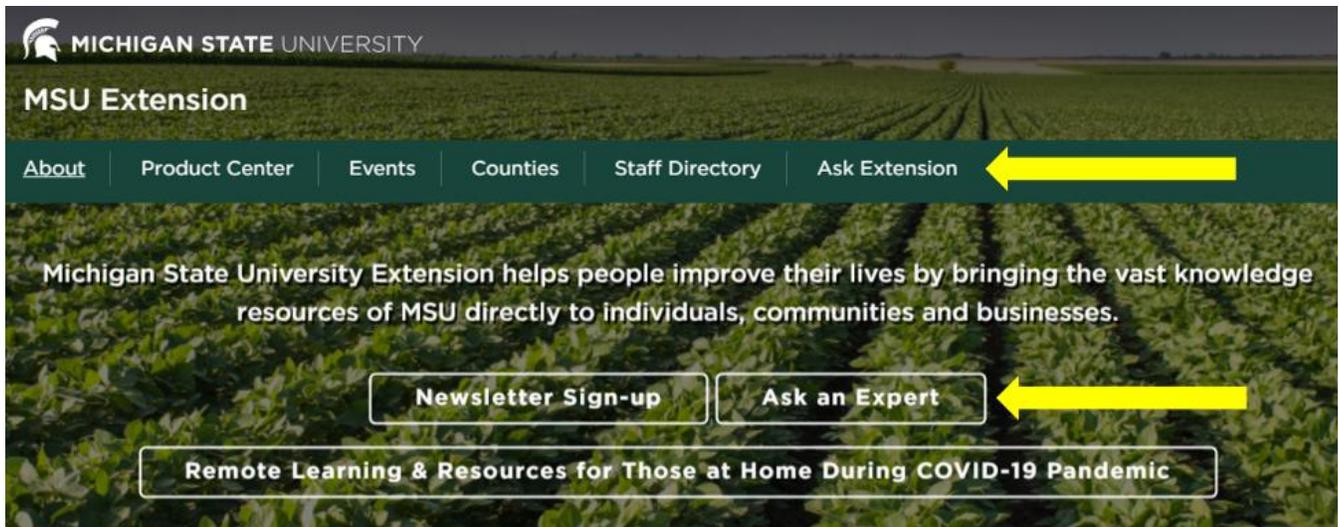


## Southwest Michigan Field Crops Updates May 1, 2022

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.

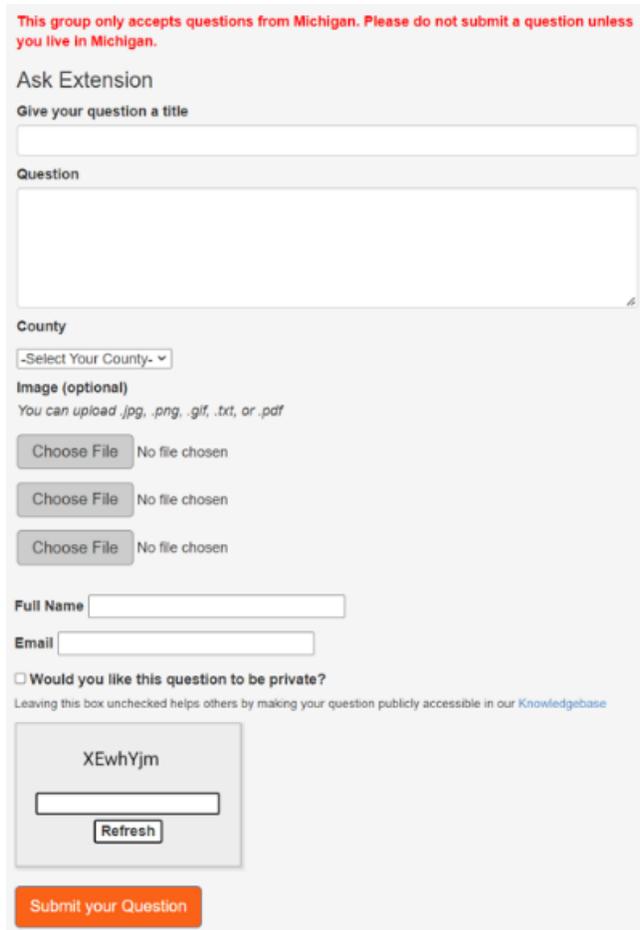
### Ask as Expert Resource at MSU

Many people may not be aware of a very useful resource through MSU Extension called “Ask Extension” (formerly known as “Ask an Expert”), a portal where anyone can enter questions that will then be directed to a wide range of campus and county-based experts. Though most questions come in from residents about home garden and lawn issues, health and nutrition, 4-H and youth topics, local governance, etc., many come from farmers and landowners with ag-related questions. The service is free to the public and requests are generally answered within a few days.



