

Southwest Michigan Field Crops Updates

May 10, 2019

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.

Weed Control Reminders

As temperatures turn unseasonably cool again over the next few days and next week is predicted to be fairly windy, I thought it would be a good time to remind folks about a few important factors when spraying burndown herbicides. Purdue's weed specialist, Bill Johnson, [recently shared](#) some reminders for spring weed control.

1. Sprayers will be rolling again soon as fields dry out, and some applications may be done in less than ideal wind conditions and may result in drift issues in the near future. Growers need to be patient and wait, especially near vulnerable areas.
2. Burn down weed control is compromised when applications are made immediately following cool, cloudy conditions. Optimum weed control occurs when herbicide applications are made when weeds are actively growing. Also, weed control is more difficult when winter annuals are maturing (flowering and setting seed). Herbicide rates should be increased under these conditions. Winter annuals that are in reproductive stages and larger in growth are tougher to control and will require an increased rate of glyphosate for effective control. Rates of 1.25 to 1.5 lb ae glyphosate (35-42 fl oz Roundup PowerMax) will be needed to effectively control winter annuals in fields that have yet to receive any burndown applications.
3. It is also recommended that farmers include 2,4-D (for Enlist soybean or corn), dicamba (for Xtend soybean and corn) and/or a saflufenacil product (Sharpen, Optill, Optill PRO, or Verdict) into the tank to improve control of the larger broadleaf weeds.
4. ATS is sometimes incorporated into a herbicide tank mix during burndown, to serve as a sulfur fertilizer application. The ATS in the tank mix may actually antagonize the herbicide resulting in poor control of winter annuals like wheat and annual rye.

Planting in Wet Conditions

It appears that we may have a bit of a reprieve from the wet weather over the next week with only a couple of chances (50% or less) of rain over the weekend and next Wednesday. That means this may be the next good time to get planters rolling. I thought this would be a good time to remind folks about the importance of being patient and not planting into soils that are too wet. Below is a portion of an article that MSU soybean educator Mike Staton published this week—the full article can be found at the link under MSUE Digest Briefs.

The planting delays and wet soil conditions will increase the potential for sidewall compaction to occur this spring. Sidewall compaction includes all soil compaction and soil smearing in and around the seed furrow and can restrict root growth and reduce crop yields. Sidewall compaction typically occurs when planting into soils that are too wet, planting too shallow and setting too much down pressure on the gauge wheels and closing wheels. Sidewall compaction is never beneficial and will be the most damaging when the soil becomes dry after planting.

A few of [University of Nebraska's agricultural engineer, Paul] Jasa's recommendations are listed below:

- Reduce the down pressure on both the gauge wheels and the closing wheels. This is one of the most important adjustments you can make to avoid sidewall compaction.
- Try to leave some crop residue over the row to delay soil drying and reduce crusting.
- Level the planter from front to rear or possibly operate it slightly tail down to improve seed-to-soil contact and seed furrow closing. The closing wheel arm must be level for angled closing wheels to function properly.

- Use seed firmers to improve seed-to-soil contact when using two spiked closing wheels per row to breakup sidewall compaction.
- Various types of spiked closing wheels are available. In general, closing wheels having long straight tines are more aggressive than those having short or curved tines. The aggressive closing wheels tend to dry the soil and may require a seed firmer to improve seed-to-soil contact and a drag chain to level the soil.
- Consider adding just one spiked closing wheel per row. This will break up the sidewall compaction on one side of the furrow and close the seed furrow more effectively in a wide range of conditions.
- Staggering the closing wheels will reduce the potential for the seed furrow to open up as the soil dries. If using one spiked wheel and one standard rubber wheel, place the spiked wheel in front.

AW and BCW Counts and Other Issues

Catches in Indiana's northern tier of counties for BCW are still mostly in the single digits, but a few locations (St. Joseph, Pulaski and Whitley Counties) had as many as 38. Armyworm counts for Pinney (NW) were still respectable (51), but at NEPAC (NE) the counts continue to increase with 1222 caught between May 2-8. Counts from MI traps are below. Reminder: Purdue uses Hartstack traps while I use bucket traps so my numbers won't be nearly as high as theirs, but we are looking for peak flight timing, not absolute numbers, in scouting and making management decisions.

