

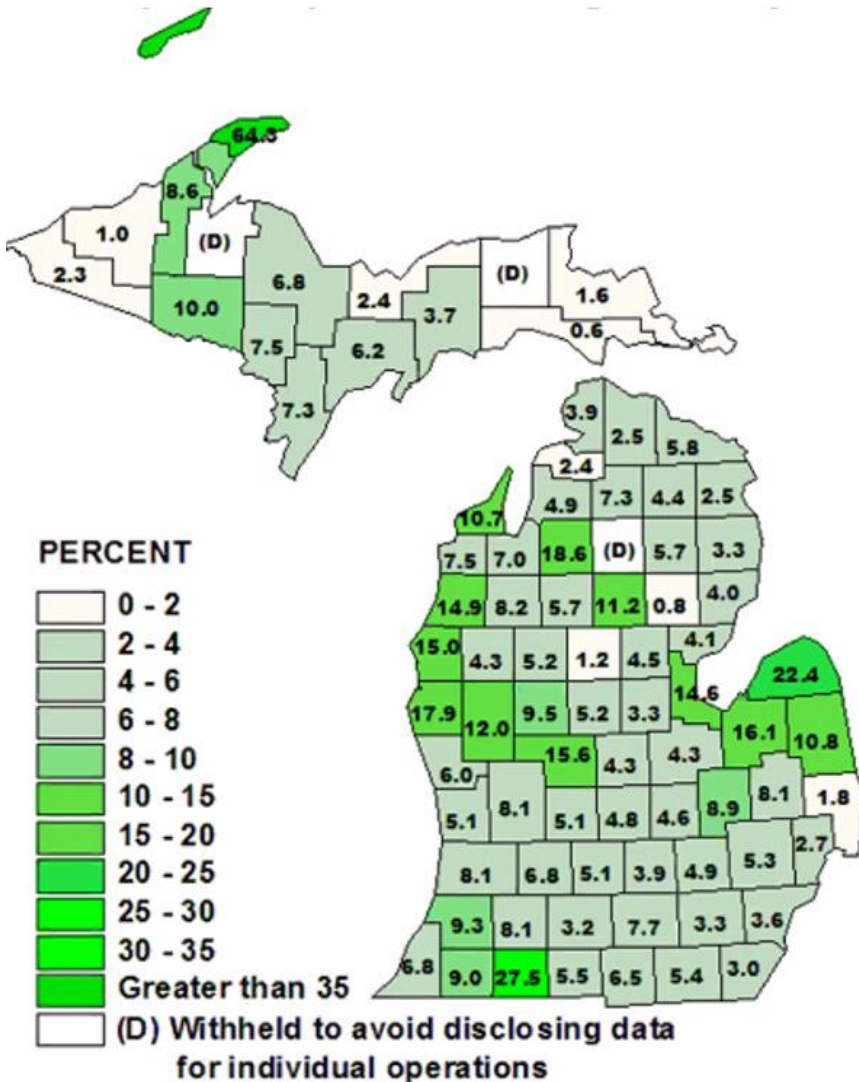
Southwest Michigan Field Crops Updates August 1, 2020

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.

Cover Crops Following Wheat

In this week's [MSU Extension Field Crops Virtual Breakfast](#), sustainable agriculture educator Dean Baas talked about cover crops in general but focused on the value of planting them following wheat harvest.

Michigan ranks 8th in the nation in cover crop acreage, and our numbers are up 54% from 2012. The top counties in MI are Huron, St. Joseph, Tuscola, Sanilac, and Montcalm.



Cover crops as a percent of ag land by county according to the 2017 NASS Ag Census. Compiled by Dean Baas.

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One of the main benefits of planting a cover crop following wheat is the length of time that the cover will be growing and thus the wider the selection of cover crop species that can be expected to succeed before a killing frost. You can use the [Midwest Cover Crop Council's Cover Crop Decision Tool](#) to help you decide which species are the best options given your management goals. Note in the screenshot of the tool below that you can select up to three cover crop attributes to narrow down your best options. According to a USDA Sustainable Agriculture Research and Education Program (SARE) survey with over 1300 submissions, the top rated cover crop benefits are:

1. Increases overall soil health
2. Reduces soil erosion
3. Increases soil organic matter
4. Reduces soil compaction / Fibrous root systems
5. Provides nitrogen scavenging
6. Controls weeds

Midwest Cover Crops Council - Cover Crop Decision Tool
Michigan: St. Joseph County Seeding Dates

NEW UPDATE!
HOVER OVER COVER CROP. CLICK TO REVIEW THE INFORMATION SHEET.