To begin, visit the [MSU Extension website](#) and look for a link for Ask Extension or Ask an Expert either in the banner at the top or as a button. This will take you to the newly-updated [Ask Extension website](#). Enter a short but descriptive title that will help the “wranglers” direct your question to the appropriate person. In the question box, be as thorough as you can to avoid the need for multiple back-and-forth messages. Selecting your county can help when assigning an expert but is also helpful when giving area-specific recommendations. You can choose to upload pictures to share with the expert—particularly helpful when you want to identify a pest, disease, etc. Input your name and email address, then decide whether you would like your question to be available to the public (to help others with a similar question) or check the box if you want your question to be private. In any case, do not include personal information in the question box such as address, phone number, etc.

Please forward this information to everyone you know with a question that MSU Extension can help with!



This group only accepts questions from Michigan. Please do not submit a question unless you live in Michigan.

Ask Extension

Give your question a title

Question

County

-Select Your County-

Image (optional)  
You can upload .jpg, .png, .gif, .txt, or .pdf

Choose File No file chosen

Choose File No file chosen

Choose File No file chosen

Full Name

Email

Would you like this question to be private?  
Leaving this box unchecked helps others by making your question publicly accessible in our Knowledgebase

XEwhYjm

Refresh

Submit your Question

## 3<sup>rd</sup> Annual Midwest iHemp Expo in Lansing

In January 2020, iHemp Michigan hosted an industrial hemp trade show at the Lansing Center. The event, attended by more than 1,200 professionals, featured presenters from around the nation discussing growing, processing, marketing and the myriad of uses for industrial hemp in Michigan. In 2021, the Expo had to be offered virtually due to the pandemic. On May 20 - 21, 2022, the [Midwest iHemp Expo](#) will focus on connecting people and resources, farmers and makers, in an effort to fuel the growth of this industry. On Friday, the Expo Hall is focused on Business-to-Business connections and sales. Saturday is free to enter the Expo Hall with a focus on Business-to-Consumer.

MSU Extension specialists and educators have presented at this event each year sharing research findings and other information important to hemp growers. This year, we will be sharing about weed control studies, variety trials for grain, fiber and CBD, and other aspects of hemp agronomy. Visit the website to view the draft agenda and to register.

## Soil Applied Herbicides and Rainfall for Activation

We have been hearing for many years from weed specialists and consultants that the key to controlling challenging weeds that have become resistant to various herbicide families is to rotate modes of action and layer residuals to take the pressure off the POST herbicides. That is certainly true this spring as some of our common burndown and POST herbicides are expensive and/or available in limited quantities. With the rainfall patterns we have had this spring—not all that much rain, but spread out each week—a question we need to ask ourselves is do we have enough rainfall to incorporate / aka activate / aka water in a herbicide like Dual, Outlook, Zidua, etc. Purdue’s weed scientists Bill Johnson and Marcello Zimmer wrote a timely article addressing this question in the latest [Pest and Crop Newsletter](#). They include a table with numerous

residual products and the amount of rainfall or irrigation water needed to incorporate each. They also discuss what to do if you have not had enough rain within 10-14 days. It is a quick read and will be worth your time.

## MiCareerQuest SW Career Exploration Event

On May 17 & 18, 2022 at the Kalamazoo County Expo Center, the [MiCareerQuest Southwest](#) career exploration event will showcase career opportunities to almost every 8<sup>th</sup> grader in Kalamazoo and Calhoun county (about 4,000 students). This is a partnership between KRESA, Calhoun ISD, Michigan Works Southwest and Southwest Michigan First. There will also be an outdoor career exploration area called “Touch a Truck” featuring outdoor and large equipment career fields.

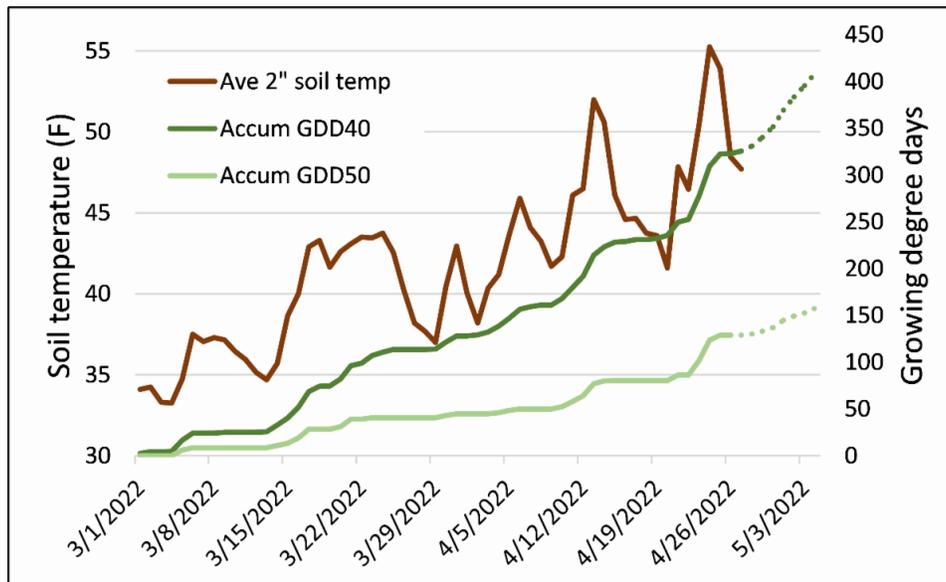
The organizers would like to have representatives from larger farms in the region be a part of the event to showcase the career opportunities in agriculture in our area. Though that is a busy time of year for farmers, especially this year, you may have someone in your office who could devote time to help develop interest and prepare the next generation of ag workers. If you are interested in learning more or signing up to participate, please contact me ([eander32@msu.edu](mailto:eander32@msu.edu)) and I will connect you with these folks.

