

Southwest Michigan Field Crops Updates October 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.

USDA Announces New Opportunities to Improve Nutrient Management

USDA welcomed the passage of the Inflation Reduction Act, which will deliver \$19.5 billion in new conservation funding to support climate-smart agriculture. This historic funding will bolster the new steps that USDA's Natural Resources Conservation Service (NRCS) announced to improve opportunities for nutrient management. NRCS will target funding, increasing program flexibilities, launch a new outreach campaign to promote nutrient management's economic benefits, in addition to expanding partnerships to develop nutrient management plans. This is part of USDA's broader effort to address future fertilizer availability and cost challenges for U.S. producers.

Through USDA's conservation programs, America's farmers and ranchers will have streamlined opportunities to improve their nutrient management planning, which provides conservation benefits while mitigating the impacts of supply chain disruptions and increased input costs.

Specifically, NRCS efforts include:

- **Streamlined Nutrient Management Initiative** - A streamlined initiative will incentivize nutrient management activities through key conservation programs, including the Environmental Quality Incentives Program (EQIP), EQIP Conservation Incentive Contracts, and the Conservation Stewardship Program. The initiative will use a ranking threshold for pre-approval and include a streamlined and expedited application process, targeted outreach to small-scale and historically underserved producers, and coordination with FSA to streamline the program eligibility process for producers new to USDA. In addition to otherwise available funding at the state level, NRCS is targeting additional FY23 funds for nutrient management. NRCS is also announcing a streamlined funding opportunity for up to \$40 million in nutrient management grant opportunities through the Regional Conservation Partnership Program (RCPP).
- **Nutrient Management Economic Benefits Outreach Campaign** - A new outreach campaign will highlight the economic benefits of nutrient management planning for farmers. The potential net savings to farmers who adopt a nutrient management plan is estimated to be an average of \$30 per acre for cropland. It is estimated that there are 89 million acres of cropland (28% of total U.S. cropland) currently exceeding the nitrogen loss threshold; and if all those acres implemented a nutrient management plan, the average net savings would be \$2.6 billion. NRCS staff develop nutrient management plans to help producers use nutrient resources effectively and efficiently to adequately supply soils and plants with necessary nutrients while minimizing transport of nutrients to ground and surface waters. Producer information is available at farmers.gov/global-food-security.
- **Expanded Nutrient Management Support through Technical Service Providers Streamlining and Pilots** - New agreements with key partners who have existing capacity to support nutrient management planning and technical assistance will expand benefits and serve as a model to continue streamlining the certification process for Technical Service Providers (TSPs). NRCS is also developing new opportunities to support partner training frameworks, nutrient management outreach and education, and new incentive payments through TSP partners for nutrient management planning and implementation.

Alongside the Bipartisan Infrastructure Act and American Rescue Plan, the Inflation Reduction Act provides once-in-a-generation investment in rural communities and their infrastructure needs, while also responding to the climate

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crisis. The bill invests \$40 billion into existing USDA programs promoting climate smart agriculture, rural energy efficiency and reliability, forest conservation, and more.

Approximately \$20 billion of this investment will support conservation programs that are oversubscribed, meaning that more producers will have access to conservation assistance that will support healthier land and water, improve the resilience of their operations, support their bottom line, and combat climate change. This includes:

- \$8.45 billion for EQIP
- \$4.95 billion for the Regional Conservation Partnership Program (RCPP)
- \$3.25 billion for the Conservation Stewardship Program (CSP)
- \$1.4 billion for the Agricultural Conservation Easement Program (ACEP)

For more information and resources for nutrient management planning, visit farmers.gov/global-food-insecurity. Contact NRCS at your [local USDA Service Center](#) to get assistance with a nutrient management plan for your land.

Required Paraquat Training for Certified Applicators

As required by EPA's [Paraquat Dichloride Human Health Mitigation Decision](#) and amended paraquat dichloride (a.k.a. paraquat) product labels, certified applicators must successfully complete an EPA-approved training program before mixing, loading, and/or applying paraquat. The training provides important information about paraquat's toxicity, new label requirements and restrictions, and the consequences of misuse.

The [EPA-approved training module can be accessed here](#). This training was developed by paraquat manufacturers as part of EPA's 2016 risk mitigation requirements and has been approved by EPA. This is the only training that is required beyond the pesticide applicator license aside from the training required for those making applications of registered dicamba products (Xtendimax, Engenia, and Tavium).

