

Southwest Michigan Field Crops Updates April 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.

White Mold or SDS in Soybean? We Want You!

As planting season approaches, we are still looking for cooperators for the Michigan Soybean On-farm Research program. There are over 12 different projects to choose from. In particular, we are looking for those growing soybean under irrigation who have had issues with either white mold or SDS in the recent past. As there are not many irrigated acres in the state, MSC is hoping to locate as many cooperators in the southwest as possible for the following trials:

- White mold fungicide application timing
- Delaro Complete foliar fungicide (product included)
- Saltro vs Ileva (products included)

We still have a couple of weeks to take on new cooperators for the other trials as well—see below. Contact me (Eric Anderson) or Mike Staton (staton@msu.edu) soon if you would like to know more about any of these trials or if you would like to sign up to host one or more trials on your farm.

- 2x2 starter fertilizer
- HeadsUp seed treatment
- Growthful Soil amendment
- Stimulate biological mixed with post emergence herbicide
- Planting date
- Broadcast potassium
- Planting equipment comparison
- Foliar fertilizer applied with foliar fungicide

Emergency Forest Restoration Program Signup Open for St. Joseph County

Owners of non-industrial private forests in St. Joseph County damaged by the series of storms that passed through there between Aug. 6 and Aug. 10, 2021 may now apply for [Emergency Forest Restoration Program](#) cost-share assistance in restoring their disaster-damaged forests. The application deadline is May 13, 2022.

Severe wind events damage trees and render them useless for lumbering, which typically offsets the cost of clearing them. Leaving downed and damaged trees to decay can take up to a decade, meanwhile harboring pests and posing a potential fire-hazard threat. Restoring damaged forests is the preferred option but is often cost-prohibitive for private landowners following severe weather events.

EFRP, administered by the USDA Farm Service Agency (FSA), provides payments to eligible owners of nonindustrial private forest land to carry out emergency measures to restore land damaged by a natural disaster.

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Only owners of nonindustrial private forests in St. Joseph County with tree cover existing before the natural disaster occurred are eligible to apply. The land must be owned by a private individual, group, association, corporation, or other private legal entity that has decision making authority on the land and doesn't use the land for business purposes.

Once an eligible forest owner applies to the program, the FSA County Committee in Centreville inspects the damage to determine if forest land is eligible for EFRP. For land to qualify for EFRP funds, the damage from the natural disaster must create new conservation problems that if not dealt with would harm the natural resources on the land and significantly affect future land use. Also, the damage must be severe enough that a landowner needs Federal assistance to address adequately.

How Does the Funding Work?

Up to 75% of the cost to implement emergency conservation practices can be provided, however the final amount is determined by the committee reviewing the application. A limit on payments of \$500,000 per person or entity per disaster applies.

Cost-share eligible forest restoration practices include:

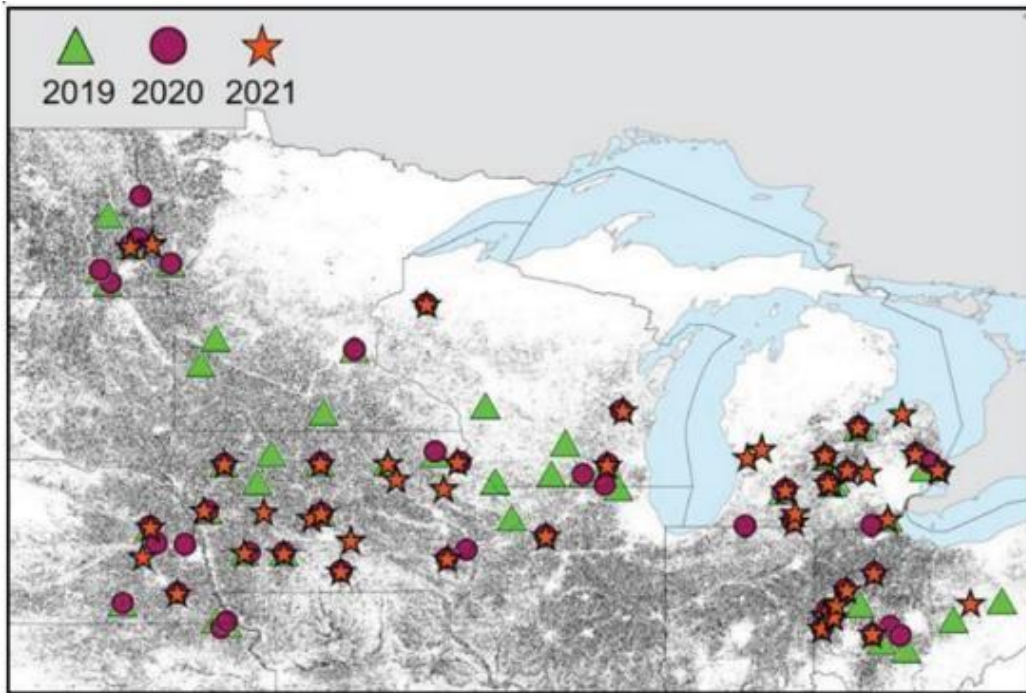
- Debris removal, such as down or damaged trees, in order to establish a new stand or provide for natural regeneration
- Site preparation, planting materials, and labor to replant forest stand
- Restoration of forestland roads, fire lanes, fuel breaks, or erosion control structures
- Fencing, tree shelters, and tree tubes to protect trees from wildlife damage
- Wildlife enhancement to provide cover openings and wildlife habitat

How Do I Apply?