## Weather and Crop Update

### Weather

Temperatures this past week were normal in the region...sort of. With temps well above normal over the weekend and below normal otherwise, the average was normal for this time of year. A Canadian-origin air mass over the Great Lakes region has brought below freezing temps for essentially the entire state—unusual for this time of year. There is another threat of frost Friday morning, but temperatures will moderate heading into the weekend as the high pressure system moves to the east and highs will remain in the low- to mid-60’s for most of the coming week. However, all of the mid- to long-range outlooks, including the 1-month outlook for May, predict below-normal temperatures for southern Michigan.

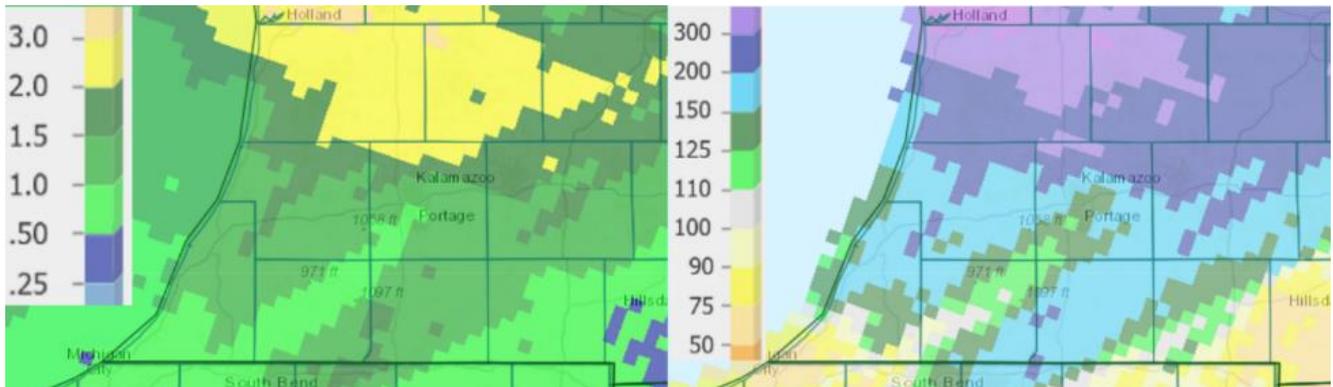
Soil temperatures dropped as air temps cooled down after last weekend as expected, but they remain warm enough for planting with a reasonable expectation of emergence within two weeks. Air temps during the forecasted rain events in the coming week will be mostly in the 50’s, so risk of injury from imbibitional chilling should be low. With daily highs forecasted to be in the mid-50’s to mid-60’s and lows staying above 40 F, soil temps should remain in decent shape as planting ramps up.



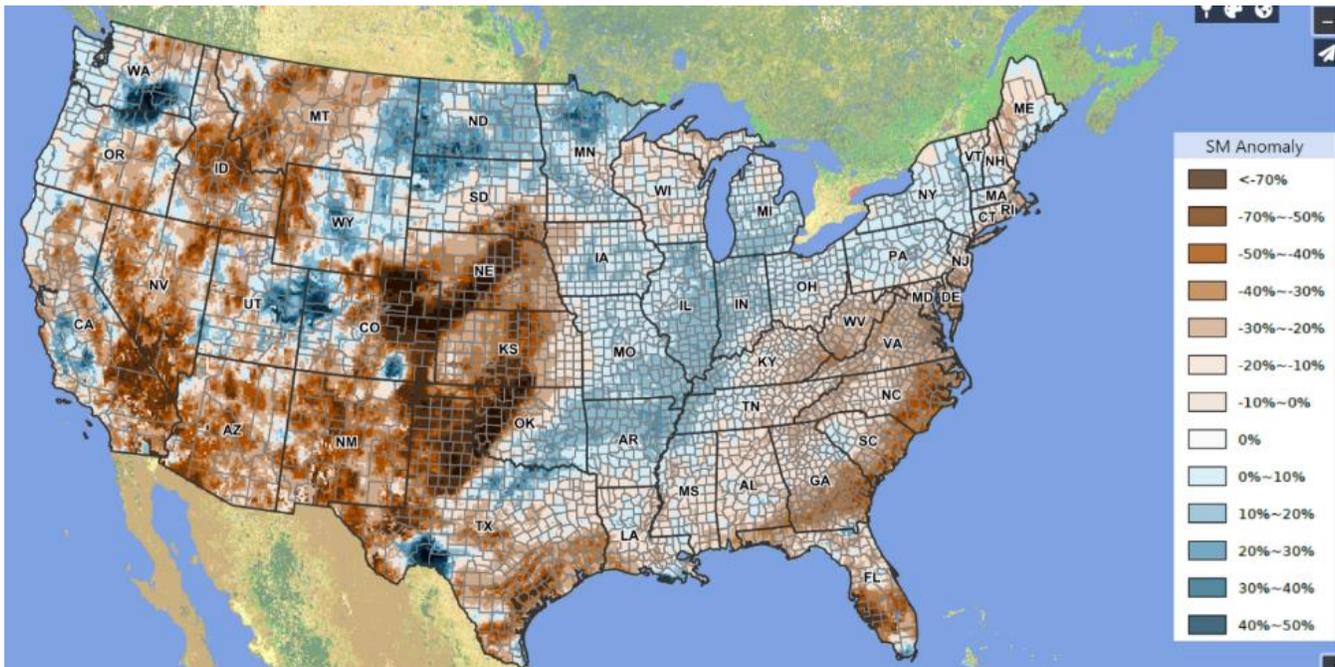
Soil temperatures at 2 in. depth and accumulated growing degree days (GDD, base 40 F and base 50 F) since March 1 as measured at the MSU Enviroweather station in Kalamazoo. The dotted lines are based on forecasted temperatures.