Why are there additional training requirements to use paraquat?

Since 2000, there have been 17 deaths – three involving children – caused by accidental ingestion of paraquat. These cases have resulted from the pesticide being illegally transferred to beverage containers and later mistaken for a drink and consumed. A single sip can be fatal. In addition to the deaths by accidental ingestion, since 2000 there have been three deaths and many severe injuries caused by the pesticide getting onto the skin or into the eyes of those working with the herbicide. To prevent these tragedies, EPA is requiring this special training for certified applicators who use paraquat. One of the purposes of the paraquat training is to reinforce that paraquat must not be transferred to or stored in improper containers.

Who is required to take this training?

Any person who intends to use paraquat must be a certified applicator and is required to take the training. "Use" includes pre-application activities involving mixing and loading the pesticide; applying the pesticide; and other pesticide-related activities, including, but not limited to, transporting or storing opened pesticide containers, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other paraquat-containing materials.

Who is permitted to use paraquat?

The use of paraquat, which is a restricted use pesticide, is restricted to [certified pesticide applicators only](#); noncertified persons working under the supervision of a certified applicator are prohibited from using paraquat, including mixing, loading, applying the pesticide, and other pesticide-related activities.

Does AMS Color Influence Weed Control With Glyphosate and Glufosinate?

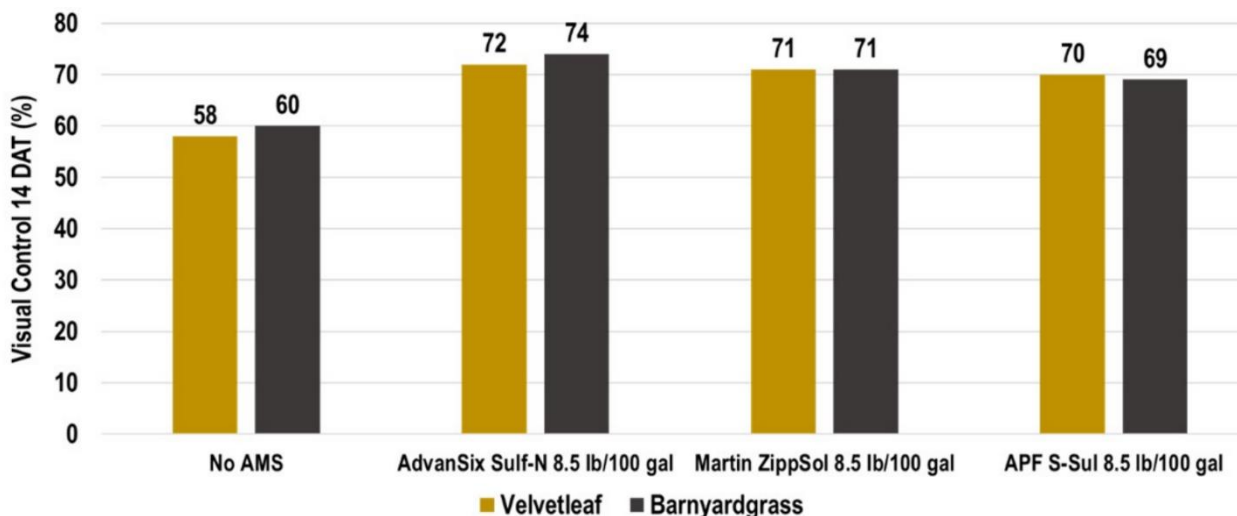
Purdue weeds specialists and staff Bill Johnson, Julie Young and Marcelo Zimmer wrote an [article with the above title](#) about a study they had conducted on the efficacy of different brands of ammonium sulfate (AMS) as a spray adjuvant. It is recommended to add AMS to weak-acid herbicides such as glyphosate and glufosinate, particularly

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when using a hard water source for the carrier. There has been some speculation that since different sources of AMS had a different color and different production process, there may be differences in efficacy as an adjuvant, and some companies have included claims in marketing materials. So, the researchers conducted a basic greenhouse study to measure any differences in efficacy. The following is an excerpt from that article.