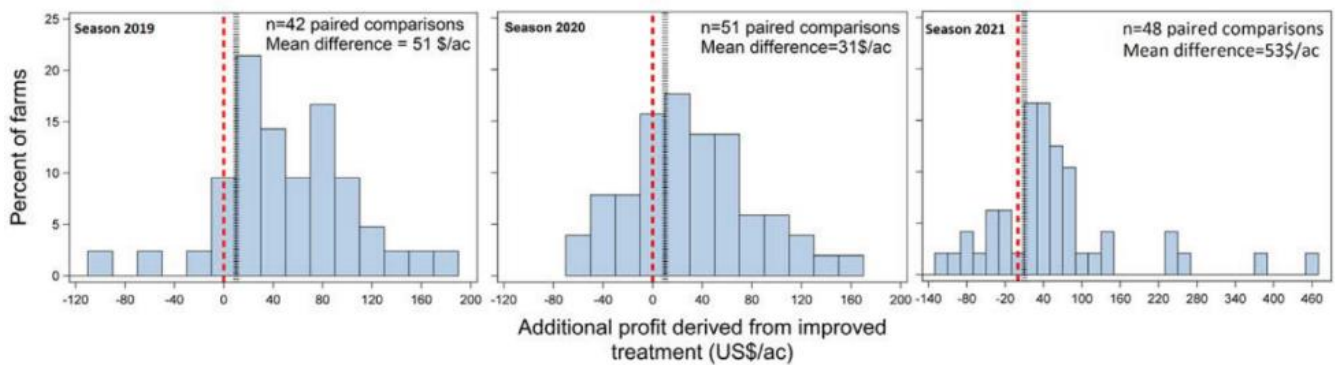
EFRP enrollment is administered by FSA state and county committees and county offices. Interested forest owners in St. Joseph County should contact the USDA Farm Service Agency Service Center in Centreville at 269-467-6336. For more information about FSA disaster programs, visit <http://disaster.fsa.usda.gov> or contact your local FSA office. To find your local FSA office, visit <http://offices.usda.gov>.

Soybean Benchmarking Final Report

Several farmers across Michigan and eight other states in the Upper Midwest have provided yield data and field history to researchers within the North Central Soybean Research Program to identify “improved” management practices that result in higher yields. The final report, “[Boots on the Ground: Validation of benchmarking process through an integrated on-farm partnership](#)”, is now available online. State-specific “improved” management practices were identified. For Michigan, those practices included early planting (end of April to early May) + foliar fungicide and insecticide (around R3 stage) + 130K/ac seeding rate. The improved management treatment netted soybean producers an average of 5.5, 3.2, and 3.7 bu/ac yield increase with a profit of 51, 31 and 53 \$/ac in 2019, 2020, and 2021 respectively. For more Michigan-specific soybean agronomy information, visit the [MSU Extension Agronomy website](#).



Locations of the 2019-2021 NCSRP validation trials.



Distribution of partial profit (improved minus reference treatment profits) across 42 farms in 2019, 51 farms in 2020, and 48 in 2021. The red dashed line shows the zero-extra profit threshold and the black dashed line shows the 10 \$/ac extra profit threshold.

Pythium: Root Rot Under Wet Conditions

Each month the Crop Protection Network focuses on a new painfully persistent or particularly pernicious pest. This month they picked Pythium, a soil-borne disease that reduces yield in a variety of crops growing regions throughout the U.S. and Canada. If left unchecked under wet conditions, Pythium can rot roots, seeds, and damage plant tissue. Thankfully, treatment options are varied, and options for intervention include both practical management and fungicide application.

To learn more about the identification, prevention, and management of Pythium in corn, soybean, and alfalfa, check out the following CPN resources:

- [Pythium Seed and Root Rot of Alfalfa](#)
- [Pythium Seedling Blight and Root Rot of Soybean](#)
- [Pythium Stalk Rot of Corn](#)
- [Fungicide Efficacy for Control of Soybean Seedling Diseases](#)

2021 Corn Disease Loss Estimates

The Corn Disease Working Group (CDWG) revised its [Corn Disease Loss Estimates From the United States and Ontario, Canada](#) to document the impact of major diseases on corn production. Plant pathologists representing 28 corn-producing U.S. states and Ontario, Canada, have estimated the percent yield loss from corn disease in their states and province. These reports account for 15.3 billion bushels (98.9 percent) of the total corn produced in the United States and Ontario in the past year.