## Southwest Michigan Field Crops Update – May 1, 2022 - 4

Precipitation this past week ranged from 0.5 to 3.0 inches in the region with a north-south gradient. Those totals ranged from 50% below normal to 50% above for most areas, although rainfall was over three times the normal amount for this time of year closer to Grand Rapids. Soil moisture remains high throughout most of southern Lower. Side note: soil moisture in the wheat growing regions of the Great Plains remains extremely low, and with most of that region in D2-D4 drought, the wheat crop may be severely impacted this year. The forecast for the coming week calls for 0.75-1.0 in. rain, most of that falling Saturday night and next Tuesday. The mid-range outlooks call for a slight chance of wetter than normal conditions for the first week of May followed by drier than normal heading into the second week.

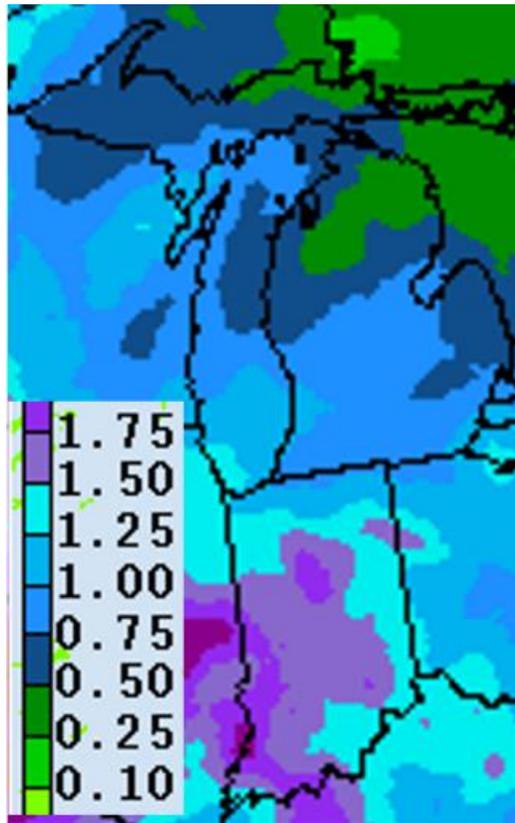


Precipitation totals (left) and percent of normal (right) for the past 24 hours as of April 28.