MSU field crops entomologist Chris DiFonzo wrote a timely article a couple of years back (["Spring moth flights and infestation potential for corn and wheat"](#)) highlighting some of the main scouting factors and impacts of these species. Here is a brief excerpt on AW and wheat.

In wheat, larvae feed on the leaves and also may clip heads. As small grains mature and dry down, larvae can "march" like an army en masse into neighboring corn fields. Larvae feed at night, but hide near the base of plants or down in corn whorls during the day. Besides damage, a give-away of armyworm during the day is to look for large cylindrical frass pellets in the whorl of corn or on the ground in a wheat field.

For armyworm, there isn't a trap catch scouting threshold per se, but trap numbers have been high; I would start scouting fields in about three weeks, looking for leaf damage and frass or larvae in the whorl (larvae may be on the ground at base of plants). If you have limited time to scout corn in May and early June, concentrate on:

1. Non-Bt corn fields, since most Bt hybrids contain at least one trait that controls armyworm and cutworm.
2. Fields where annual weed pressure was heaviest, or where a cover crop was terminated late.

For armyworm on wheat, the story is different and not tied to weed control because egg laying occurs directly in small grains in spring. Thus, armyworm outbreaks in wheat tend to occur on a wider scale, with most or all fields in a neighborhood infested. High trap captures are an alert to scout for leaf feeding so that populations can be managed quickly across an area before head clipping occurs. Walk fields to look for flag leaf defoliation and cut heads, and larvae at the base of plants. The threshold is four or more larvae per square foot before heading, and two or more larvae per square foot at heading.

	Crop	Trap Set	3-May	10-May
AW	Wheat	26-Apr	64	98
	Wheat	26-Apr	8	11
	Grass pasture	3-May	-	16
	Grass pasture	3-May	-	27
BCW	Alfalfa	26-Apr	0	0
	Grass/alfalfa mix	26-Apr	4	15
	Pasture w/ dandelion	26-Apr	1	2
	Alfalfa	30-Apr	1	0

Moth trap counts for true armyworm (AW) and black cutworm (BCW).

Weather and Crop Update

Sometimes you don't want the weather reports to be right, and these past two weeks they have unfortunately been pretty accurate, predicting cool and wet conditions. Below you'll find several charts and graphs with commentary to give you a picture of where we've been this past week weather-wise and what the predictions are for next week.

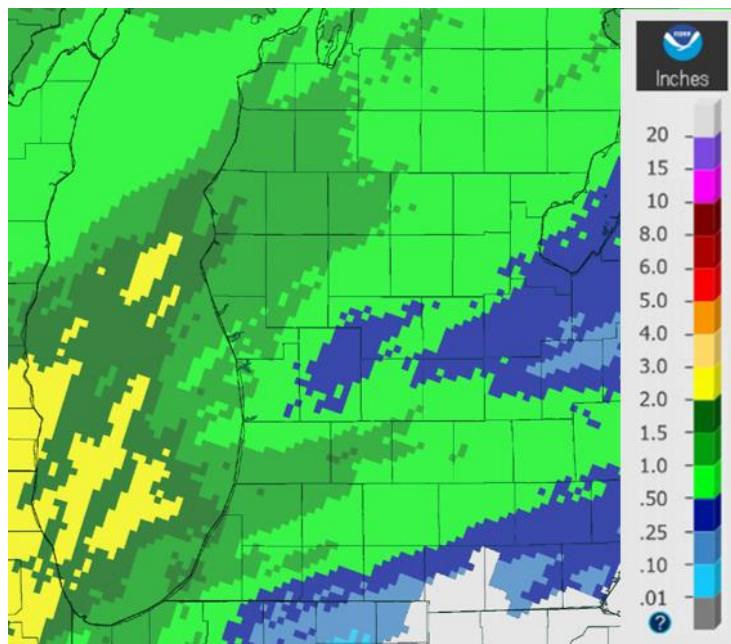
Over this past weekend, lighter soils dried out enough to get more field work done. According to the USDA's crop progress report from last week, only 1% more corn got planted in MI last week and no more soybean. Some planters were out over the weekend in St. Joseph County so perhaps those numbers edged up slightly. We're not that far behind yet (9% behind in corn planting, 3% in soybean) and we can easily catch up when conditions improve. Many fields remain covered with cereal rye or winter annuals (see pics below) as conditions have prevented weed management operations. See the comments in the moth counts section above for information on scouting and insect management.