The CDWG report shows [tar spot](#) as causing the most significant disease-related losses in the United States and Ontario at 231 million bushels in total losses—a huge jump from just 12.3 million bushels estimated in 2020. While total yield reduction caused by disease in 2021 is down, tar spot had a significant impact on individual states due to increased dry conditions, and the disease has now been observed in several new states.

For those who have not yet secured corn fungicides for this year, check out the [Fungicide Efficacy for Control of Corn Diseases](#) (updated Feb 2022) to aid in decision making.

Rank		Disease/Pathogen	Total losses (millions of bushels)
Northern Region	Nation		
1	1	Tar spot	228.5
2	4	Fusarium stalk rot	110.9
3	2	Gray leaf spot	109.5
4	3	Southern rust	106.1
5	5	Northern corn leaf blight	84.6

Estimated corn yield losses due to the five most significant diseases in the northernmost U.S. states in 2021.

FSA Accepting CRP Continuous Enrollment Offers

The Farm Service Agency (FSA) is accepting offers for specific conservation practices under the [Conservation Reserve Program \(CRP\) Continuous Signup](#). In exchange for a yearly rental payment, farmers enrolled in the program agree to remove environmentally sensitive land from agricultural production and to plant species that will improve environmental health and quality. The program's long-term goal is to re-establish valuable land cover to improve water quality, prevent soil erosion, and reduce loss of wildlife habitat. Contracts for land enrolled in CRP are 10-15 years in length.

Under continuous CRP signup, environmentally sensitive land devoted to certain conservation practices can be enrolled in CRP at any time. Offers for continuous enrollment are not subject to competitive bidding during specific periods. Instead they are automatically accepted provided the land and producer meet certain eligibility requirements and the enrollment levels do not exceed the statutory cap.

For more information, including a list of acceptable practices, contact the Cass County USDA Service Center at (269) 445-8641 ext. 2, or visit fsa.usda.gov/crp.