“We conducted a greenhouse trial to compare one of the off-colored AMS products (AdvanSix AMS) with commonly used white AMS products (Martin ZippSol and APF S-Sul). We planted barnyardgrass and velvetleaf in greenhouse pots, allowed the weeds to grow to around 6 inches in height, and applied herbicide treatments with a greenhouse track sprayer. The reason we use barnyardgrass and velvetleaf in adjuvant trials, is that these weeds are somewhat difficult to control with both glyphosate and glufosinate, and we have learned that these weed species provide reliable responses to adjuvants in the hundreds of adjuvant trials that we have done over the last several years. In this trial we evaluated control of both barnyardgrass and velvetleaf with glyphosate (Roundup PowerMax), velvetleaf control with glufosinate (Liberty).

“In conclusion, the results of this greenhouse experiment indicate that there are really no differences in the control of barnyardgrass and velvetleaf with glyphosate, or velvetleaf control with glufosinate with these three sources of AMS. The off color AMS product worked just as well as the white color AMS product in these trials.”



Influence of AMS source on weed control with glyphosate. Roundup PowerMax was applied at 15 GPA of 800 ppm hard water.

Food Plots Bring a Variety of Wildlife to Farms

Food for wildlife can be scarce during the winter, and many landowners are using food plots to provide food for them during the colder months. A food plot adds plant diversity, food and cover to the landscape. It can be particularly useful for providing a winter or early spring food source. Where fall plowing buries the majority of crop residue, food plots are an excellent choice to encourage wildlife survival. USDA's Natural Resources Conservation Service works with many landowners to provide technical assistance, and in some cases financial assistance, to establish food plots on their land.

Legume-based, perennial food plots, for instance, may supplement the energy needs for big game species, such as white-tail deer, during times of the year when there are few available sources to eat. In most cases, food plots are also tied to planting pollinator habitat, native warm-season grasses and tree planting for cover.

The different components of a wildlife management plan help tie all the missing pieces of the puzzle together for a landowner, helping to meet their individual farm goals for wildlife management. As an added benefit, these new habitat acres have a ripple effect, bringing more and more wildlife to the surrounding areas.

For more information, contact your St. Joseph/Kalamazoo County USDA Service Center at 269-467-6336 or visit www.nrcs.usda.gov.

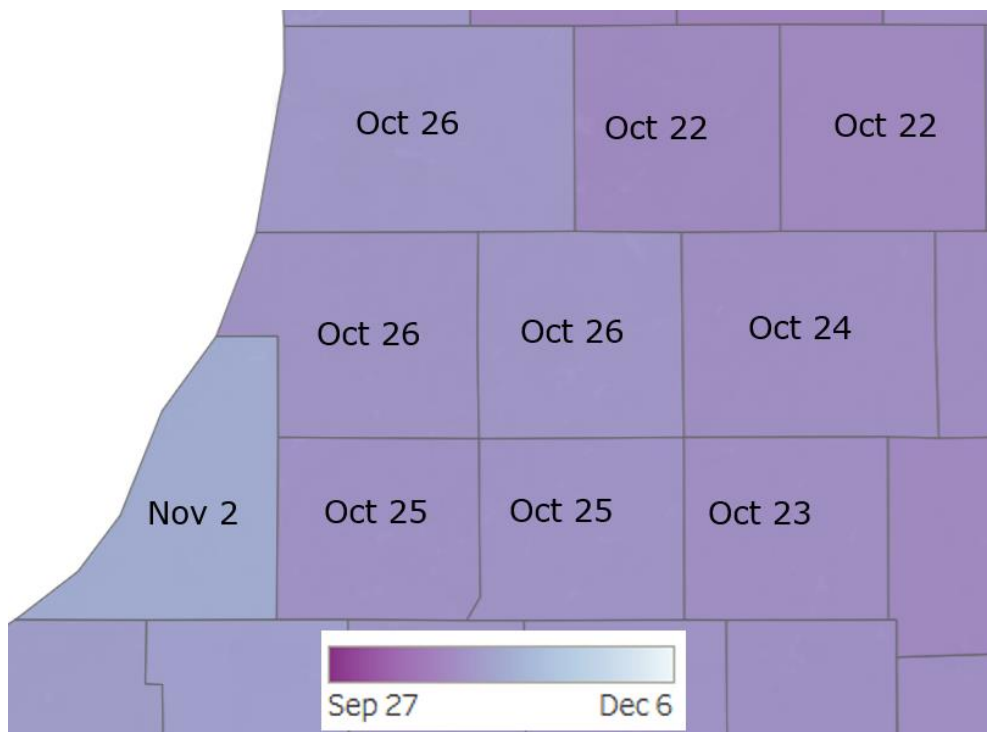
St. Joseph County 4-H Program Coordinator Starting October 24

For those in St. Joseph County, you may know that Autumn Converse, our previous 4-H coordinator, took a job this spring as the 4-H Livestock & Veterinary Science Educator with MSU on campus. That meant that we had to rely heavily on volunteers to ensure that the Fair last month was successful. A new program coordinator, Kayla Mitchell, will be starting on October 24. I will include a brief interview with Kayla later this year to introduce you to her.