Speaking of insects, MSU field crops entomologist Chris DiFonzo mentioned on this week's Virtual Breakfast that European corn borer resistance to Cry1F Bt (Herculex 1) was confirmed in multiple locations in eastern Canada. Populations from 2018 were tested in lab assays & found to be 100% resistant. She will talk more about that on the Virtual Breakfast on May 30th.

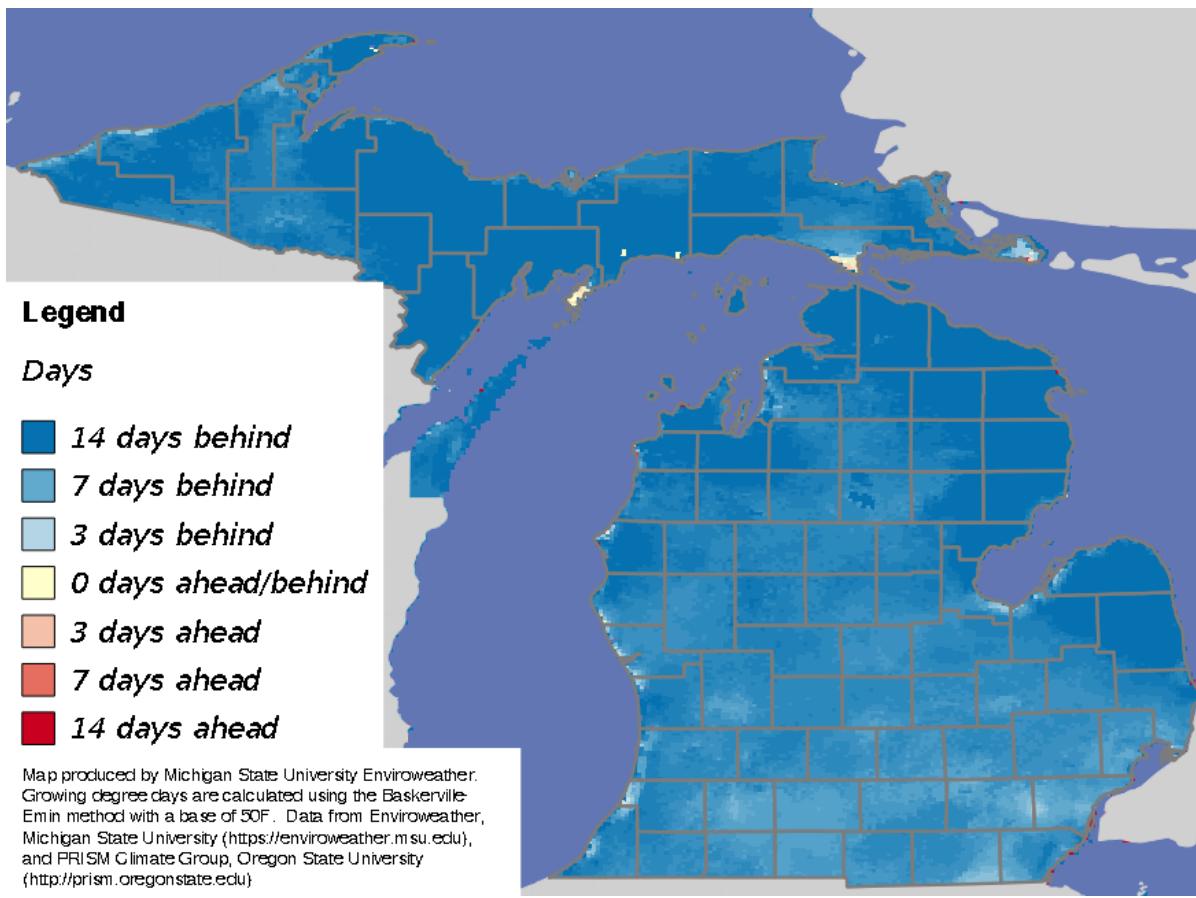
Alfalfa stands continue to look good in our area, and I expect first cutting yields to be good later this month. I have not seen the alfalfa weevil leaf tip feeding that Bruce MacKellar reported last week. MSU forage educator Phil Kaatz wrote a nice article a few years back (["Helpful tips for scouting alfalfa during the growing season – Part 1: Insects"](#)) that includes tips on scouting for alfalfa weevil.