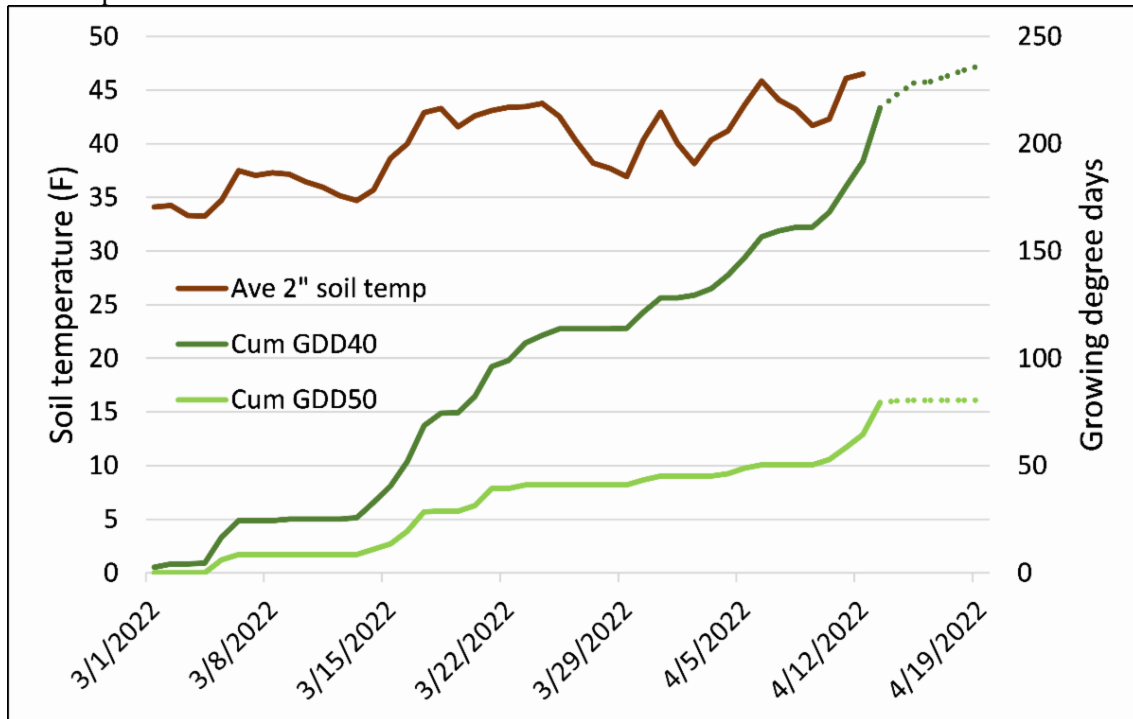
Weather and Crop Update

Weather

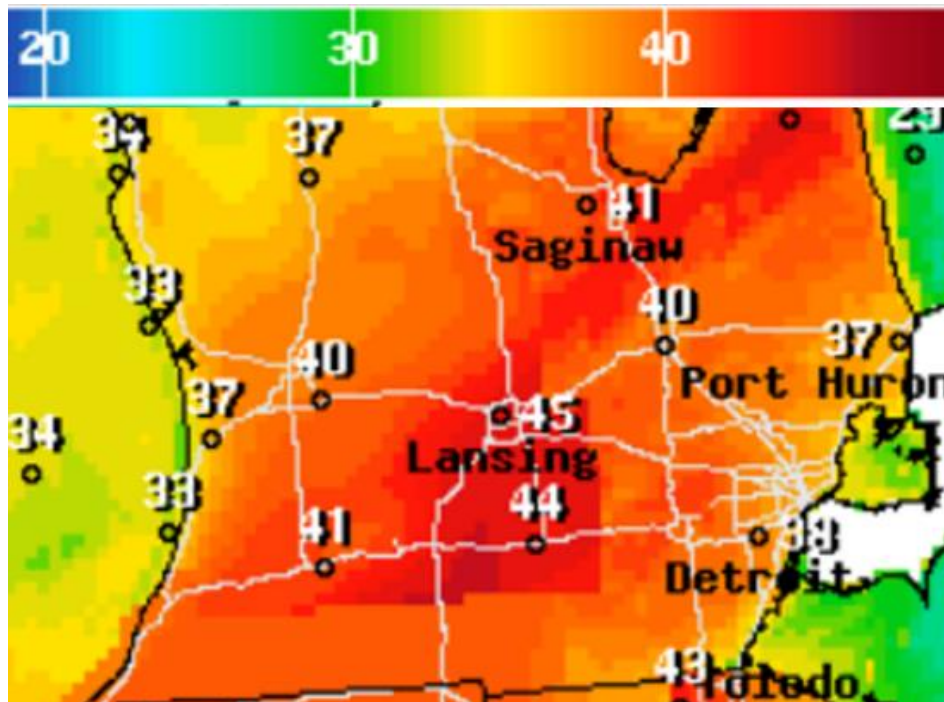
Temperatures this past week were 1-2 degrees Fahrenheit warmer than normal for the eastern half of the state but were normal in the south-central and southwest. The weather system that is currently causing unusual blizzard conditions over ND and MN will be bringing cooler temperatures to MI over the next couple of days and into next week. Soil temperatures continue to hover near 45 degrees Fahrenheit but are slowly increasing and will hopefully reach 50 degrees Fahrenheit by later next week with a few warmer and sunny days in the

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forecast. Strong westerly winds are expected Thursday afternoon and through tonight continuing into Friday with gusts up to 55 mph this evening. The outlooks for most of the remainder of April call for below-normal temperatures to persist.

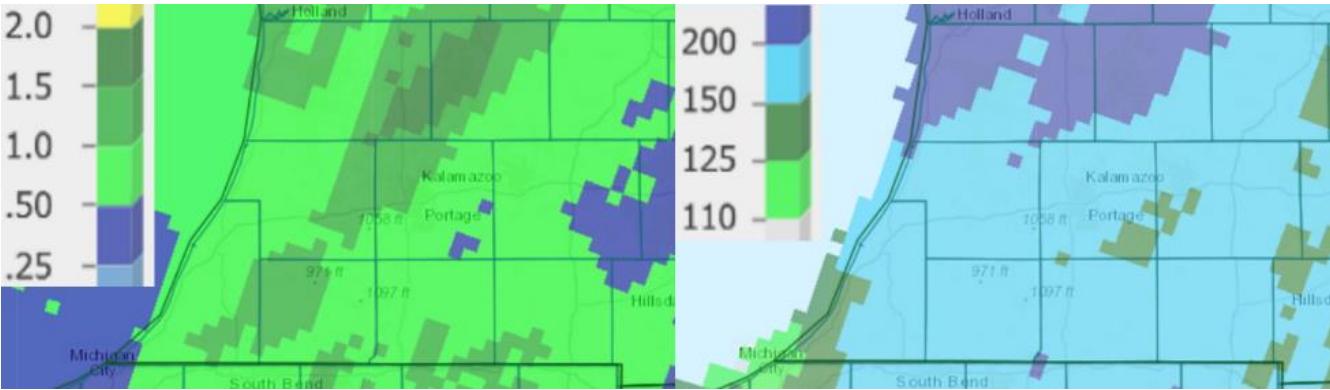


Soil temperatures at 2 in. depth and accumulated growing degree days (GDD, base 40 degrees Fahrenheit and base 50 degrees Fahrenheit) since March 1 as measured at the MSU Enviroweather station in Kalamazoo.

