as we head into winter.



### Combine Ground Speed Soybean Trial Cooperator Needed

The Michigan Soybean Committee conducts numerous on-farm trials each year. Several are being conducted on farms in southwest and south-central Michigan, and these were initiated this spring. An additional trial is being run this fall related to the ground speed of the combine with two treatments—ground speed of 3.5 mph and 5.5 mph—with 6 replicated strips for each treatment. The strips should be at least 750 feet long and preferably 1000+ feet. We are looking for a cooperator who would like to learn a bit about this topic and who has a field and harvest setup that would meet the following criteria.

The rows must run across (perpendicular) to tile lines, if applicable

Site should have relatively uniform and productive soils and the soybeans are not lodged

- This trial should be conducted using the automatic reel speed control on the combine. This ensures that the reel speed to ground speed ratio remains constant as ground speed changes reducing the potential for shatter losses to occur.

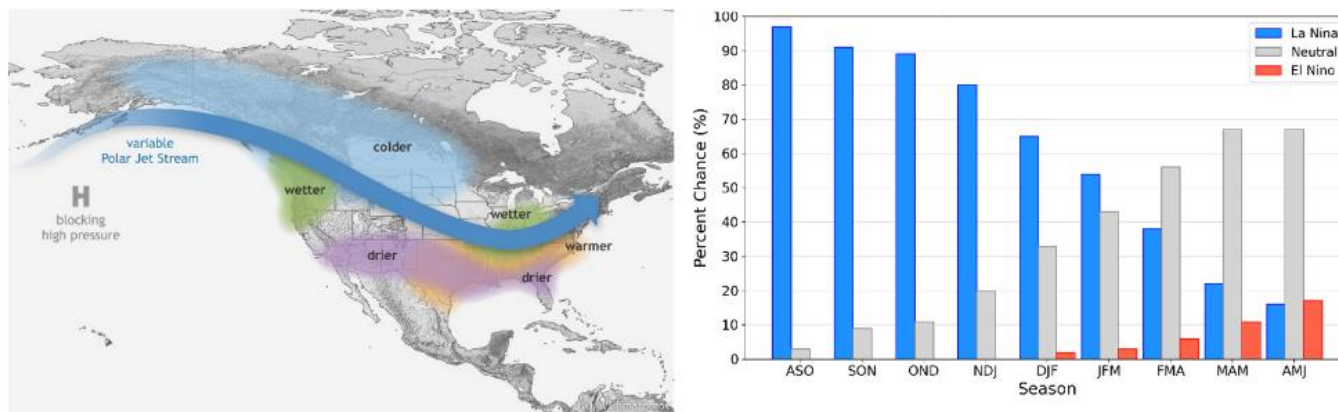
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- To capture accurate yields from each ground speed, the yield monitor must be carefully calibrated and the calibration should include speeds of at least 3.5 mph, 4.5 mph and 5.5 mph. Calibrating at speeds of 3 mph, 4 mph, 5 mph and 6 mph will produce more accurate results.

No other data or additional harvest procedures will be needed as long as the yield monitor has been properly calibrated. If you would like to participate in this study, please contact me ([eander32@msu.edu](mailto:eander32@msu.edu) or 269-359-0565).  
UW-Madison Soil and Forage Lab – 4702 University Ave, Madison, WI 53705

## La Niña to Persist Through Winter

Ocean and atmospheric conditions tell us that La Niña—the cool phase of the El Niño-Southern Oscillation (ENSO) climate pattern—currently reigns in the tropical Pacific. It's looking very likely that the long-predicted third consecutive La Niña winter will happen, with a 91% chance of La Niña through September–November and an 80% chance through the early winter (November–January) which is a very high level of confidence. La Niña winters theoretically tend to be wetter in Michigan. The caveat from NOAA: “Of course, nothing is guaranteed with weather and climate—ENSO merely ‘tilts the odds’ toward certain patterns.”