Location Information: Michigan | St. Joseph
 Cash Crop: Wheat | Plant Date: 10/01/2019 | Harvest Date: 07/15/2020
 Drainage Information: Moderately Well Drained | Flooding: No

Goal #1: Select an attribute | Goal #2: Select an attribute | Goal #3: Select an attribute

Attributes: Freeze Risk to Establishment, Frost Seeding, Growing Period: Requires Aerial Seeding or Interseeding of Cover Crop

	Jul 15	Aug 1	Aug 15	Sep 1	Sep 15	Oct 1	Oct 15	Nov 1	Nov 15	Dec 1	Dec 15	Jan 1	Jan 15	Feb 1	Feb 15
NONLEGUMES															
Buckwheat															
Millet, Japanese															
Millet, Pearl															
Oats															
Rye, Winter Cereal															
Ryegrass, Annual															
Sorghum-sudangrass															
Sudangrass															
Triticale, Winter															
Wheat, Winter															
BRASSICAS															
Mustard, Oriental															
Radish, Oilseed															
Rapeseed/Canola															
Turnip, Forage type															
LEGUMES															
Alfalfa - Dormant															
Alfalfa - Non-dormant															
Clover, Crimson															
Clover, Red															
Pea, Field/Winter															
Sweetclover															
Vetch, Hairy															
MIXES															
50% HV/50% WC Rye															
50% W Pea/50% OSR															
60% A Ryegr/40% OSR															
60% Cr Cl/40% A Ryegr															
60% Cr Cl/40% Oats															
60% Oats/40% OSR															

If you missed the live Virtual Breakfast session, you can view the recording on the [MSU Extension Field Crops Team website](#). To learn more about different cover crop mix recipes and other recommendations, visit the [Cover Crops](#) webpage on the MSU Extension website. Be sure not to miss the [Cover Crop Virtual Field Day](#) on September 2nd—register online.

COVER CROPS
VIRTUAL FIELD DAY

FROM THE FIELD

September 2, 2020 9-10:30 a.m.
 Registration link:
<https://events.anr.msu.edu/virtuscovercrops2020>

This virtual tour will highlight the why and how of inter-seeding cover crops in a regional manner. Roundtable discussions on soil health, erosion management, timing, weed management, organic systems, and forage and grazing will conclude the program.

Featuring experts from the MSU Cover Crops Team
https://www.cnr.msu.edu/cover_crops/experts

MICHIGAN STATE UNIVERSITY | Extension | MICHIGAN STATE UNIVERSITY | AgBioResearch

Don't Plant Those Seeds!

Across the United States, people have been reporting receiving unsolicited packages containing seeds from China in the mail. The Michigan Department of Agriculture and Rural Development (MDARD) is warning residents who receive these packages not to open or plant the seeds.

The seeds are usually sent in white packages displaying Chinese lettering and the words “China Post.” Most recipients say they did not order anything, and that the packaging was labeled as jewelry. Some recipients have reported ordering seeds on Amazon and receiving these seeds.

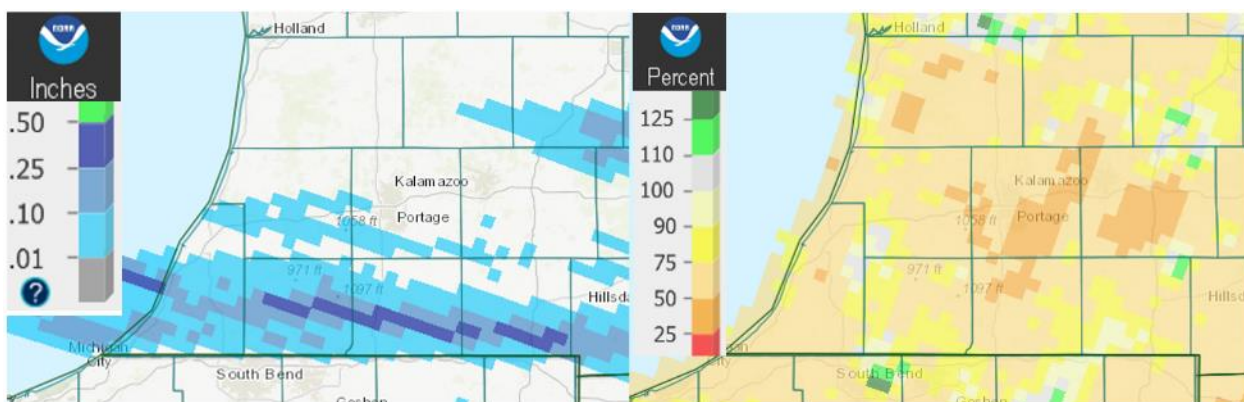
“If you receive unsolicited seeds from another country, do not plant them. If they are in sealed packaging, do not open the package,” said Mike Philip, director of MDARD’s Pesticide and Plant Pest Management Division. “We don’t know what type of seeds are in the packages, but we do know they come in a variety of sizes and colors, with some reported to be very tiny. These unsolicited seeds could be invasive, introduce diseases to local plants, or be harmful to livestock.”