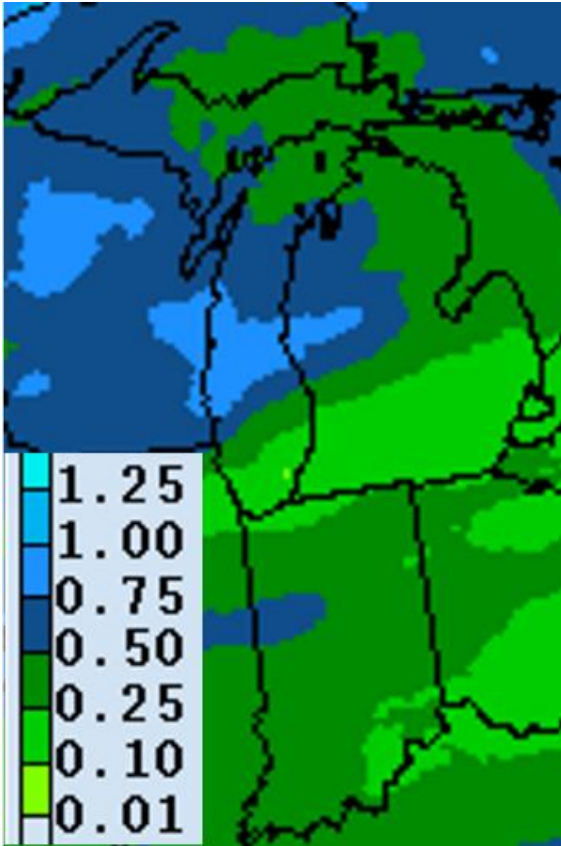


Wind gusts predicted for Thursday at 5:00 PM in knots. 1 knot = 1.15 miles per hour, so 40 kts = 46 mph.

Precipitation this past week ranged from 50 percent below normal to 100 percent above normal depending on location, although rainfall totals fell short of predictions over the past 48 hours in the region. This continues to be a wet spring overall with most areas having received 1-4 in. more rain than normal over the past 30 days. The forecast for the coming week may give many their first opportunity to get fieldwork done as less than 0.25 in. of rain is expected which is predicted to fall Monday through Thursday next week. The outlooks for the remainder of the month call for normal precipitation levels.