Typical winter La Niña weather pattern (left) - wetter (and snowier) conditions for parts of the northern tier of the US. The official ENSO probabilities (right) show La Niña persisting at least through the end of the calendar year.

## Check Your Number of Michigan Pesticide Credits Online

Many of you have asked me how you can find out how many pesticide recertification (RUP) credits you have earned. MDARD has now made it possible to see this information online so that you don't have to call or email someone and wait for a response. It is not quite what I had envisioned, but it is a step in the right direction. The ideal would be that you would enter a portal, input your name and license number, and you would see your total credits and a list of events at which you earned those credits—that way you could verify whether you earned credits from a given program you know you have attended.

If you visit MDARD's [Pesticide Licensing & Certification website](#), look under the Recent Additions section and click on Pesticide Applicator Credit Report, you will see a pdf of presumably every pesticide license holder in the state, what certification type you have, the expiration date, and the current number of credits you have earned. This will assumedly be updated periodically. As always, I highly recommend that you keep track of your credits earned using MDARD's [seminar attendance record form](#).

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LAST NAME, FIRST NAME, INITIAL, SUFFIX	CITY	STATE	ZIP	CAT	COUNT OF CREDITS	CERT. TYPE	EXPIRATION DATE
ANDERSON, BRETT, A,	SPARTA	MI	49345	CO	24	P	12/31/2022
ANDERSON, CHARITY, B,	WYOMING	MI	49509	CO	10	C	12/31/2022
ANDERSON, CHARITY, B,	WYOMING	MI	49509	3A	16	C	12/31/2022
ANDERSON, CODY, A,	MT. PLEASANT	MI	48858	CO	4	C	12/31/2023
ANDERSON, DEAN, J,	SPARTA	MI	49345	CO	51	P	12/31/2022
ANDERSON, ERIC, J,	MARLETTE	MI	48453	CO	16	P	12/31/2022
ANDERSON, ERIC, K,	VICKSBURG	MI	49097	CO	4	C	12/31/2022
ANDERSON, ERIC, K,	VICKSBURG	MI	49097	1B	2	C	12/31/2022
ANDERSON, HAROLD, F,	FOWLerville	MI	48836	CO	20	P	12/31/2022
ANDERSON, JAMES, ,	GRAND BLANC	MI	48439	7A	8	C	12/31/2023
ANDERSON, MARK, A	CADIZ	MI	48801	CO	10	C	12/31/2022

## Online Encyclopedia Articles Cover Crop Deficiencies, Injuries, and More

Stay informed with new encyclopedia articles recently added to the [Crop Protection Network Library](#) covering some of the most prevalent soybean disorders. These new publications provide overview and resources for weather injury, nutrient deficiencies, and soil issues that can cause significant yield loss and puts crops at risk for other diseases. Crops include corn, soybean, small grains and alfalfa, and the article categories include diseases, disorders, insects and weeds. Here are just a few of the topics included.