The packages may be a part of a “brushing” scam. A brushing scam is an exploit by a vendor used to bolster product ratings and increase visibility online by shipping an inexpensive product to an unwitting receiver and then submitting positive reviews on the receiver’s behalf under the guise of a verified owner.

If you receive an unsolicited package of seeds from China, hold on to the seeds, packaging and mailing label, and contact MDARD’s Customer Service Center, Monday-Friday, 8 a.m. – 5 p.m., at 800-292-3939 or via MDA-Info@michigan.gov.

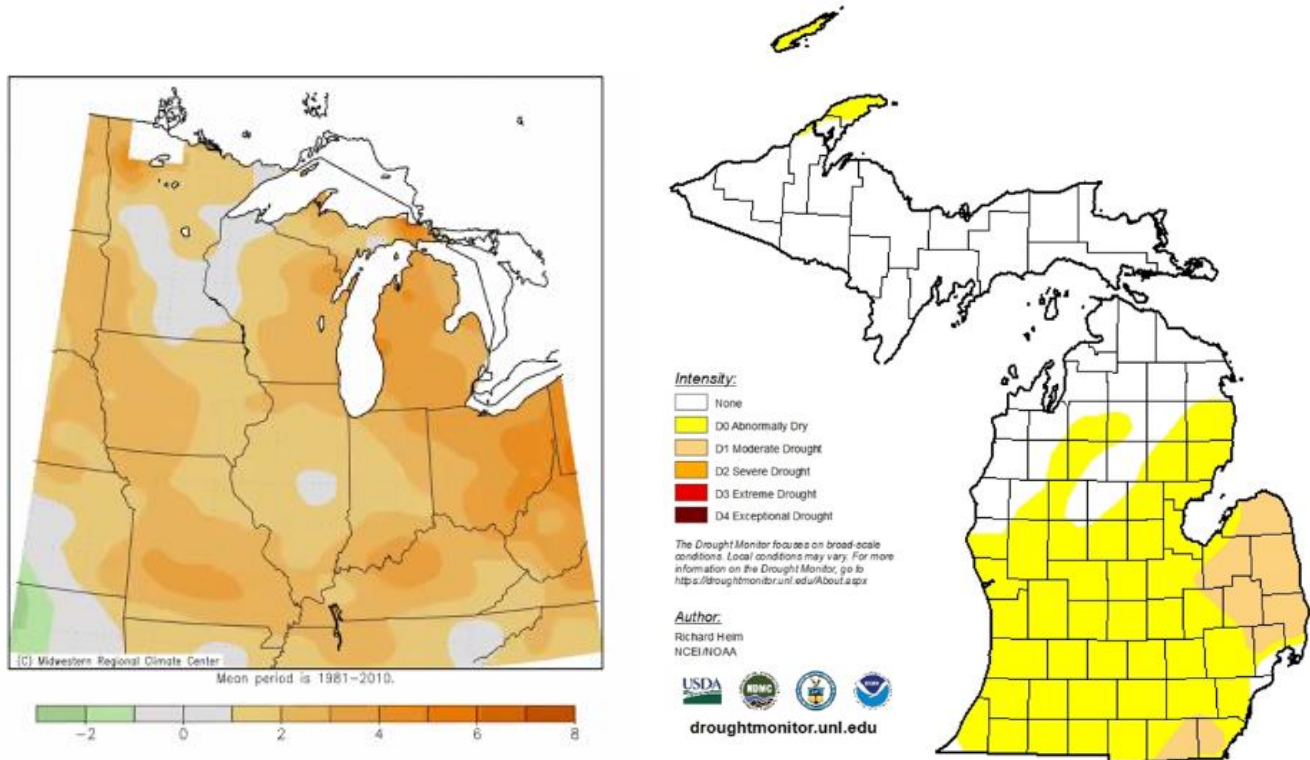
Weather

The warmer-than-normal trend for the summer continued this past week. Coupled with the dry conditions from this past week—and really the past month—these warm summer temperatures have taken their toll on crops in the region, and we are now currently under D0 (abnormally dry) status according to the latest US Drought Monitor. According to the latest precipitation forecast, this is not likely to improve in the coming week with only 0.50–0.75 inches of rain expected this next week. The one bright spot in the forecast is for cooler-than-normal temperatures beginning next Monday that are being set up by an unusually strong upper air trough that is forming over the Midwest. This will drive the weekly potential evapotranspiration rates down slightly (1.1 to 1.2 inches per week). These cool conditions are expected to extend through the first week of August. The 8-14 day outlook looks to reverse that with warmer and wetter conditions returning, but according to MSU Extension ag climatologist Jeff Andresen, the confidence level for that prediction is currently low.