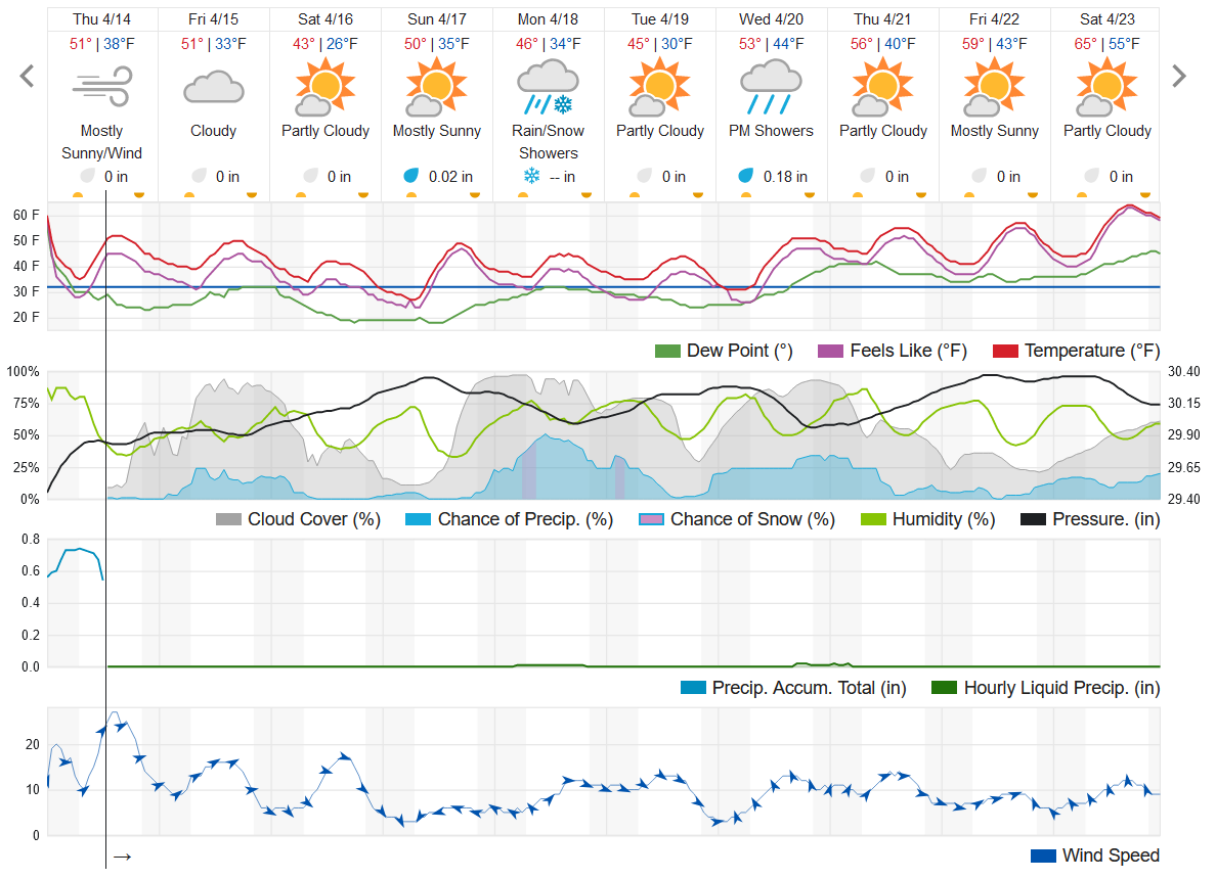


Precipitation totals for the past 7 days (left) and percent of normal for the past 30 days (right) as of April 14 at 8:00 AM EDT.

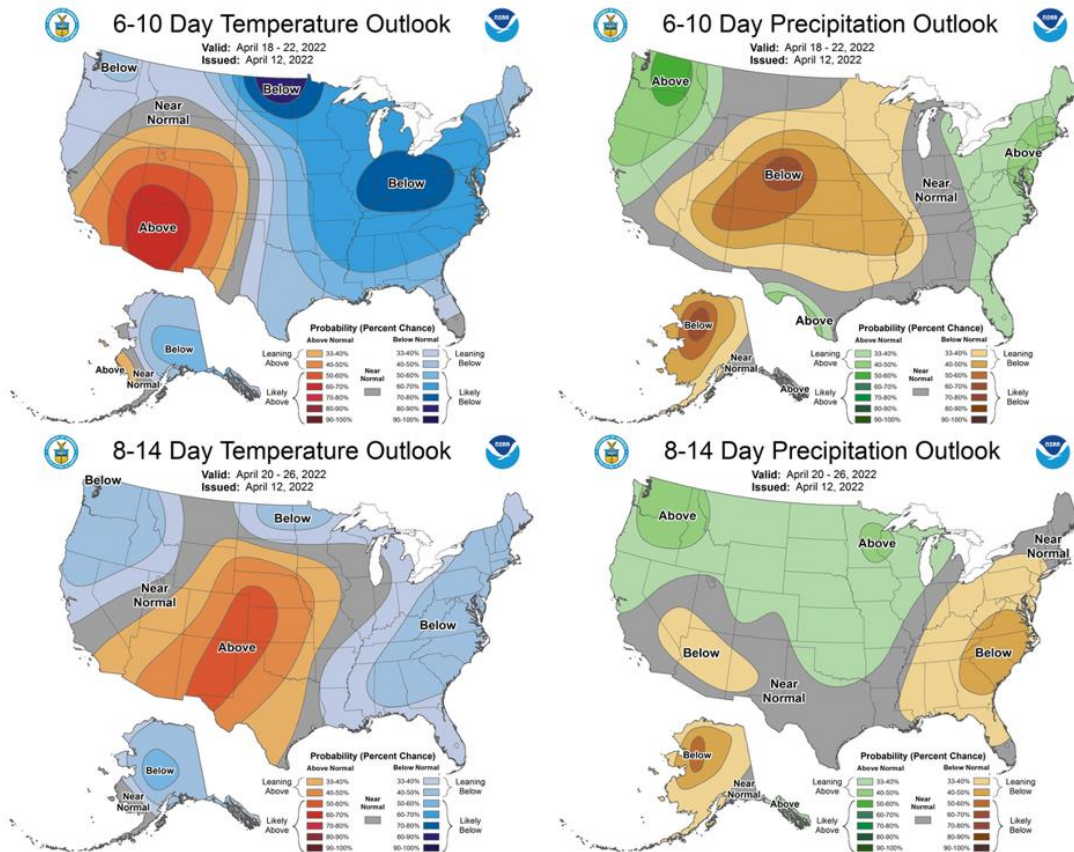


Precipitation forecast for Apr 14-21.

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



The 6-10 day (Apr 18-22, top) and 8-14 day (Apr 20-26, bottom) outlooks for temperature (left) and precipitation (right).
Crops and Pests

Wheat in Michigan is rated at 39 percent good to excellent (34 percent fair) according to the current USDA Crop Report—a significant drop compared to a 70+ percent rating last year. The main causes are late planting last fall combined with freezing/flooding challenges this winter and spring. Most fields are still at Feekes 2-3 with tillering and stems beginning to become erect but no nodes visible. If a nitrogen (N) application has not yet been made, growers may end up putting all of their spring N on just before jointing (Feekes 5) depending on ability to get into fields soon. Jointing is the point at which the crown is above the soil surface and the first node is visible."