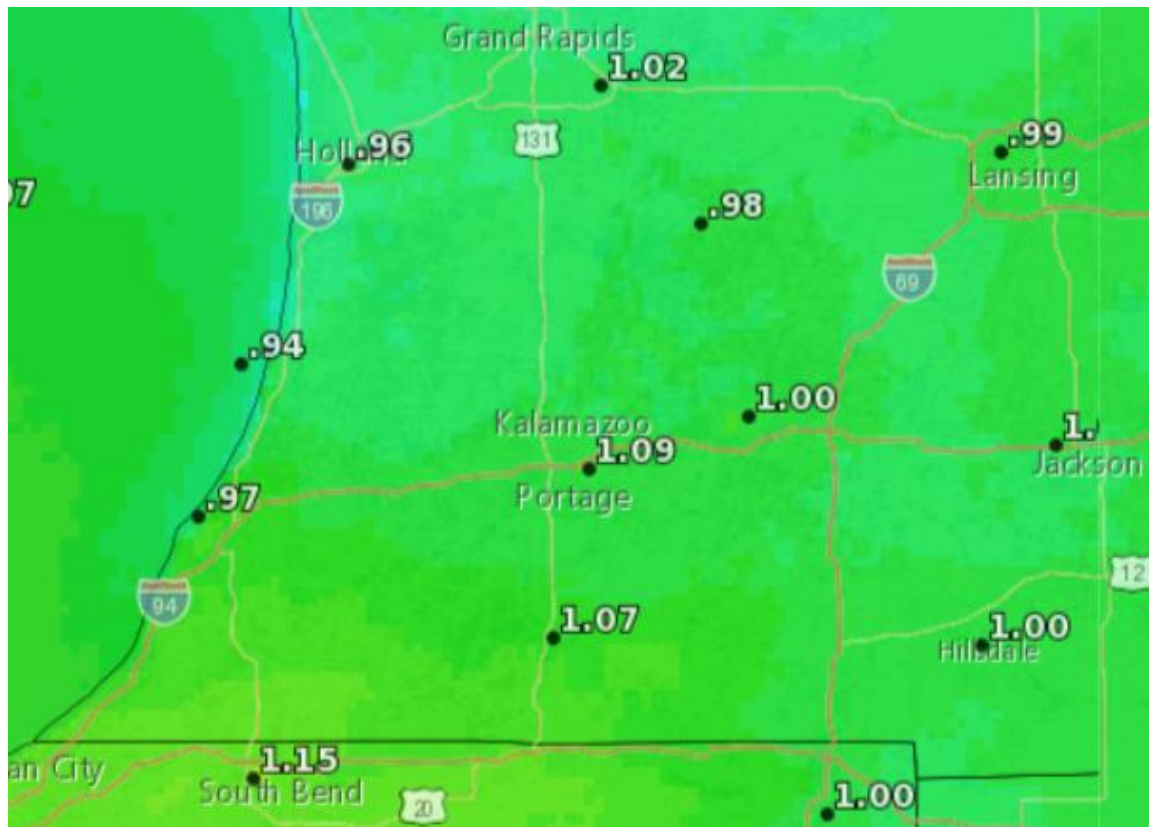
- Hail Injury in Soybean
- Purple Seed Stain in Soybean
- Potassium (K) Deficiency in Soybean
- Fertilizer Injury (UAN) of Soybean
- Common Smut in Corn
- Gibberella Ear Rot fo Corn
- Loose Smut of Wheat
- Alfalfa Weevil in Alfalfa

## Weather and Crop Update

### Weather

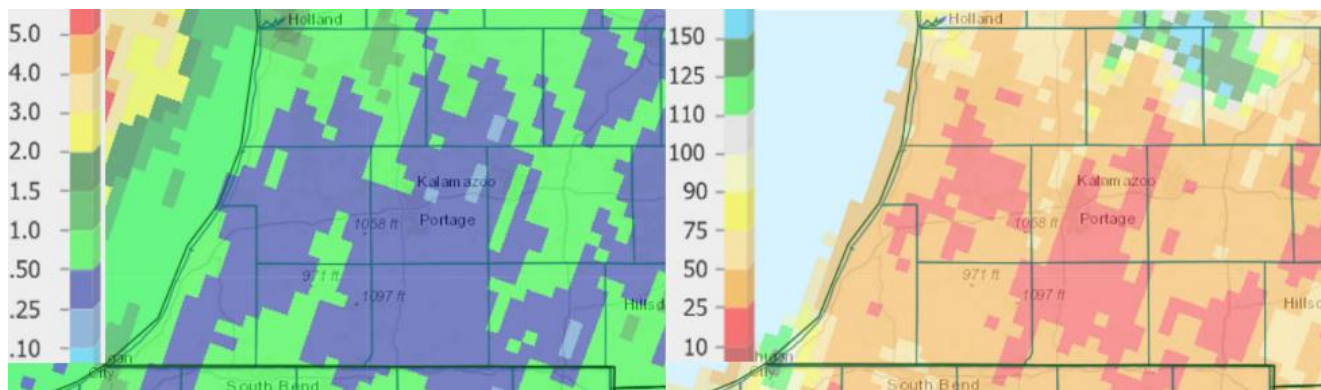
Temperatures were normal or 1-2 degrees below normal in the extreme southwest corner of the state with only 95 growing degree days (GDD, base 50 for corn and soybean) this past week. The forecasted reference evapotranspiration (FRET) rate is roughly 1.0-1.1 inch for the week ending September 21 as temperatures warm up again. The forecast predicts the addition of another 140 GDD<sub>50</sub> in the coming week. Both the 6-10 day and 8-14 day outlooks call for above-normal temperatures during the last week of September.