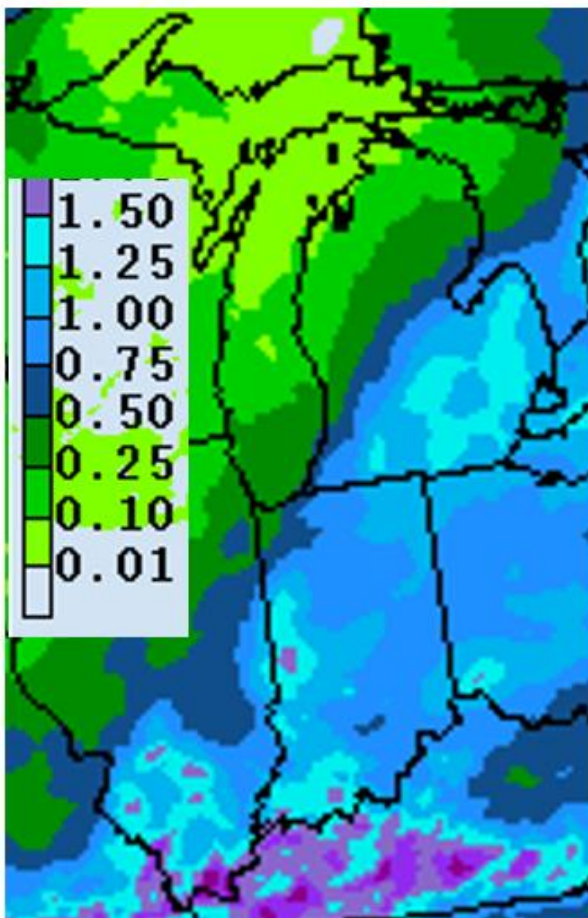


Rainfall totals for the past 7 days (left) and percent of normal over the past 30 days (right) as of July 30.

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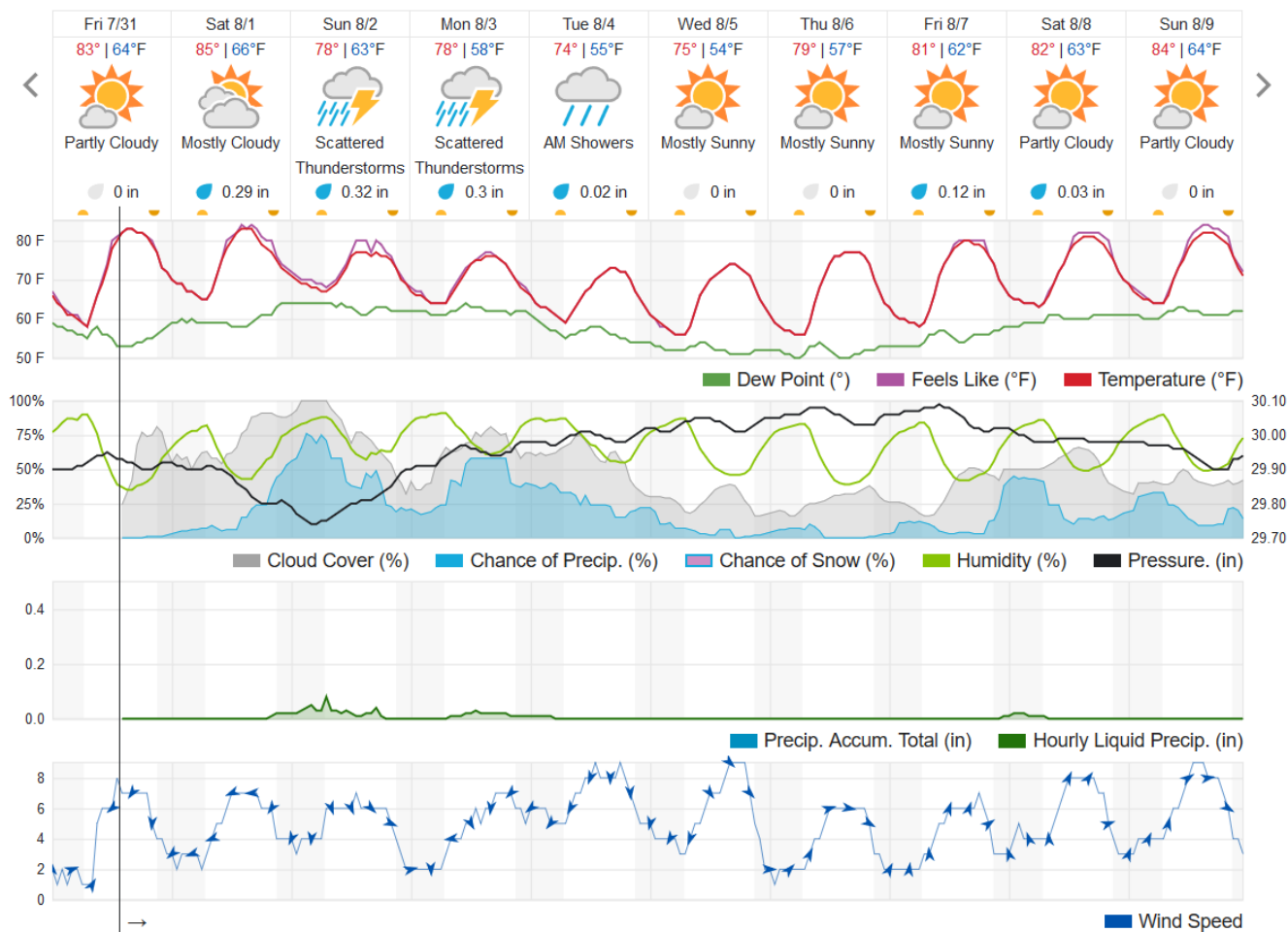