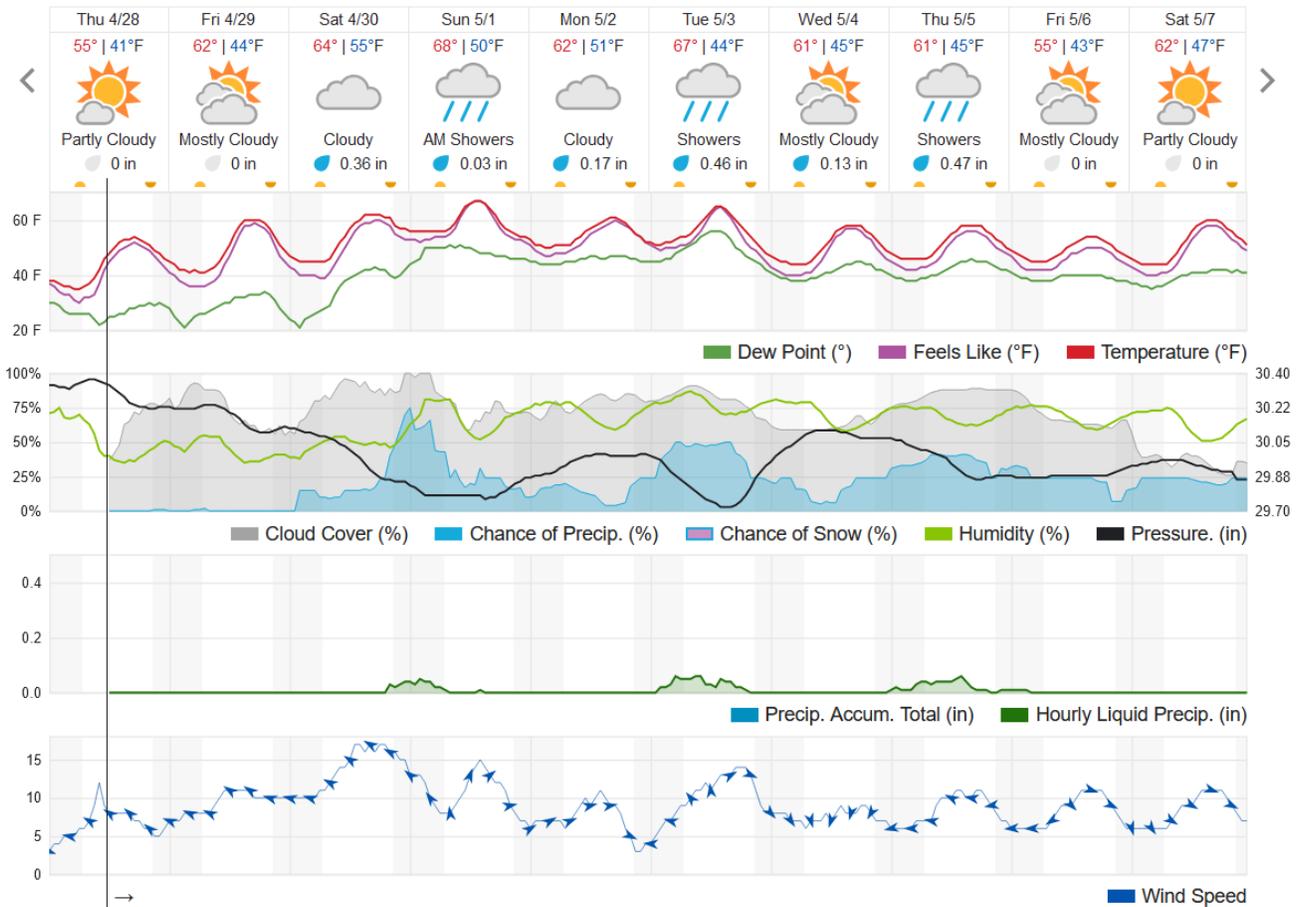


Soil moisture anomaly as measured by satellite by Crop-CASMA (Crop Condition and Soil Moisture Analytics), funded by NASA and USDA-NASS.

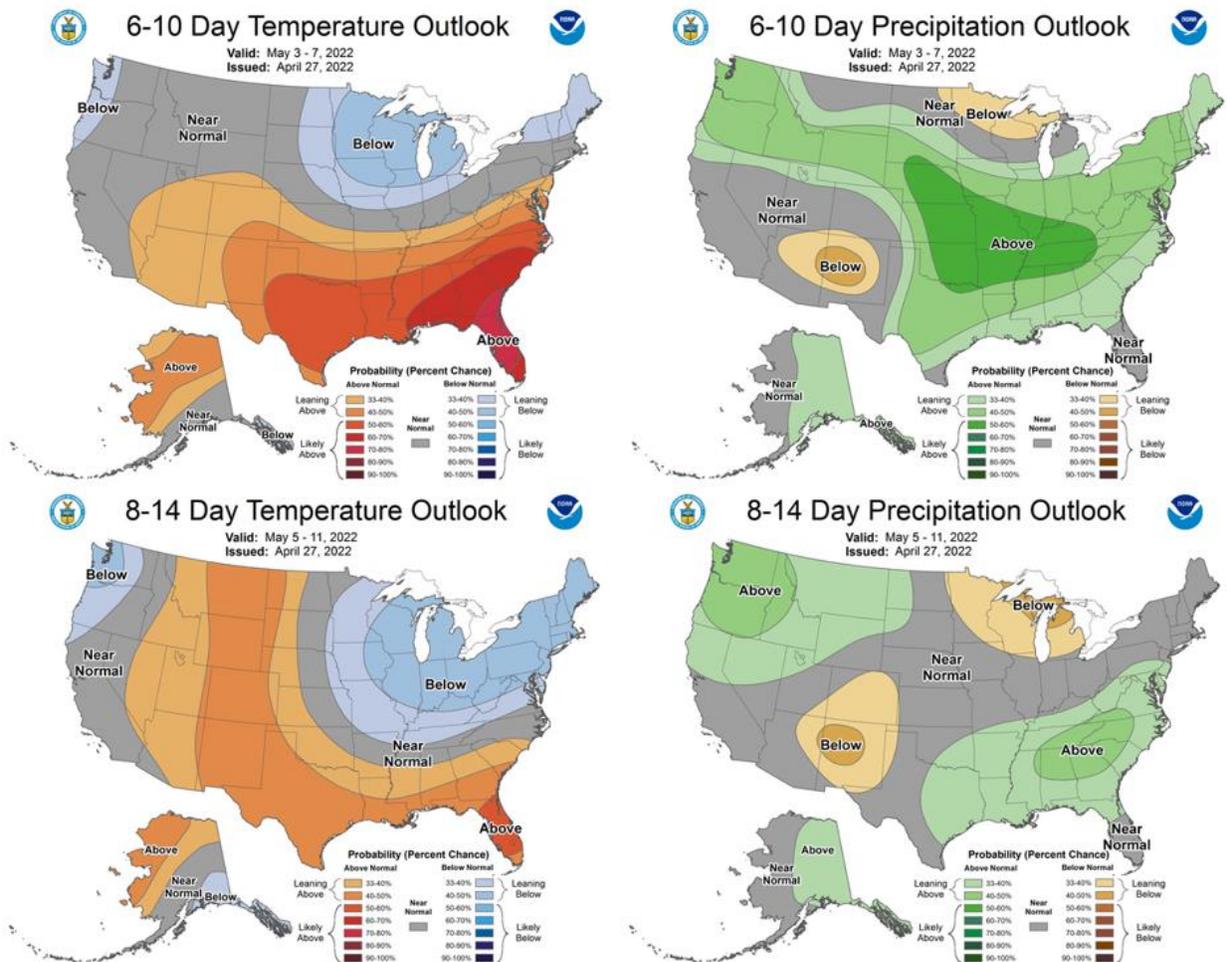
Southwest Michigan Field Crops Update – May 1, 2022 - 5