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Weekly forecasted reference evapotranspiration rate for the week ending September 21.

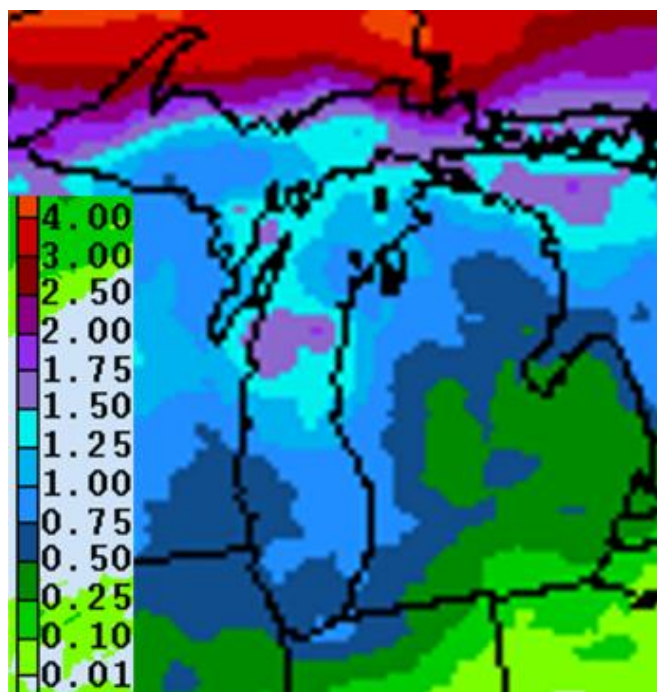
Precipitation was low once again in most parts of the region this past week with most areas receiving less than half an inch from the weather system last weekend. Rainfall has been 1-2 inches below normal over the past two weeks with most areas reporting 50-75% less rainfall than normal. The medium-range outlooks call for a slight chance of below-normal precipitation during the last week of September.