Mean temperature departure from normal, Jul 22-28 (left) and the US Drought Monitor, released July 30, 2020 (right). The drought conditions are slowly overtaking us.

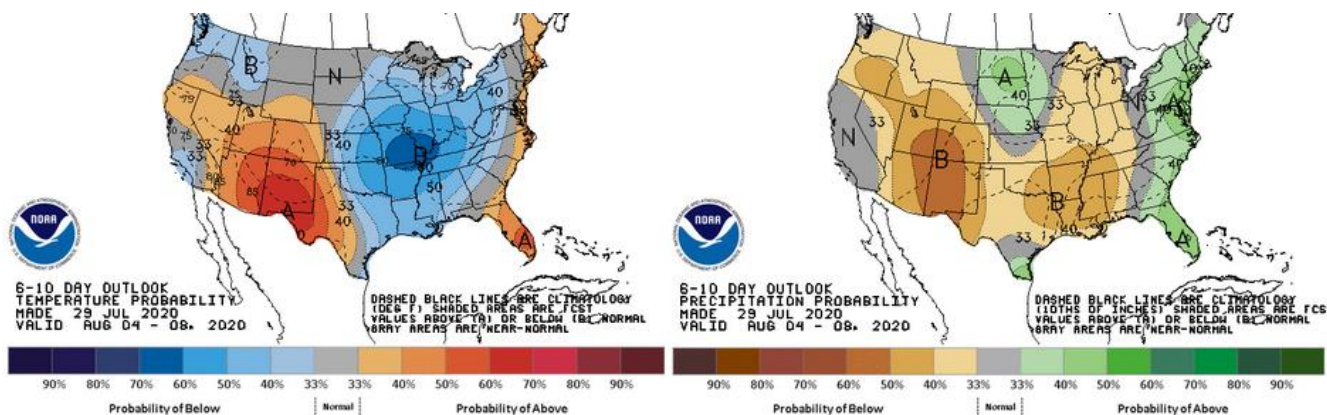


Precipitation forecast for Jul 31-Aug 7, 2020. Most of this is expected Sunday through Tuesday next week.

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The 10-day forecast for Kalamazoo as of July 31, 2020.



The 6-10 day (Aug 4-8) outlook for temperature (left) and precipitation (right) as of July 30, 2020. This is a departure from the previous model releases.