Wheat in St. Joseph County. The late-planted field in the top photos received nitrogen two weeks prior, but cool temperatures earlier this month have limited root growth and uptake. The field in the bottom photos was planted in mid-October and is tillering nicely. Photos courtesy of Eric Anderson.

The recommendation for wheat N fertility follows the formula:

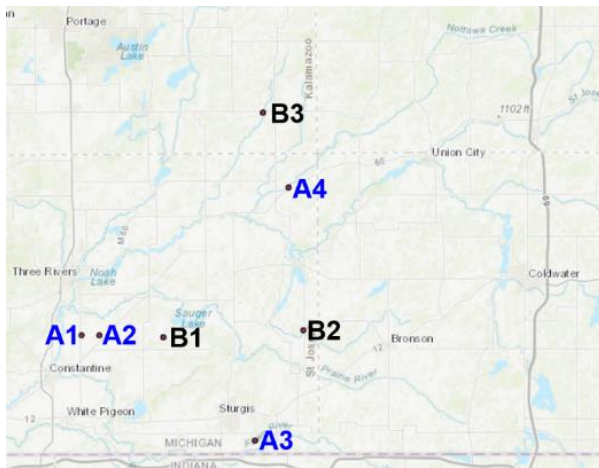
$$\text{lbs actual N per acre} = (1.33 \times \text{yield potential in bushels}) - 13$$

This comes from [Extension Bulletin E2904, Nutrient Recommendations for Field Crops in Michigan](#) and is also used in the [Tri-State Fertilizer Recommendations](#).

For more information about early-spring wheat management, check out the following MSU Extension articles: “[Evaluating wheat stands and spring management](#) (Dennis Pennington, MSU Extension wheat specialist); [Topdress nitrogen on wheat](#) and [Winter wheat response to nitrogen](#) (Darryl Warncke, MSU soil fertility professor emeritus); and [Topdressing wheat with nitrogen](#) (Martin Nagelkirk, MSU Extension wheat educator emeritus).

Potatoes are typically the first row crop that gets planted each spring, but with the weather conditions this year, there has not been much planting accomplished yet. It is true that 2021 was an unusually early planting year due to dry conditions, so having 75 percent of fields planted by now (like last year) would not be the norm. However, according to one of the larger potato companies in the region, only 10 percent has been planted thus far, so it looks like everyone will have a compressed planting season.

Insects. Trapping for true armyworm and black cutworm moths has begun in the region. As of April 8, few moths had been captured from either species in northern Indiana according to Purdue’s Pest and Crop Newsletter. The traps in St. Joseph and Kalamazoo counties also yielded very few moths this past week. Peak flights typically don’t occur until early May, but with the weather system coming through this week from the southwest, we may see an uptick next week.



Armyworm

Black cutworm

	12-Apr
A1	3
A2	0
A3	1
A4	0
B1	0
B2	0
B3	0

Locations for true armyworm (A1-4) and black cutworm (B1-3) traps for 2022 and trap counts for the week ending Apr 12.

Forage fertility was the topic of this week’s [MSU Extension Field Crops Virtual Breakfast](#) with forage and cover crop specialist Kim Cassida. Of course, a good fertility program for any crop starts with consistent soil sampling. Sampling every three years at the same time of year is critical as soil test values change over the course of a year, and using the same testing lab will help avoid inter-lab variability. There is some disagreement among scientists as to the depth of sampling on a perennial hay or pasture field as there is going to be stratification with highest test levels at the surface. However, though the consensus says to sample at 3-5 in. depth, Kim suggests following the specific lab’s guidelines as their recommendations for fertilizer inputs will be based in part on a given depth of sampling. She also recommended farmers consider using grid sampling as many row crop farmers do and then making variable rate applications across fields to avoid over-fertilizing some areas and saving on the fertilizer bill. Obtaining a yield map using a forage yield monitor can also aid in creating a fertility prescription.

	Legume	Grass	Legume	Grass
Nitrogen	70	50	421	298
Phosphate (P₂O₅)	15	15	91	92
Potash (K₂O)	68	61	407	364
Calcium	28	12	170	73
Magnesium	6	5	3	27
Sulfur	5	4	30	27

Based on Dairy One Feed Library, 4/13/22

Average pounds of soil nutrient removed per dry ton of forage yield (left) and per acre at 6 tons of dry hay yield per acre (right). For legume or legume-grass mix hay, it is assumed that no N fertilizer is needed if the percent of legume is at least 30 percent of the stand. Table courtesy of Kim Cassida.