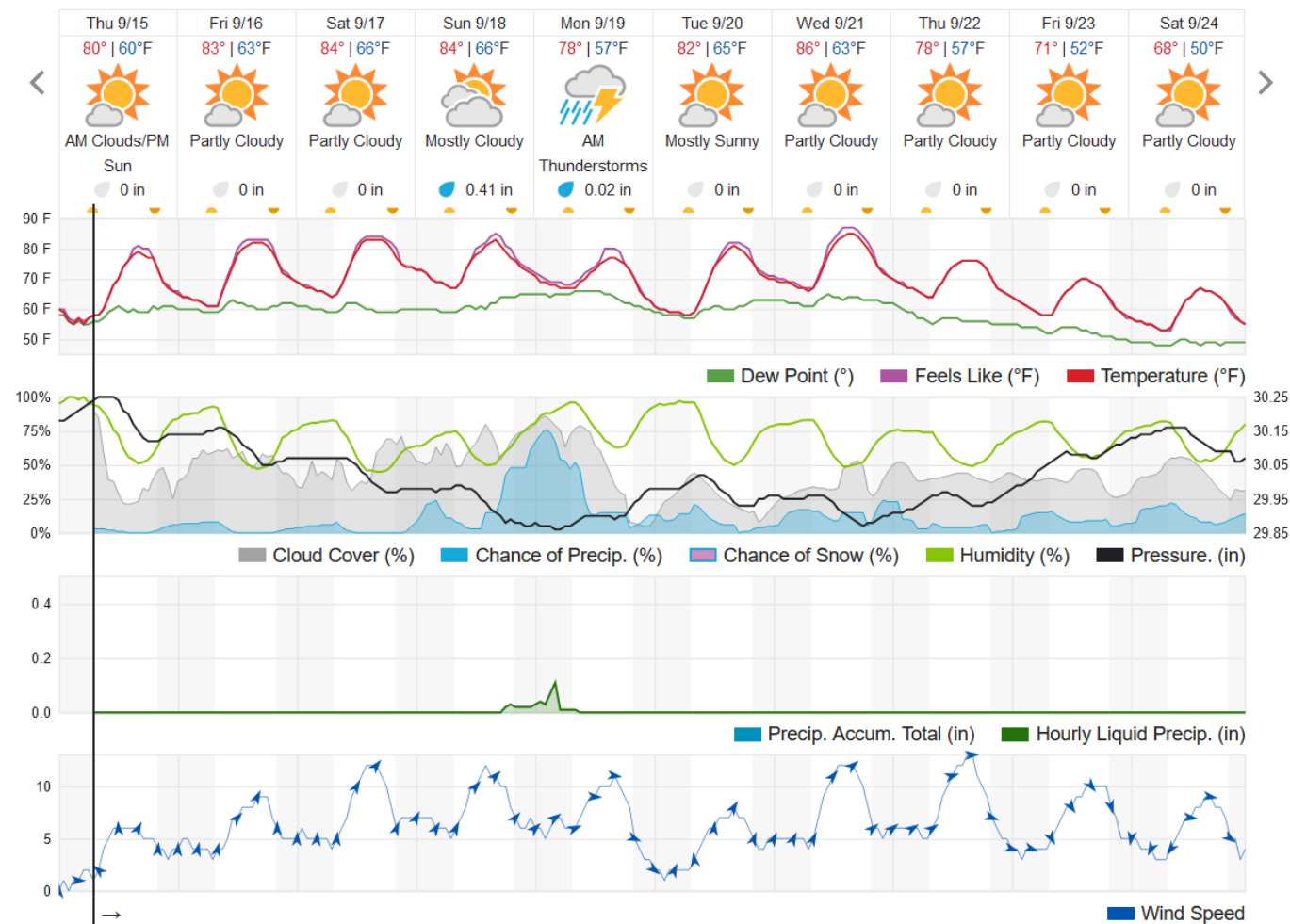
Precipitation totals from the past 7 days (left) and percent of normal for the past 14 days (right) as of September 14.