Beginning in mid-May, producers should scout their alfalfa fields for signs of alfalfa weevil chewing and skeletonizing leaves. Sweep nets should be used early to detect adults, and then begin larval scouting. Sample 20 stems in five different locations of the field and look for feeding damage and larvae. [Michigan State University Extension](#) recommends that a threshold before first cutting should have 40% of stems damaged, plus live larvae present. **This does not mean 40% defoliation!**

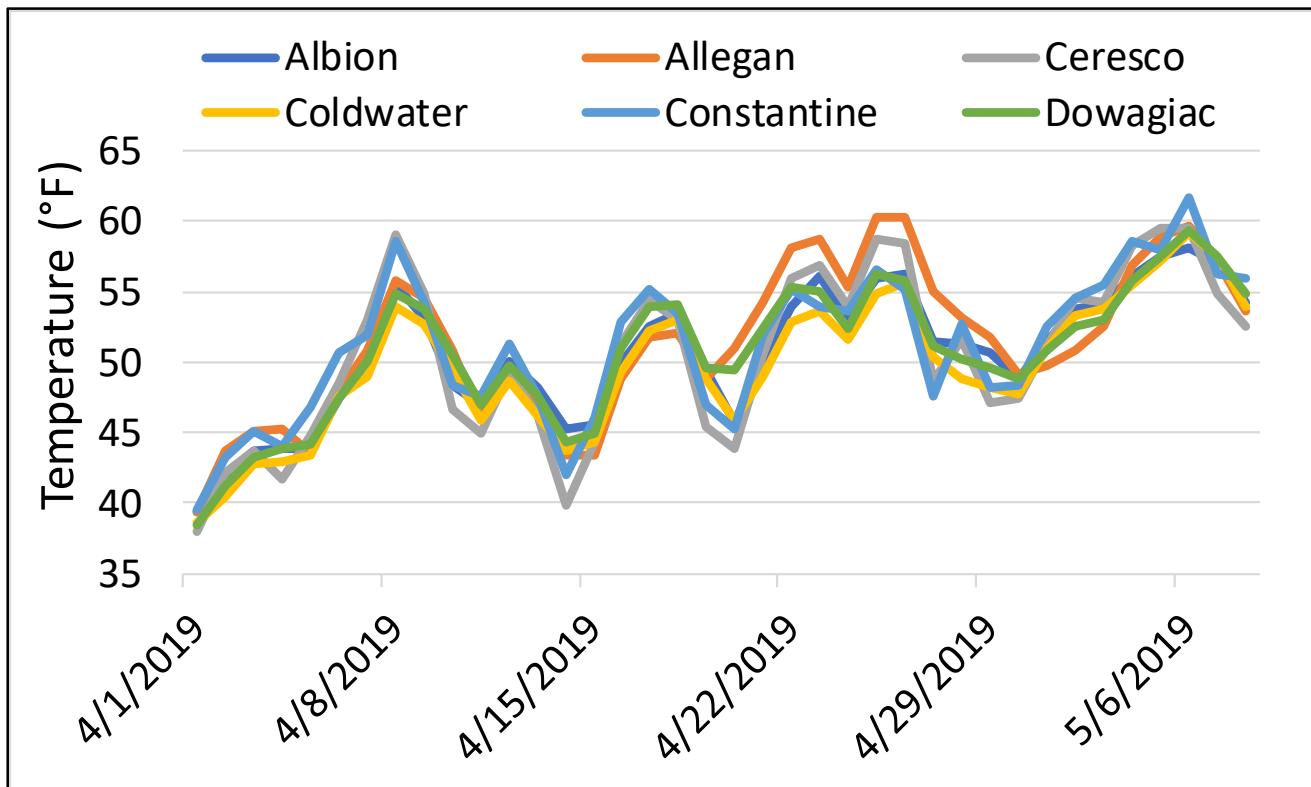
If damage exceeds threshold within seven to 10 days of a planned harvest, control the pest outbreak by harvesting the hay as soon as possible. Cutting kills most alfalfa weevil larvae, pupae and some adults. If harvest is more than 10 days in the future, weevil outbreaks should be controlled by spraying the field as soon as possible. If harvesting early, check new growth of second cutting for signs of damage. Several insecticides are available. See a [list of registered insecticides for alfalfa weevil control in Michigan](#).