Weather and Crop Update

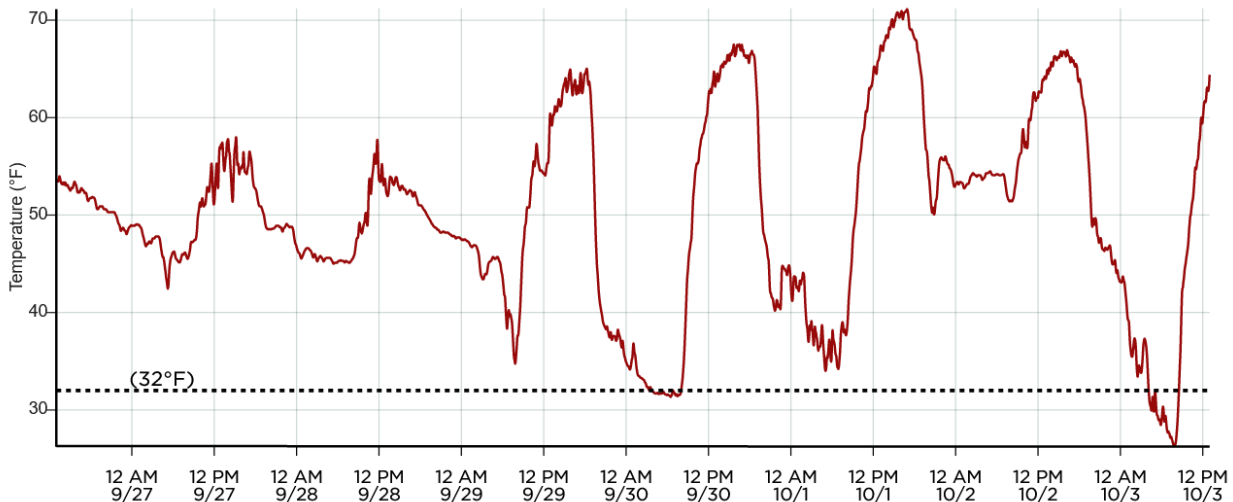
Weather

Temperatures were below normal with only 34 growing degree days (GDD, base 50 for corn and soybean) this past week with only another 30 GDD₅₀ expected in the coming week. The average first frost date for most of the region is not for another few weeks. However, some areas have had below-freezing temps at least once with Kalamazoo reaching 26 degrees early Monday morning. Both the 6-10 day and 8-14 day outlooks call for below-normal temperatures through the middle of October.



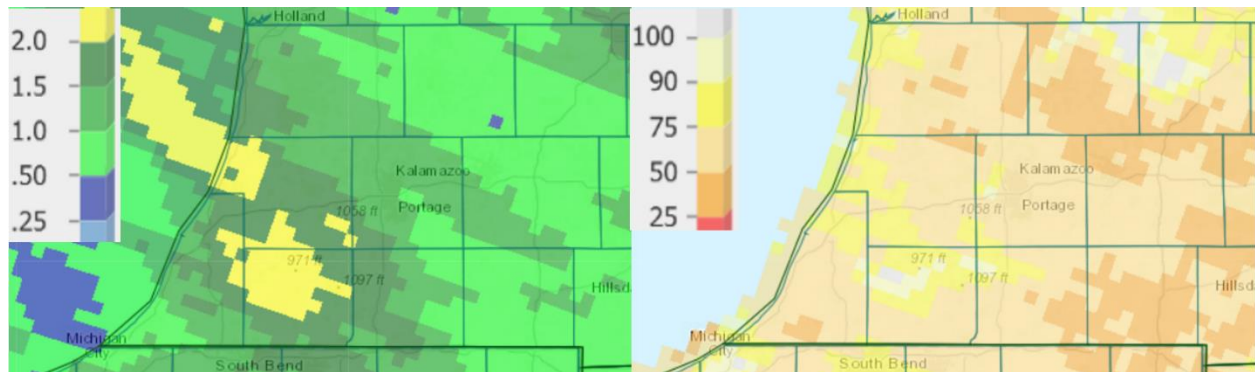
Average first fall 28 °F freeze date according to the [Freeze Date Tool](#).