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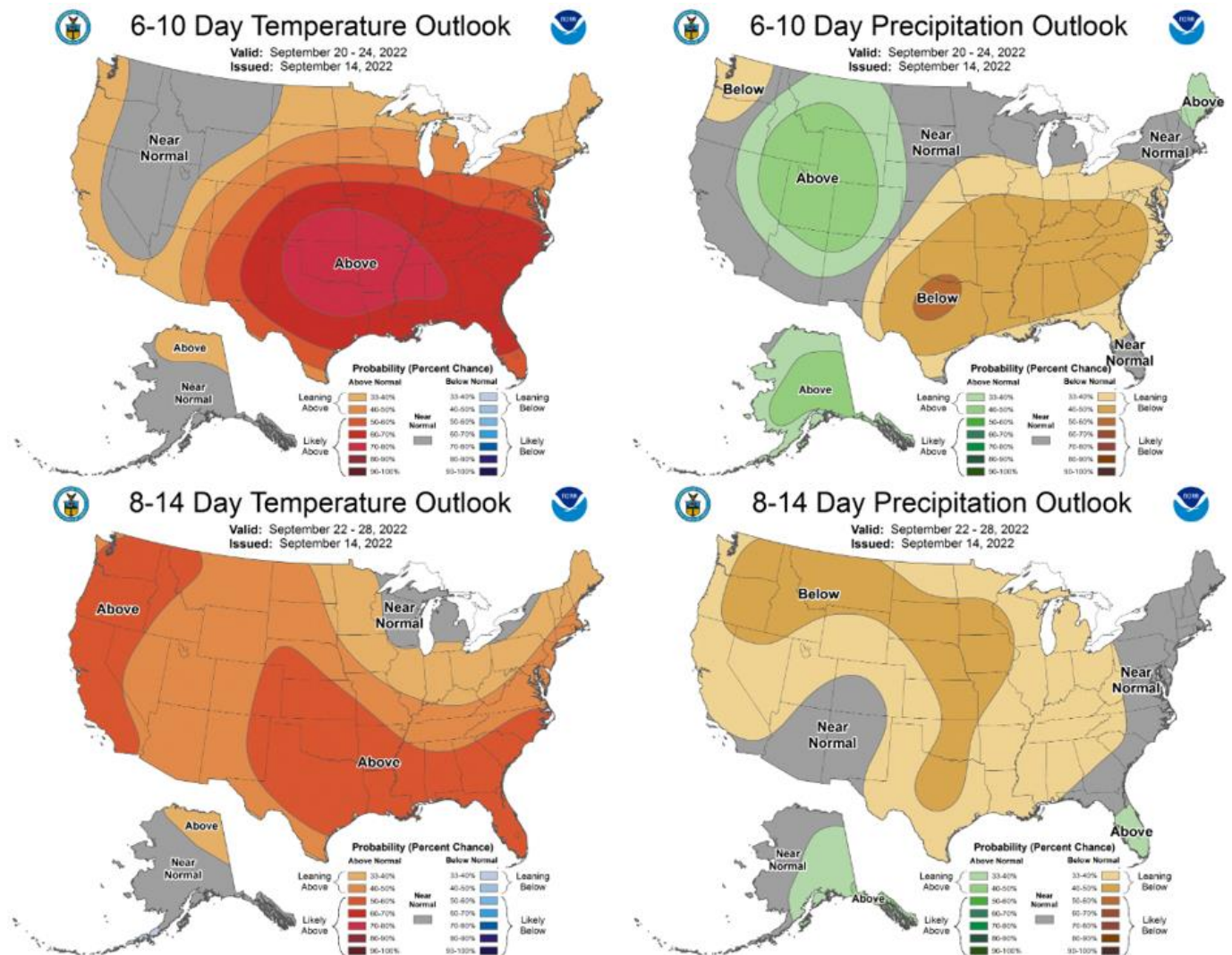


Precipitation forecast for September 15-22.



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

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The 6-10 day (Sept 20-24, top) and 8-14 day (Sept 22-26, bottom) outlooks for temperature (left) and precipitation (right).

## Crops and Pests

**Corn** and **soybean** in many fields are now entering the final reproductive stages as we get closer to physiological maturity. Seed corn as well as potato harvest is well underway in the region. Commercial corn in early-planted and earlier relative maturity groups have reached full dent already with the milk line having moved all the way to the tip of the kernels. Corn requires an additional ~250 GDD<sub>50</sub> beyond the dent stage to reach physiological maturity, aka black layer, when you will be able to scrape the kernel tips off and see the black layer. Given the current mid-range forecasts, we should expect to accumulate that many GDD<sub>50</sub> by the end of the month. Moisture level in corn at black layer is typically 25-40% with the average being around 30%. Under the right conditions—high temperature, high wind, low humidity—corn can lose 0.75-1.0% moisture per day.

Soybean in earlier maturity group fields has reached beginning maturity (R7, one normal pod on the main stem has reached its mature pod color). Soybean that has reached full maturity (R8, 95% of the pods have reached their full mature color) will be around 35% moisture, and according to Purdue University soybean agronomist Shaun Casteel, it will only take 5-10 days to dry down to ~15% moisture after that.

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Soybean at beginning maturity in a field with 2.0 maturity group soybeans. Photo courtesy of Eric Anderson.