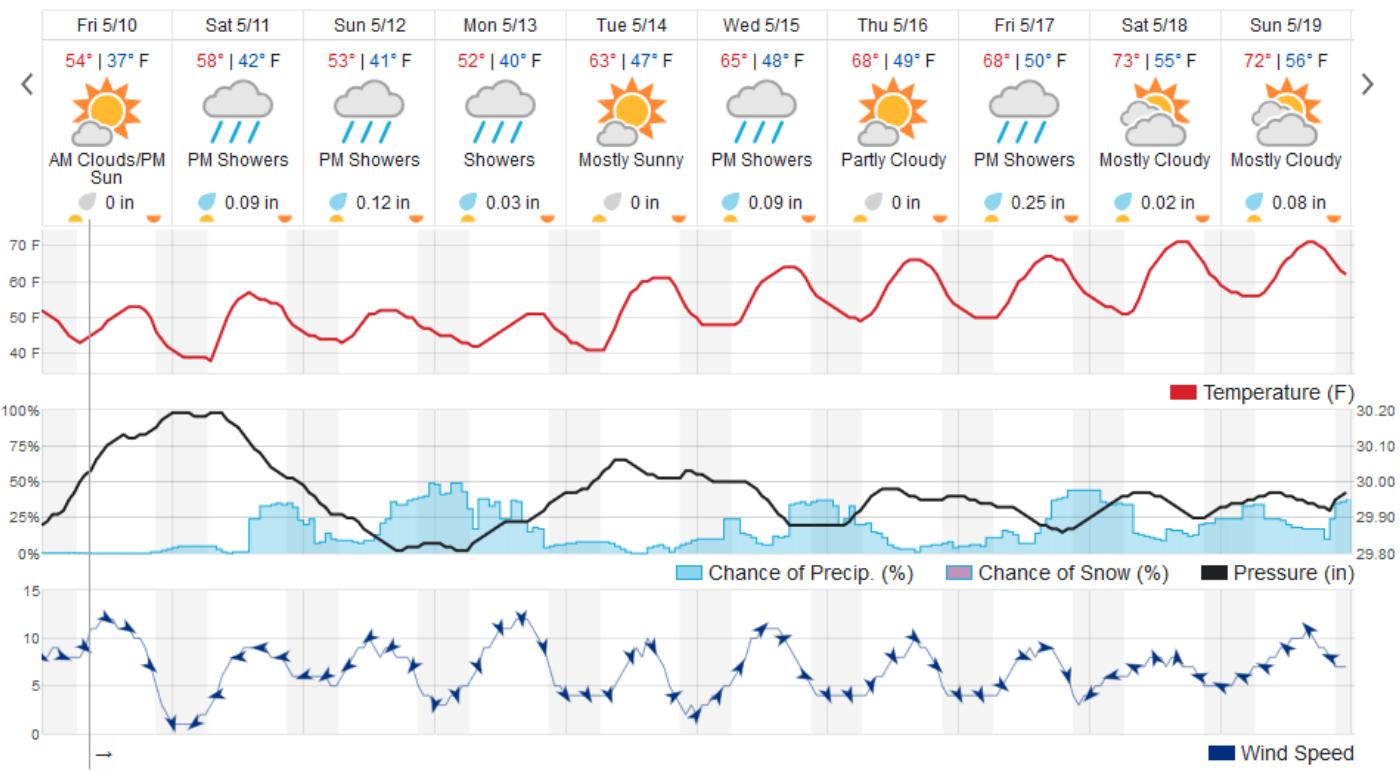
Precipitation totals for week ending May 9, 2019. Fortunately, this past week most of the rain stayed to our north and west with most areas in the region receiving only 0.5-1.0".