Crop and Pest

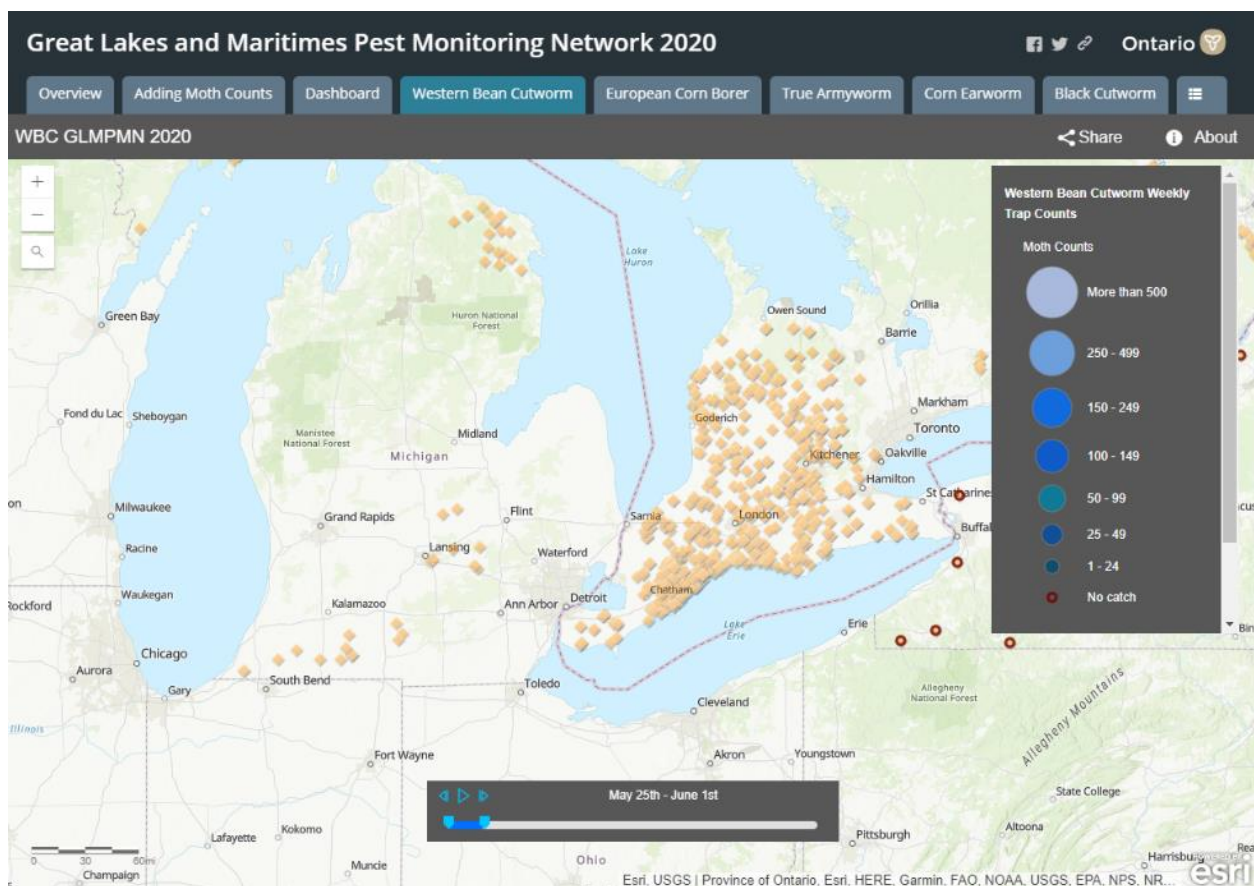
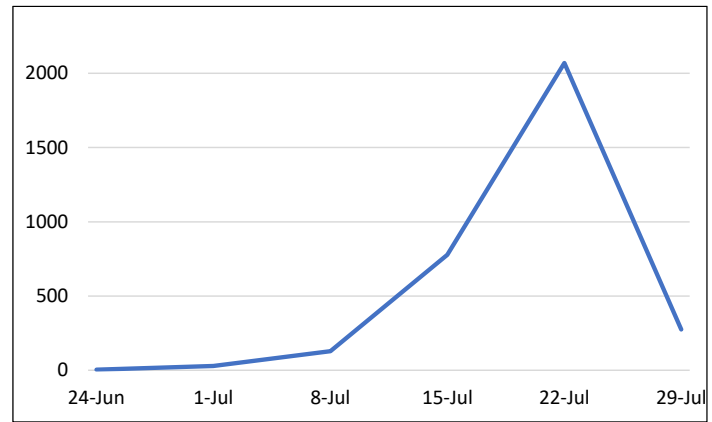
Crops. Silks are turning brown on early planted **corn**, signaling the end of pollination, while later planted fields have not yet tasseled. I have not seen signs yet of tar spot, and I have not found western bean cutworm (WBC) egg masses, hatched eggs or larvae in fields visited. See below for more on WBC from MSU Extension field crops entomologist Chris DiFonzo. Purdue Extension entomologist Christian Krupke recorded a [video describing WBC scouting](#) and the difficulty of finding larvae after tasseling has begun. Early-planted **soybean** fields are beginning pod formation with ¼” pods forming toward the base of the plant. Officially, beginning pod stage (R3) is when pods 3/16” long are found at the top four nodes in over half the field. Fields I have visited showed minimal signs of insect feeding from Japanese beetle, bean leaf beetle and grasshopper. Some leaf yellowing near the base of the plant was seen, likely due to Septoria leaf spot, but no other diseases were seen [fields were irrigated and planted at both 15” and 30”].



Purple leaf sheath lesions in corn at silking (R1). These are generally found at the base of leaf sheaths and are likely caused by saprophytic fungi feeding on tassel debris that has fallen into the leaf collar. It is cosmetic and not thought to impact yield.

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Pests. Western bean cutworm (WBC) trap counts ramped up in Indiana, Ontario and Michigan over the past two weeks. This graph shows the combined catches from 24 Purdue moth trap sites in the top three tiers of counties in Indiana. You can also see moth capture data from several locations in Michigan that are posted on the [Great Lakes and Maritimes Pest Monitoring Network](#) – see the screenshot below. After you select the Western Bean Cutworm tab, zoom in to your region to see the trapping sites. Grab the slider at the bottom of the screen to see trap counts at different points in time. The Extension field crops team has four traps set in St. Joseph and Kalamazoo Counties and the first counts are posted on the GLMPMN. If you are interested in contributing to this network this year or in the future, read through the information under the Adding Moth Counts tab.



MSU Extension field crops entomologist Chris DiFonzo sent out the following report on July 24.