**Irrigation.** This week reference evapotranspiration is about 1.0 inch. The crop water use coefficient (Kc) for corn falls to 0.6 from full dent onward and soybean Kc falls from 1.0 at beginning maturity to 0.2. Recommend 0.5-inch applications, pray for rain, and be happy if rain met the need. To learn more about basic checkbook irrigation scheduling and crop water use by growth stage, view the [Soil Water Balance Worksheet resource](#).

With the low rainfall in some areas from late August into September, this is a good time to:

- Water up your cover crop
- Flow test well and measure draw down and recovery
- Prepare annual reporting significant volume water withdrawals
- Good yield monitoring for irrigation decision and irrigation trouble shooting

As you head into harvest season and beyond, consider these recommendations for [irrigation planning](#).

- Find a water supply 5 gpm/irrigated acre
- Investigate cropping options, land rent options, contract feed production, contract crops
- Investigate future surface water withdrawal site, pump, measure, water test
- Think about your future goal for the farm.

Contact MSU and Purdue Extension irrigation educator Lyndon Kelley ([Kelleyl@msu.edu](mailto:Kelleyl@msu.edu), 269-535-0343) for help with irrigation questions.

**Checking for weed resistance** was the topic of this week's [MSU Extension Field Crops Virtual Breakfast](#) with MSU weed diagnostician Erin Hill. Dr. Hill explained that there are reasons other than herbicide resistance for why they don't die when sprayed including issues with application equipment or rates used, weeds being too mature, environmental stress, and others.

Hill described a pilot program being conducted by Dr. Eric Patterson and his grad student Juliano Sulzback on evaluating a molecular test for weed resistance in several key weed species including common and giant ragweed, Palmer amaranth, waterhemp, and horseweed (marestail). The initial findings are promising, although they are also learning key steps in the protocol to streamline the process in order to offer it to the general public. This molecular screening would greatly reduce the time needed to check for resistance via the standard bioassay process used currently.

Hill shared about several tips and new findings during her presentation including the following:

- ALS-resistant johnsongrass was identified (accidentally) in St. Joseph County this year
- When submitting samples, be sure any plants you send are females with seeds
- Make sure the seeds are mature before collecting and sending—they typically turn from green to brown or black



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- Check out the [Tips for Collecting Weed Seeds](#) article for more details on how to collect and submit samples
- Visit the [Michigan State University Plant & Pest Diagnostics](#) website for more information

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](#).

## Calendar

Titles are clickable links to online content when highlighted and underlined

- Sept 15** [Virtual Breakfast – Herbicide Resistance? Now is the Time to Check! with Erin Hill](#). 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.
- Sept 22** [Virtual Breakfast – Fall Weed Control with Christy Sprague](#). 7-8am. Register online once for the entire series.
- Dec 19** [Integrated Crop and Pest Management Update](#). This event will be held as a hybrid again this year at the MSU Livestock Pavilion and online. Watch for more details coming soon.

## MSU Extension Digest Briefs

[START PLANNING YOUR NUTRIENT NEEDS NOW](#) - [Fertilizer Planning Resources Available from MSU Extension](#). PUBLISHED ON SEPTEMBER 12, 2022

[ALTERNATIVE PLANTING STRATEGIES FOR MAXIMIZING YIELD POTENTIAL IN WINTER WHEAT](#) - [Farmers are looking for ways to accelerate planting of winter wheat to reduce weather-related planting delays. Meanwhile, a transition to precision planting in narrow rows may improve yields.](#) PUBLISHED ON SEPTEMBER 8, 2022

[GRANTS AVAILABLE FOR SUSTAINABLE AGRICULTURE RESEARCH AND EDUCATION](#) - [SARE annual grant request issued.](#) PUBLISHED ON SEPTEMBER 6, 2022

[PLANTING THE 2023 WHEAT CROP](#) - [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.](#) PUBLISHED ON SEPTEMBER 6, 2022

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