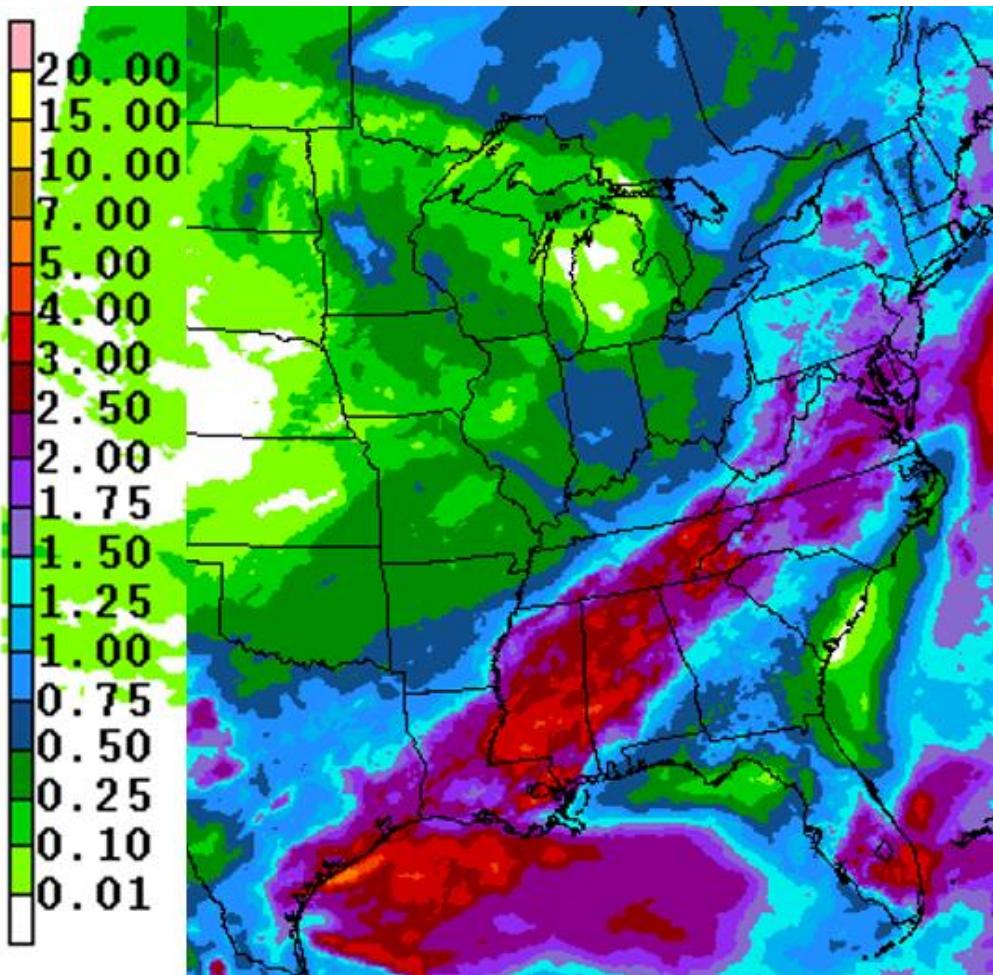
Growing degree day accumulation compared with normal, March 1 through May 8, 2019. Air temperatures have been cool so soils in many areas did not dry out enough to get much work done. We fell further behind on heat units and are now about 2 weeks behind normal for GDD₅₀ accumulation.