*Western bean cutworm flight is increasing. Unconfirmed reports of hundreds in traps in the Montcalm County area (a historic hot spot with favorable sandy soils). In a bucket on campus, 6 moths last week & 60 this week. Egg masses, fresh and hatching, also were reported. The corn is further ahead of normal, and many fields in southern and central Michigan are already past having a fresh tassel. These fields will rapidly become less attractive for egg laying. That means that moths will seek out younger corn, and perhaps may accumulated in later-planted fields in your neighborhood. The threshold in corn is 5% of the plant with an egg mass. Remember that this threshold is CUMULATIVE. i.e add the % infestation from last week to the next week's %. A tip sheet for WBC in corn is attached to this email.

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If the corn isn't attractive anymore, females will switch over to dry beans in areas where they are grown. It's impossible to find egg masses and small larvae in beans without making it your career. Instead, use a total trap catch over 120-150 as a cue that populations are high in your area. I also suggest walking nearby corn for egg masses. Then walk dry bean fields to look for pod feeding. The optimum timing for a spray in dry beans tends to be the first week of August (not too early or late). Here is a [tip sheet for WBC in dry beans](#).

* Other caterpillars in corn - Saw both true armyworm and fall armyworm in corn fields on campus. Larvae were still small (3rd or 4th instar), not very numerous, and in a weedy section of a field. But non-Bt and organic fields do merit a walk-thru to check for these species plus western bean cutworm and corn borer.

*Western corn rootworm: adults have emerged. They will feed on (scrape) leaf surfaces until the tastier tassels or silks emerge.

*Several people asked about a tiny green bug that is in great numbers in some corn fields. It is the rice leaf bug, *Trigonotylus caelestialium*, a handsome and striking bug with a bright green body and pink antennae. This species prefers grasses, but I have seen it on hemp too. Nothing to worry about, its simply doing well this summer.

*Grasshoppers: This is a banner year for hoppers. In corn and soybeans, hoppers are messy feeders and create ragged leaf damage. Hopper poo looks like small brown dirt pellets (they often use the corn whorl as a litter box). The infestations that I've seen were in rows along the field edge, where the hoppers moved in from the ditch or roadside. The feeding petered out further into the field so spraying isn't necessary.

*Japanese beetle: Adult are feeding in corn and soy. Like grasshoppers, the beetles often congregate on edges near lawns, grassy roadsides and ditches, where the grubs probably developed. Groups of mating beetles will defoliate a section of beans or clip the silks of a few corn plants, but feeding usually drops quickly further into the field.

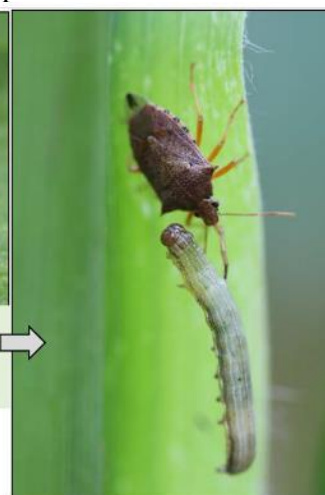
*Stink bugs: Several people sent me pictures of mystery egg masses, sometimes with tiny insects gathered around. These are stink bugs. The eggs are distinctly barrel shaped, and some types have a spiky crown. Hatch is synchronized; the colorful little bugs stay by the egg mass for a bit before dispersing over the plant. Most of the plant-feeding stink bugs that I've collected in corn and beans are the brown 'one-spotted' stink bug. One-spotted adults move out of wheat as it dries down, into corn and soy where they lay eggs. If you see a mass of stink eggs which are extremely spikey, this could be *Podisus maculiventris*, the spined soldier bug. This is a voracious predatory stink bug which attacks other insects, including pest caterpillars in corn.



Plant feeding stink bugs near their egg mass



Above, an egg mass of the spined soldier bug, a predatory stink bug. Adults (right) feed on other insects like this armyworm in non Bt corn. Picture taken yesterday on campus.



Photos courtesy of Chris DiFonzo

*Other defoliators in soy: I've seen many other defoliators in soybean besides hoppers and Japanese beetles. Bean leaf beetles are plentiful in some fields, chewing the small round holes. Thistle caterpillars and leafrollers are both present, feeding from webbed shelters on leaves. The threshold for defoliation in beans is quite high, 20% of the canopy. Typical defoliation levels in Michigan soybean fields run less than 1%.

*Leafhoppers: I can't stress enough the importance of sampling alfalfa and dry beans for potato leafhopper. Don't wait until you see yellowing! This is one instance where damaged has already occurred, and spraying will probably pay. My last Fonz Facts, sent July 6, discussed leafhopper sampling and thresholds.

Water Usage and Irrigation. The most critical time for crops is during flowering—flowering (R1-R2) in soybean and tasseling (VT) and the three weeks thereafter for corn. With the water stress that our crops are under this summer, those who have the ability to irrigate are thankful right now for that ability. MSU and Purdue irrigation educator Lyndon Kelley has written an article, “July/August corn water needs,” to discuss this crucial time. Here is a snippet from that article.