Specific nutrient recommendations begin with getting the pH correct depending on the type of forage being grown. For example, the optimum pH for alfalfa is 6.5-6.8 while for grasses and other legumes it is 6.0-6.5. Plan to apply lime if needed at least six months before applying fertilizer if possible to allow time for the lime to take effect—this will maximize the crop’s ability to uptake the nutrients applied and minimize the risk of loss due to volatilization, runoff, etc. Consider applying sulfur (S) at 4-5 lbs per dry ton of forage removed as N deficiency symptoms can sometimes be due to a lack of S. As there is no good soil test for sulfur, conduct tissue sampling to measure this and other micronutrient levels.

Lastly, Dr. Cassida discussed the pros and cons of utilizing manure for hay fields and pastures. Though legumes do not need the N in manure, they will utilize it so there is reduced risk of losing the N. Manure also provides many micronutrients and a boost to the microbial community, thus increasing the value compared with mineral fertilizers. However, the timing and manner of application are important to avoid traffic damage to new shoots, leaf burning and fouling of foliage, and applying “chunky” manure that will end up in bales in the next cutting. Manure can also reduce palatability of the forage and increase the spread of weed seeds.

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](#).

Announcements & Jobs

- Wilbur Ellis in Dundee, MI (Monroe County) has a [seasonal warehouse position](#) open to fill. This is a great stepping stone for any college student looking to get into agriculture or see the many sides of the industry. As well as being a warehouse representative this employee would be able to help assist with soil sampling, planting of our local seed plot, deliveries, and shadowing of sales people. Contact Alexia Alvarez (734-823-5690 or aalvarez@wilburellis.com) with questions.
- Berrien County Program Technician, \$32,570 - \$58,158. Closing date: 04/22/2022. Apply online at <https://www.usajobs.gov/job/647664600>. If applying online poses a hardship, contact Katie Robyn (Katie.Robyn@usda.gov) well before the closing date for an alternate method.

Calendar

Titles are clickable links to online content when highlighted and underlined

- Apr 21** [Virtual Breakfast – Planting](#). 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.
- Apr 28** [Virtual Breakfast – Weed ID](#). 7-8am. Register online once for the entire series.
- May 13** St. Joseph County Emergency Forest Restoration Program signup deadline
- May 31** Last Day to Request Commodity Loans 2021 Corn, Soybeans & Sorghum
- Jul 15** Final Date to Report Crop Plantings & CRP

MSU Extension Digest Briefs

FIELD CROPS VIRTUAL BREAKFAST ON APRIL 21 FOCUSES ON CORN AND SOYBEAN PLANTING STRATEGIES

PUBLISHED ON APRIL 14, 2022

MSU Extension cropping systems specialist Manni Singh will discuss optimal planting conditions, soybean planting dates, seeding rates and maturity selection.

HOW PROFITABLE DOES 2022 LOOK FOR YOUR FARM?

PUBLISHED ON APRIL 12, 2022

The MSU Cash Flow Estimator can help your farm answer this question.

PSM UNDERGRADUATE STUDENTS WIN FIRST PLACE FOR MSU UURAF PRESENTATION

PUBLISHED ON APRIL 11, 2022

2022 MSU UURAF PSM Undergraduates take first place prizes for their presentations Several PSM students present research projects

TO APPLY OR NOT TO APPLY POTASSIUM FERTILIZER IN 2022, THAT IS THE QUESTION

PUBLISHED ON APRIL 7, 2022

Soybean producers can make important potash allocation decisions this spring by combining information contained in recent soil test reports and the new tri-state fertilizer recommendations.

SOYBEAN INOCULATION—WILL THE ADDED COST PAY OFF?

PUBLISHED ON APRIL 7, 2022

A three-year on-farm study funded by the Michigan Soybean Committee looked at the effects of soybean inoculant applied as a seed treatment and as a postemergence application.

EVALUATING WHEAT STANDS AND SPRING MANAGEMENT

PUBLISHED ON APRIL 7, 2022

Scout wheat fields now to make proper management decisions.

PRODUCTION RECORD ACCURACY CHECK TEMPLATE

PUBLISHED ON APRIL 6, 2022

A Microsoft Excel tool to assist producers with reconciling production records for accuracy and completeness.

PLANT IDENTIFICATION? THERE'S AN APP FOR THAT—ACTUALLY SEVERAL!

PUBLISHED ON APRIL 1, 2022

2022 update! Plant identification apps for smart phones have seen significant improvements over the past several years, offering the opportunity to take a photo and get an instant identification in many cases.

MICHIGAN SOYBEAN PRODUCERS CAN HELP DEVELOP A NEW ONLINE TOOL FOR OPTIMIZING SOYBEAN PRODUCTION

PUBLISHED ON MARCH 31, 2022

Survey data collected from Michigan soybean growers will help in developing a new online tool that can provide field-specific management guidelines.

EARLY-SEASON WEED CONTROL AND OPTIONS WITH PRODUCT SHORTAGES

PUBLISHED ON MARCH 31, 2022

Herbicide shortages will influence early-season weed control decisions.

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