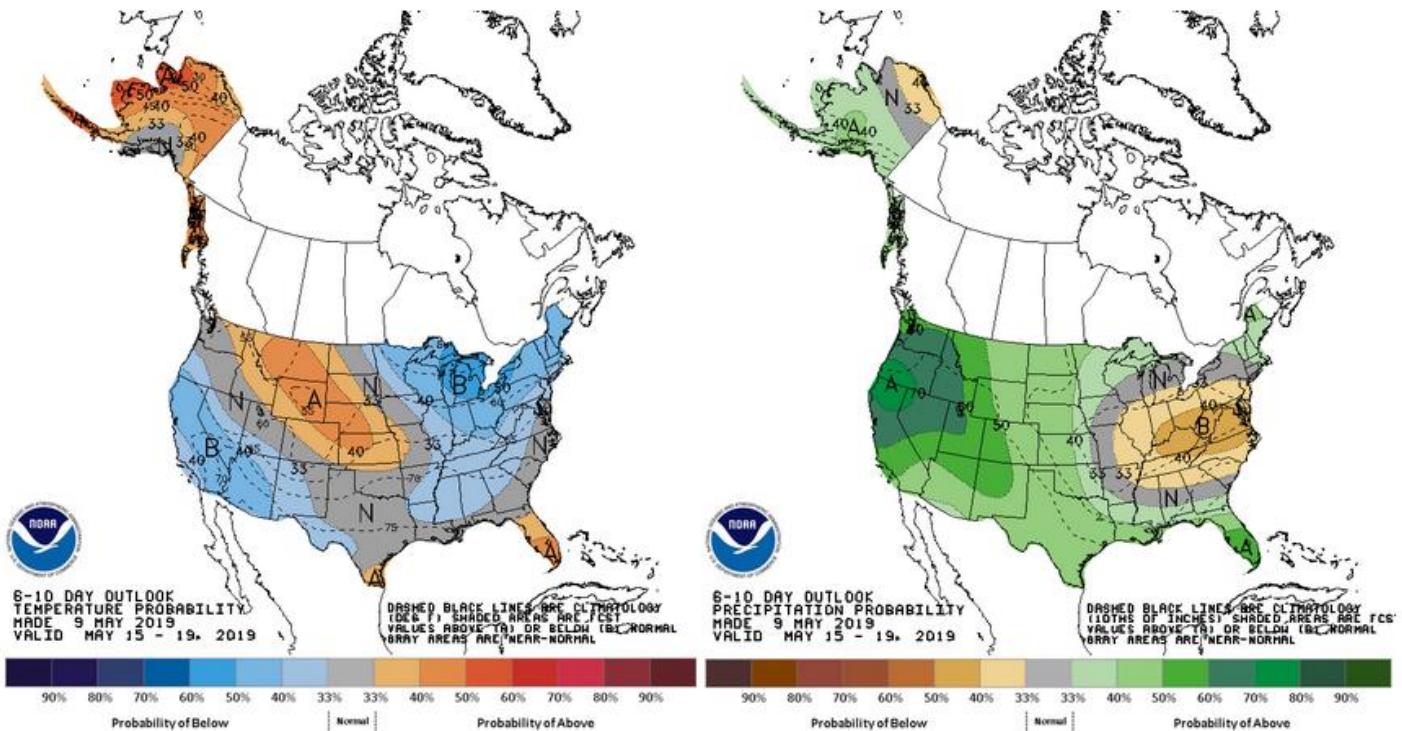
Average soil temperatures at 4-inch depth since April 1, 2019 for several Enviroweather stations in southern MI. Soil temps dropped off this past week but remain above 50°. Note that all stations are within a few degrees of each other despite location and soil differences.