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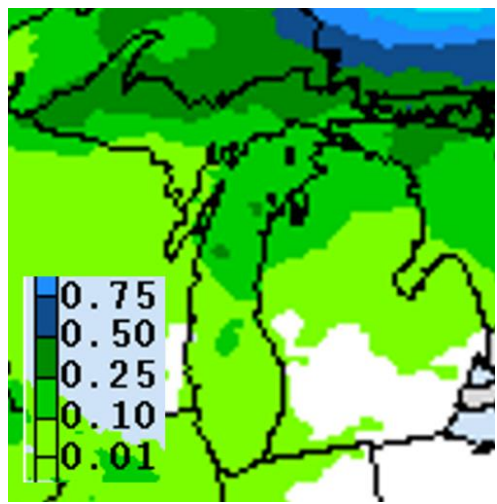


Temperatures at the Kalamazoo Enviroweather station this past week.

Precipitation was below normal throughout the region in September with most areas receiving 25-50% less rainfall than normal which translates to 1-2 inches below normal over the past 30 days. The forecast for the coming week continues that trend with less than 0.10 inch of rain expected. The medium-range outlooks call for below-normal chances of precipitation through the middle of the month.

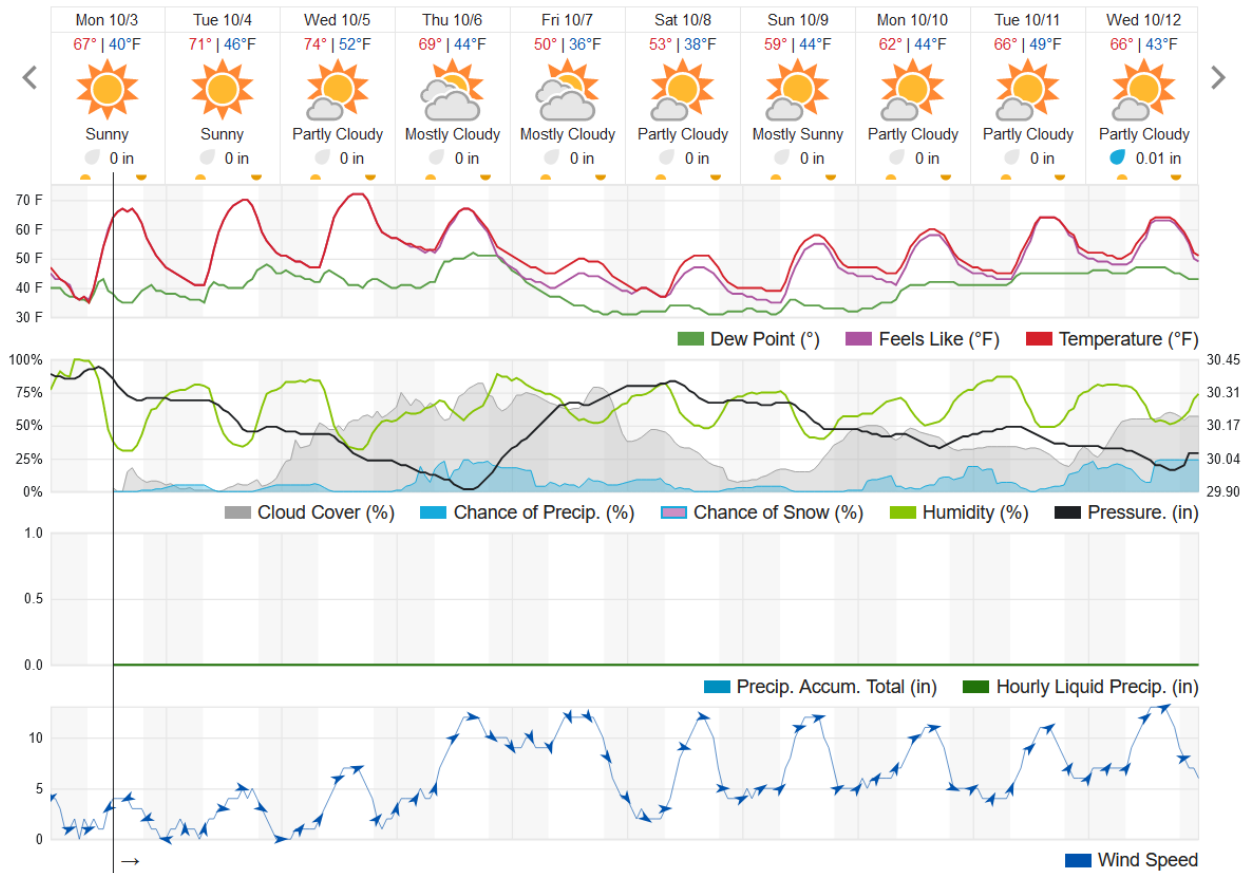


Precipitation totals from the past 14 days (left) and percent of normal for the past 30 days (right) as of October 3.



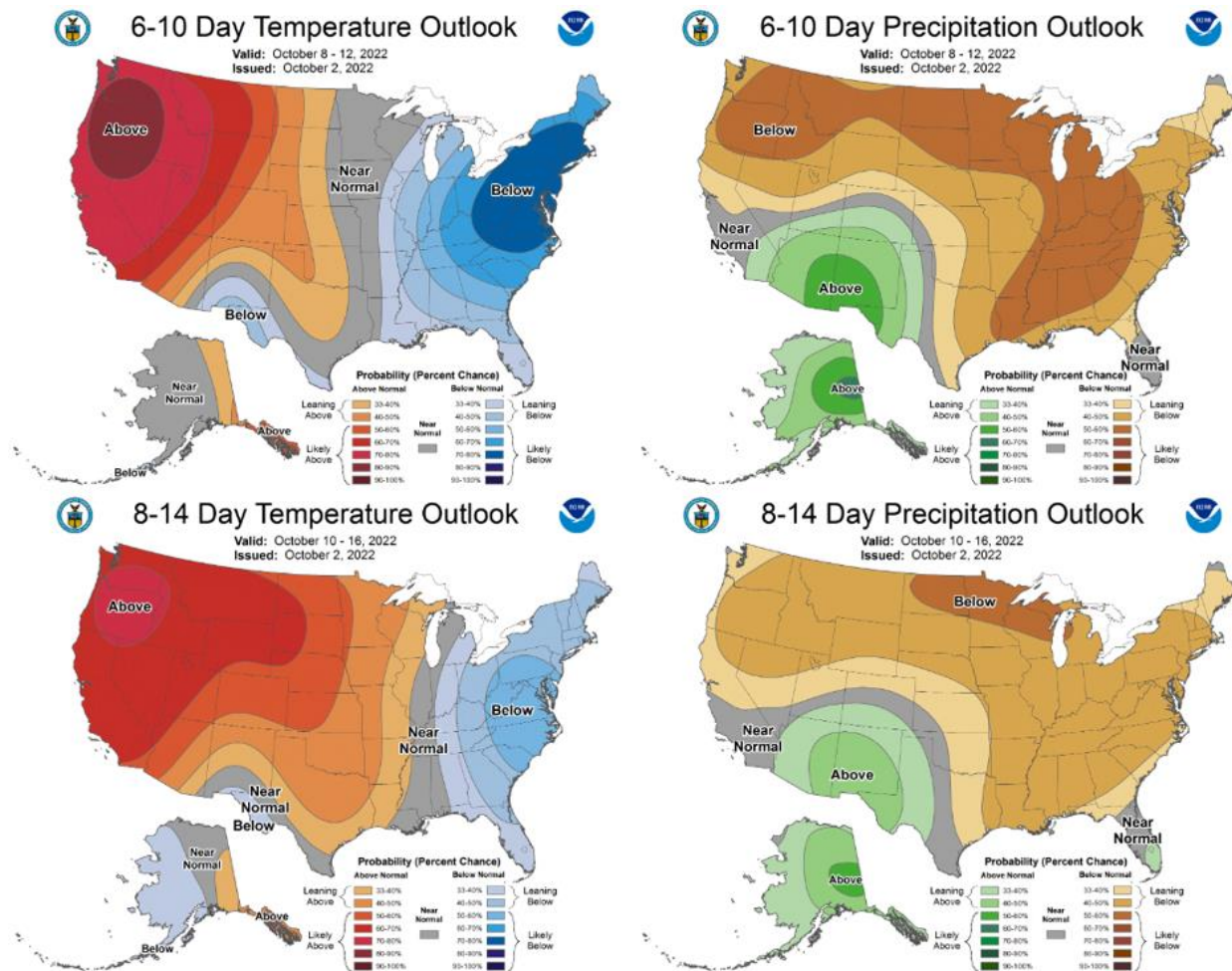
Precipitation forecast for Oct 3-10.