“Irrigated corn has its highest water use and realizes its greatest potential benefit from irrigation during the week of tasseling and the following three weeks. Most irrigation scheduling programs have corn using 115 to 120 percent of a 6-inch grass reference evapotranspiration (ET_0), which translates to a water need for as much as 2 inches per week in cornfields in the peak water use stages.

“Supplying adequate water during the week before and three weeks after tasseling is critical to obtain top corn yields. This period often occurs during the dry point in the summer when rainfall rarely meets crop water needs. In early and late summer, producers can save irrigation water and energy by using rainfall and “stored” soil moisture as much as possible. Irrigators striving for water and energy saving will let the crop deplete the available soil moisture to almost 50 percent, the point at which corn leaves will start to roll on a hot afternoon. During the critical week before and three weeks after tassel emergence, maintaining higher soil moisture reduces yield risk and maximizes water use efficiency. Although using a lower daily water use (100% of ET_0), corn at beginning dent stage through full dent needs adequate water to avoid light test weight grains.”

Calendar

Titles are clickable links to online content when highlighted and underlined

Aug 6+ [MSU Extension Field Crops Virtual Breakfast](#). 7:00-7:30 AM. [Participants must sign up](#) to receive an email notification with instructions for joining the Virtual Breakfast. You only need to do this once and you will receive the Zoom link and call-in phone number, as well as weekly reminders every Wednesday.

The Virtual Breakfast has become one of our team's flagship outreach programs. Here is the tentative schedule. [RUP credits are now available for the live sessions](#) and **NEW**** we were able to get approved to offer 1 credit for each live session. If you can't participate in the live session on Thursdays at 7 a.m., you can view the recorded version at any time. Recordings are closed-captioned and available on the [MSU Extension Field Crops webpage](#) and social media platforms: [Spotify](#), [Apple Podcasts](#), [YouTube](#), [Facebook](#) and [Twitter](#).**

Aug. 6 – Irrigation and diseases with Lyndon Kelley and Martin Chilvers

Aug. 13 – Alfalfa autotoxicity with Kim Cassida

Aug. 20 – Grain marketing with Aleks Schaefer

Aug. 27 – Wheat planting with Dennis Pennington

Sep. 3 – Corn silage mycotoxins with Manni Singh

Sep. 10 – Industrial hemp with Kurt Thelen

Aug 26 [MSU Extension Soybean Virtual Field Day](#). Soybean educator Mike Staton leads the soybean virtual field day with an emphasis on white mold research and outreach. Visit the [Virtual Field Day](#) website to register.

Aug 28 [CFAP Application Deadline](#). USDA's Coronavirus Food Assistance Program (CFAP) provides direct payments to offset impacts from the coronavirus pandemic. The application and a payment calculator are [now available online](#), and USDA's Farm Service Agency (FSA) staff members are available via phone, fax and online tools to help producers complete applications.

- Sep 2** **MSU Extension Cover Crop Virtual Field Day.** Sustainable agriculture educator Dean Baas delivers research information on cover crops for this virtual field day. Visit the [Virtual Field Day](#) website to register.
- Sep 9** **MSU Extension Corn Virtual Field Day.** 9:00 – 11:00 AM. MSU Extension specialists and educators will focus on tar spot and uneven corn development in this live, interactive program. Visit the [Virtual Field Day](#) website to register.
- Sep 30** **Final Date to Update 2020 PLC Yields.** Contact your local USDA’s Farm Service Agency (FSA) staff members for assistance.

MSU Extension Digest Briefs

Southwest Michigan field crop update – July 30, 2020

PUBLISHED ON JULY 30, 2020

Hot and dry...have we heard that before? The southwest region is now being categorized as “abnormally dry,” and rainfed crops will continue to struggle with little precipitation in the coming week.

July/August corn water needs

PUBLISHED ON JULY 30, 2020

The water needs of corn peak in July and taper off in August as we near dent stage.

Cover crops are on deck as wheat and other small grains are being harvested

PUBLISHED ON JULY 28, 2020

Cover crops after wheat can help to protect your soil and minimize pest pressure for the upcoming crop.

Identifying risks for COVID-19 exposures in the workplace: Agriculture

PUBLISHED ON JULY 27, 2020

A new online tool helps agricultural employers evaluate and reduce COVID-19 exposure risks.

Million-dollar rain

PUBLISHED ON JULY 23, 2020

What is 1 inch of rainfall worth to irrigators at peak time of importance?

Potato leafhoppers are doing more harm than alfalfa growers may realize

PUBLISHED ON JULY 23, 2020

Hot, dry weather has led to high numbers of leafhoppers in 2020.

White mold management in Michigan dry beans

PUBLISHED ON JULY 22, 2020

Each year, white mold is the most yield limiting disease in Michigan dry beans. Learn what to watch for and how to protect yield.

Eric Anderson

Michigan State University Extension

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