Precipitation forecast for Apr 28 – May 5.



The 10-day weather forecast for Kalamazoo according to [wunderground.com](http://wunderground.com).



The 6-10 day (May 3-7, top) and 8-14 day (May 5-11, bottom) outlooks for temperature (left) and precipitation (right).

**Crops and Pests**

**Potato** planting has made good progress over the past two weeks but remains well behind normal.

**Forage** growth has been relatively slow thus far, although MSU Extension forage educator Phil Kaatz says that the recent freeze events should not be a problem since temperatures overall this spring have remained cool. If a longer span of warmer temps spurring rapid growth is followed by a hard freeze, that is when yield-impacting injury can occur.

**Wheat** in Michigan is rated at 38% good to excellent and holding steady as of last week. Later-planted fields visited in St. Joseph County this week were approaching jointing (Feekes 6) as the first node was not yet visible. However, the growing point (aka primordial head, found by splitting the main stem longitudinally) is right at the soil surface, so jointing is not far away. Fields that were planted earlier last fall may have already reached jointing, and differences exist among varieties according to MSU Extension wheat specialist Dennis Pennington.

According to University of Wisconsin soybean and small grains agronomist Shawn Conley, nitrogen (N) apps should be made by this point as N uptake increases following this stage, and wheel tracks after jointing could result in broken stems and reduced yield potential. Read the article, "[Spring N application timing for Michigan winter wheat management](#)," by MSU Extension soil fertility specialist Kurt Steinke for more information on timing and importance of spring wheat fertility. Growth regulator herbicides should also be applied before the first joint develops as the synthetic auxins could impact the growing point. The [MSU 2022 Weed Control Guide for Field Crops \(E0434\)](#) contains a section on small grains with a very thorough treatment of herbicides and restrictions.

If the stand is dense and lush, begin scouting for early signs of disease pressure from Septoria or powdery mildew and assess whether an early fungicide application is warranted. If planting was delayed in the fall and N was not applied early in the spring, growth has likely not been that vigorous as temperatures have been mostly below normal over the past month. The article from MSU Extension on [early-season fungicide use on wheat for foliar diseases](#), although many years old, may provide useful insights for conditions we’re experiencing this year. MSU Extension field crop pathologist Marty Chilvers says he has not seen disease in research plots around the state yet, but once warmer temperatures arrive, farmers should begin scouting for disease signs and symptoms.

Small grains development in early spring using Zadoks and Feekes scales. Thanks to North Dakota State University for compiling this table.

Zadoks	Feekes	Description
		Tillering
20		Main shoot only
21	2	Main shoot and tiller
22		Main shoot and 2 tillers
23		Main shoot and 3 tillers
24		Main shoot and 4 tillers
25		Main shoot and 5 tillers
26	3	Main shoot and 6 tillers
27		Main shoot and 7 tillers
28		Main shoot and 8 tillers
29		Main shoot and 9 or more tillers
		Stem Elongation
30	4-5	Pseudo stem elongation
31	6	1st node detectable
32	7	2nd node detectable
33		3rd node detectable
34		4th node detectable
35		5th node detectable
36		6th node detectable
37	8	Flag leaf just visible
39	9	Flag leaf ligule/collar just visible



Wheat with several tillers in St. Joseph County (left). Splitting the main stem (right) shows the primordial head just above the soil surface with no visible node, indicating this wheat is still at Feekes 5 with Feekes 6 (jointing) just around the corner. Photos courtesy of Eric Anderson.