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

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The 6-10 day (Oct 8-12, top) and 8-14 day (Oct 10-16, bottom) outlooks for temperature (left) and precipitation (right).

Crops and Pests

Corn and **soybean** harvest are well under way with 10% and 14% harvested in the state, respectively, according to the latest USDA Crop Report issued Oct. 3. Early reports of above-average seed corn yields came in last week and the first soybean fields were harvested the third week of September in the region. Although lower temps mean dry-down is slower than ideal, the lack of rain means fields should be trafficable as soon as moistures fall within an acceptable range. The hope is that the crops had enough soil moisture going into the late-summer dry conditions to finish out the season with little yield impact.

Wheat. Only 35% of the winter wheat crop had been planted as of Oct. 2 in the state. Seeding rates should not be increased yet according to MSU recommendations. The following was excerpted from the article, "[Winter wheat planting recommendations.](#)"

"The recommendation is to plant between 1.4 and 2.2 million seeds per acre. Seeding rates on the lower end of the range should be reserved for fields being planted within a couple weeks of the fly-free-date [roughly Sept. 20 give or take a few days in southwest MI]. Higher rates at this time are discouraged as overly thick stands may encourage lodging....As the planting season goes on, the seeding rates should become progressively higher. If planting continues into the second half of October, the seed rate should be increased to at least 2 million per acre. The seeding rates should also be adjusted upward when seed is of questionable quality."

Irrigation. Essentially all crops are beyond needing irrigation at this point except for very late-planted crops, double-crop soybeans, etc. Consider making a plan for repairs and maintenance to your irrigation system. Reference the article, "[Create the irrigation repair list as you end the season.](#)" written by Purdue and MSU Extension irrigation educator Lyndon Kelley, for a list of system components and typical areas requiring maintenance.

Calendar

Titles are clickable links to online content when highlighted and underlined

- Oct 18** [Emergency Response to Accidents Involving Livestock \(ERAIL\) Training](#). 9AM - 4PM. MSU Pavilion for Agriculture and Livestock Education, 4301 Farm Lane, East Lansing, MI. This one-day training focuses on managing the scene of an accident, organizing volunteers and working to ensure public safety and animal welfare and is aimed at helping response teams plan for and respond to rollover accidents involving livestock. Cost is \$75 per person or \$60 per person for groups of 2 or more, includes lunch. Registration is limited to 80 people, no refunds after October 10, registration deadline is October 12.
- 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

PUBLISHED ON SEPTEMBER 30, 2022

- [SPECIALTY CROP AND MINOR-USE PESTICIDE PRIORITIZATION AT THE 2022 IR-4 FOOD USE WORKSHOP](#) - Participants at the 2022 IR-4 Food Use Workshop identified the most important research projects for the 2023 IR-4 food-use research program.

PUBLISHED ON SEPTEMBER 22, 2022

- [OVERCOMING SOYBEAN HARVEST CHALLENGES IN 2022 – LODGING AND GREEN STEMS](#) - Use this information to reduce soybean harvest losses due to green stems and lodging.
- [CONSIDER HARVESTING SOYBEANS EARLIER TO MANAGE RISK AND IMPROVE NET INCOME](#) - Harvesting soybeans at 15% to 16% moisture reduces potential for harvest losses and soil compaction and increases income compared to harvesting overly dry soybeans.
- [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.

PUBLISHED ON SEPTEMBER 21, 2022

- [NEW MSU EXTENSION FORAGE AND LIVESTOCK EDUCATOR IN THE EASTERN UPPER PENINSULA](#) - Michelle Sweeten has a strong agricultural background and personal farming experience.

PUBLISHED ON SEPTEMBER 15, 2022

- [IPM REPORT TO OUR PARTNERS](#) - The IPM Program recently wrapped up a four-year National Institute of Food and Agriculture sponsored project. We wanted to take this opportunity to share with our partners and collaborators the important work we have accomplished together.

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