The 10-day forecast for Centreville according to wunderground.com. With temperatures slowly warming next week and 10 mph winds each day, soils should be drying out by mid-week if weekend showers hold off.



Forecast for precipitation totals for the week of May 10-17, 2019. Most of the rain will stay to the southeast so hopefully we will enjoy a dry week to get caught up.



National Weather Service 6-10 day outlook (May 15-19) for temperature (left) and precipitation (right). The darker the color, the greater the chances of cooler and wetter than normal conditions. Let's hope the meteorologists continue their accuracy streak this spring and that we'll have dryer, albeit cooler, than normal conditions for next week.





A cool and wet spring has kept many from being able to make timely and effective burndown applications in 2019. See the section above on weed control reminders for considerations from Purdue's weed specialists.

Calendar

Titles are clickable links to online content when highlighted and underlined

- May 16** [**Field Crops Virtual Breakfast Free Webinar.**](#) Thursdays 7:00-7:30 AM. This week: “Assessing Alfalfa Stands for Winter Damage” with Dr. Kim Cassida. Join via computer or mobile device (audio and video, <https://msu.zoom.us/j/552324349>) or by phone (audio only, **669-900-6833** and enter meeting ID **552-324-349**). To receive a weekly reminder of the Virtual Breakfast, sign up at <http://eepurl.com/gm-PIv>
- May 17** [**MFP Deadline Extended.**](#) Market Facilitation Program deadline extended until May 17.
- May 21** [**Educational Industrial Hemp Seminar.**](#) 8:30am-4:00pm. SWMREC Conference Center, 1791 Hillandale Rd, Benton Harbor, MI. The Berrien Conservation District and MSU Extension are cohosting a seminar on industrial hemp. Cost is \$35 including lunch. Register online at the above link.
- Jun 26** [**MSU Weeds Day.**](#) 8:30am-12:00pm. 4450 Beaumont Rd, Lansing, MI. Registration information will be available soon.
- Jul 15** [**Deadline for FSA Acreage Reporting.**](#) Deadline for 2019 acreage reporting for spring seeded crops. Contact your local FSA office for details.
- Jul 26** [**Ag Innovation Day.**](#) 8:30am-5:00pm, MSU Research Farm, East Lansing, MI. Day will be split into morning and afternoon tours with a free lunch. Attendees are asked to register beforehand (coming soon) to help with logistics and food ordering.
- Aug 20-21** [**2019 Bridging the Experience Gap.**](#) Saginaw Valley Research and Extension Center, 3775 S Reese Rd, Frankenmuth, MI. This program provides a platform for professionals to gain experience, network with their peers and ask questions from knowledgeable instructors without fear of rejection or criticism. Cost is \$350, supplies and lunches included, register online.

MSU Extension Digest Briefs

So many apps, so little time—which agricultural apps are worth the investment?

PUBLISHED ON MAY 10, 2019

Join us at the 2019 Agriculture Innovation Day “There’s an Ag App for That” session to learn about agricultural apps that are worth your time.

Preventing sidewall compaction in field crops

PUBLISHED ON MAY 9, 2019

The potential for sidewall compaction occurring during planting operations is high this spring and the following information will help you reduce this yield-limiting phenomenon.

Soybean producers should be patient yet prudent about the wet weather

PUBLISHED ON MAY 9, 2019

Waiting for good soil and weather conditions and making plans for speeding up planting operations will benefit soybean producers this spring.

Targeting corn nitrogen strategies for improved resilience

PUBLISHED ON MAY 9, 2019

Volatile environmental conditions continue to challenge agricultural production.

Early career agribusiness professional development training available

PUBLISHED ON MAY 8, 2019

Bridging the Experience Gap is an educational program for young professionals involved in agriculture who want to sharpen their skills and better understand production systems.

Field Crop Virtual Breakfast on May 16 focuses on assessing alfalfa stands for winter damage

PUBLISHED ON MAY 8, 2019

MSU Extension's Field Crop Virtual Breakfast continues May 16 with a discussion on assessing alfalfa stands for winter damage featuring Kim Cassida.

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