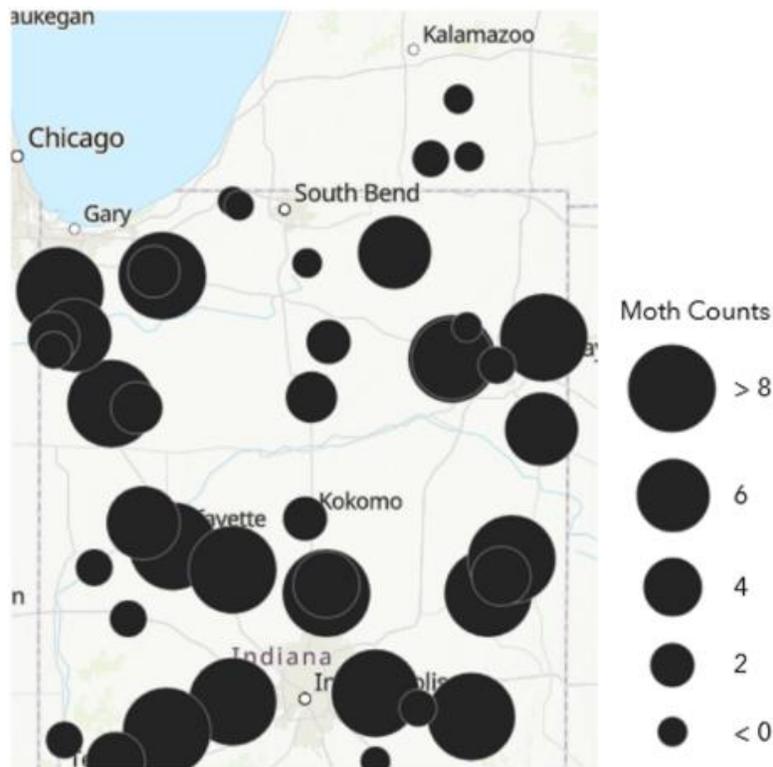


Fields with uneven growth and crop greenness would benefit from a nitrogen application prior to jointing. Photo courtesy of Eric Anderson.

**Insects.** Moth trap counts this past week saw an uptick as predicted with the strong southerly winds. While counts are still in the single digits per trap in Michigan, Purdue’s trapping network recorded black cutworm numbers in the teens in northwest Indiana (LaPorte, Lake) and 31 near Fort Wayne while true armyworm counts were in the teens at the two northern research stations for the week ending Apr 20. Purdue’s crop entomologist John Obermeyer gave a [recent reminder about the nature of moth trapping](#): “Monitoring moth arrival, and numbers captured, is an inexact science. We cannot predict with certainty that high moth counts will equate to high pest damage. Instead, it is best to understand the pest and how the next few weeks unfold. Should the moth flight continue at this pace AND fields remain untouched, then you might better understand why future articles might sound as though the ‘sky (or moths) is falling’.”

Moth trap counts for true armyworm (A1-4) and black cutworm (B1-3) in St. Joseph and Kalamazoo counties.

	12-Apr	19-Apr	26-Apr
A1	3	1	3
A2	0	0	5
A3	1	1	0
A4	0	0	0
B1	0	1	4
B2	0	0	4
B3	0	0	5



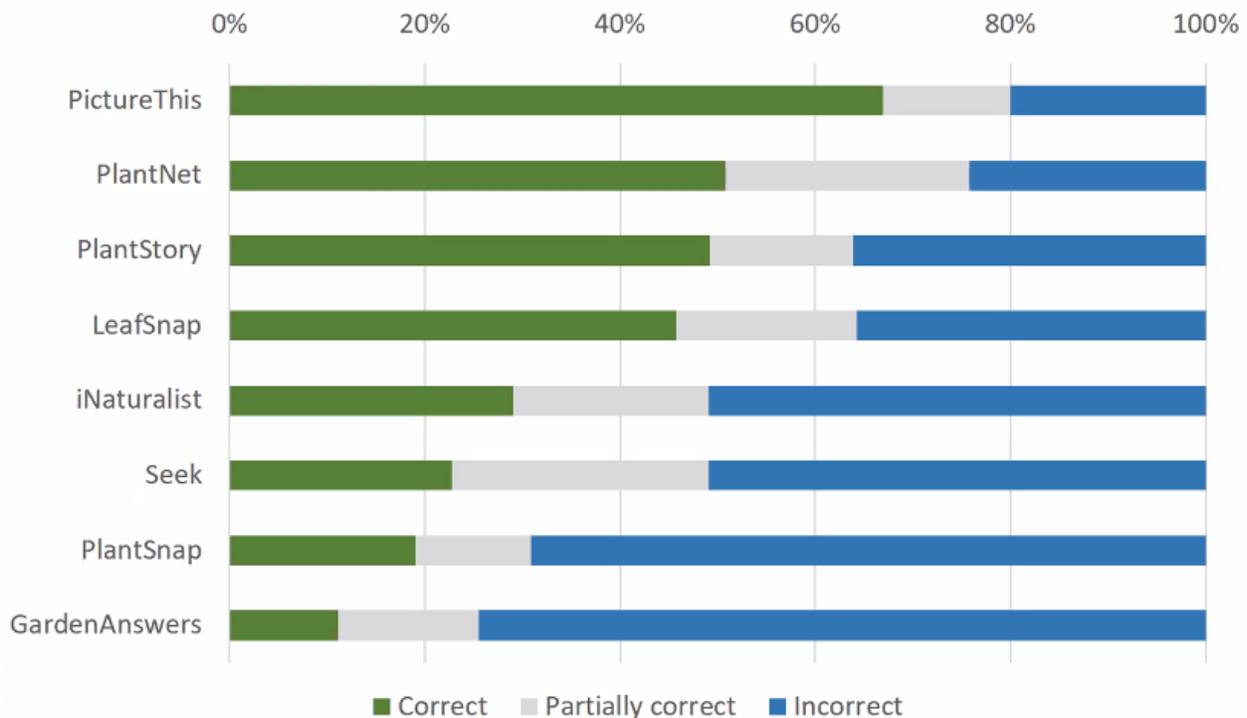
Black cutworm moth trap catches in Indiana for the week ending Apr 20. Thanks to MSU Extension field crop entomologist Chris DiFonzo for slogging through Purdue’s trap counts and entering them into the [Great Lakes and Maritimes Pest Monitoring Network database](#).

**Apps for weed/plant identification** was the topic of this week’s [MSU Extension Field Crops Virtual Breakfast](#) with weed diagnostician Erin Hill. Weed ID is important to know which weeds you actually have so you can understand their life cycle, which herbicides are effective against them, and the best timing for

control. Although books and websites with dichotomous keys can be helpful, they require a certain prior knowledge of plant morphology and terminology. Hill has been working over the past several years with numerous plant ID apps for smartphones to see which ones are most accurate.

In 2021, Hill and the students in her Weed Science Lab course tested eight different apps to see which ones would accurately identify a range of plants including vegetative and flowering grass and broadleaf weeds, flowering ornamentals, and winter annual seedlings. The results showed a clear winner—[PictureThis](#)—although differences existed among apps in their ability to identify different types of plants. For example, even the best app correctly identified vegetative grass weeds less 50% of the time. Although they tested only the free versions of these apps, several have paid versions ranging from a one-time fee of \$5 to a \$30 annual subscription.

To verify whether your app is correct for a weed you are not familiar with, you can check the [USDA Plants Database](#) and the [Michigan Flora website](#) to try to confirm. You can also send pictures or plants to the [MSU Plant and Pest Diagnostic lab](#) on campus for assistance. If you have a plant ID app you think is good that they have not tested, [email Dr. Hill](#) and make a suggestion.



Evaluation of the ability of various plant ID smartphone apps to correctly identify several different plant species in 2021. Graph courtesy of Erin Hill.

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](#).

## Calendar

Titles are clickable links to online content when highlighted and underlined

- May 5** [Virtual Breakfast – Postemergence Weed Control with Erin Burns](#) . 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.
- May 12** [Virtual Breakfast – Head Scab in Wheat with Marty Chilvers](#). 7-8am. Register online once for the entire series.
- May 13** St. Joseph County Emergency Forest Restoration Program signup deadline
- May 19** [Virtual Breakfast – Sidedress Corn Recommendations with Kurt Steinke](#). 7-8am. Register online once for the entire series.
- May 20-21** [Midwest iHemp Expo](#). Lansing Center, Lansing, MI. Register online.
- May 26** [Virtual Breakfast – Dry Bean Planting with Scott Bales](#). 7-8am. Register online once for the entire series.
- May 31** Last Day to Request Commodity Loans 2021 Corn, Soybeans & Sorghum
- July 15** Final Date to Report Crop Plantings & CRP

## MSU Extension Digest Briefs

PUBLISHED ON APRIL 28, 2022

- [WARNING: HERBICIDE APPLICATIONS UNDER COLD CONDITIONS INCREASE INJURY TO WINTER WHEAT](#) - Cold temperatures and crop growth stage could alter weed control strategies in winter wheat.
- [SOYBEAN PLANTING CONSIDERATIONS: PLANTING DATE, SEEDING RATE AND ROW SPACING IMPLICATIONS](#) - Optimal planting date, seeding rate and row spacing are important to maximize soybean yield and profits. Check out factsheets summarized by university agronomists.

PUBLISHED ON APRIL 21, 2022

- [SOYBEAN PLANTING CONSIDERATIONS FOR MAXIMUM PROFITS](#) - Matching planting time with other management decisions can increase yield while minimizing input costs.

PUBLISHED ON APRIL 20, 2022

- [IS WATER QUALITY A TRADE-OFF FOR THE BENEFITS OF NO-TILL?](#) - Couple no-till in fine-textured soil with subsurface placement or band to reduce phosphorus loss.
- [CONTRIBUTORS TO INCREASED PHOSPHORUS LOSS IN DRAINAGE WATER](#) - Increased phosphorus loss due to greater phosphorus availability in the soil and rapid water transport.

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