

Southwest Michigan Field Crops Updates

June 14, 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.

Weekly Ag Update on WRCI Radio

Since late April, I have been submitting a 3-4 minute audio clip to WRCI Radio (97.1 FM) in Three Rivers that I have called the “Weekly Ag Update.” These updates are being aired Saturday mornings between 9:30 and 9:45 and will continue through early September. In talking with the station manager, I decided this year the update should focus on the topics shared during the weekly [Field Crops Virtual Breakfast](#) meetings. Each week, I summarize what agronomic recommendations were shared by the speaker and the weather outlook as presented by Jeff Andresen, our state ag climatologist. I also include instructions on how folks can join each week. These updates are now being archived on the [St. Joseph County Extension website](#) under [the Agriculture tab](#) along with a copy of these weekly e-newsletters.

Replant Soybeans?

It is mid-June, and although a significant number of soybean acres are yet to be planted, much was planted in May in between rain events. Almost all fields appear to have good emergence, but with ponding in heavier fields or low areas of generally lighter fields, there are bound to be some poor stands. The question of whether to replant is a perennial question, and much research is ongoing to determine how low populations can be and still return a profit.

Mike Staton had this to say in [an article this spring](#): “Soybean agronomists have identified 100,000 plants per acre in narrow rows and 80,000 plants per acre in 28- and 30-inch rows as the minimum plant stands required to produce optimum yields. However, the information presented in the preceding tables shows that fields having plant stands of less than 80,000 plants per acre have the potential to produce high yields.” Purdue’s Shaun Casteel commonly suggests that stands below 90,000/ac should be evaluated. See below for useful tables from their Corn and Soybean Field Guide about soybean stand assessment.

Shawn Conley at the University of Wisconsin shared some timely—and a bit surprising—recommendations in an article last month titled [“Soybean Replant Decisions: Just the Facts Jack.”](#) Here is an excerpt from that article.

An effective stand is obviously important to maximize soybean seed yield. However the downside yield risk for a sub-par stand is minimal until stands fall below 50,000 plants per acre. The synergy of early planting coupled with breeders adding 3x yield to soybean branches at low populations have effectively reduced the yield penalty for thins stands by 1/2. Therefore we recommend the following.

- Early planted soybean yield is maximized with stands that range from **100,000 (high yield environment) to 135,000+ (low yield environment) plants per acre.**
- When soybean stands are **less than 50,000 plants per acre**, inter-plant new seed with a similar maturity into the existing stand. **DO NOT TEAR UP THE STAND AND START OVER.**
- When stands fall between optimal and 50,000k plants per acre **Think Twice Before Replanting Soybeans!** Our data shows a nominal ~2 bu yield increase in this situation. Even if you have a “free replant” guarantee the numbers don’t make economic sense. As a grower you are better off investing \$\$\$ in an effective in-season residual herbicide to control weeds such as Palmer and waterhemp.

Information Needed for Soybean Replant Decisions

Yield Effects from Reduced Plant Populations

Population Plants/Acre	Yield as % of Normal	
	Solid Seed	30 in. Row
160,000	100	100
120,000	100	100
80,000	96	100
60,000	92	94
40,000	87	88
20,000	77	81
10,000	58	72

Yield Effects of Early-Season Weed Infestations

Pigweed		Giant Foxtail	
#/10 ft.	% Yield	#/10 ft.	% Yield
1	70	5	97
2	50	10	93
4	44	30	90
8	44	60	87
Velvetleaf		Jimsonweed	
#/10 ft.	% Yield	#/10 ft.	% Yield
1.5	60	1	100
3.0	60	2	81
6.0	48	3	68
12.0	46	4	65

Yield Effects of Reduced Stands

Plant Spacings	Yield as % of Normal
2 ft. skips - 50% of row	94
3 ft. skips - 50% of row	87
4 ft. skips - 50% of row	85

Yield Effects from Delayed Planting (Uniform Stands)

Planting Date	Yield as % of Normal for	
	Mid-season Variety	Full-season Variety
May 20	100	100
May 30	96	94
June 10	92	90
June 20	82	78
June 30	70	NR ¹
July 10	60 ²	NR ¹

¹ NR: not recommended.

² In Indiana, south of Interstate 70 only.

Effect of Row Spacing on the Number of Days to Canopy Formation

Row Spacing (inches)	May Planting Date		
	before 5/5	5/6-5/15	5/16-5/25
7	35	30	25
10	40	35	30
15	50	45	40
20	60	55	50
30	75	70	65

Tables from Purdue's Corn and Soybean Field Guide to assist with soybean replant decisions.

AW and BCW Counts

There was a significant uptick in moth captures this week. Purdue has now ended its armyworm trapping for the season, and I also am discontinuing my moth captures for armyworm (AW) and black cutworm (BCW) for the season. John Obermeyer had this to say about armyworm activity: "From the recent surge in moth numbers, it is obvious that the next generation of armyworm has begun. These moths will be attracted to dense, lush grasses of all types. Consider, Bt-traits will have little to no suppression of armyworm this late in the season. Because of the current maturity of small grains and grassy cover-crops, they won't likely be targeted for egg-laying by this surge. Though with this large of a moth flight, there will be unique fields that will be attacked by this pest."

		3-May	10-May	17-May	24-May	31-May	7-Jun	14-Jun
AW	Wheat	64	98	17	25	5	6	25
	Wheat	8	11	4	3	1	13	8
	Grass pasture	-	16	3	7	1	3	39
	Grass pasture	-	27	16	33	31	17	103
	LaPort/Pinney Ag Center	52	51	39	186	13	591	87
	Whitley/NEPAC Ag Center	392	1222	739	1349	605	193	310

BCW	Alfalfa	0	0	3	0	0	4	9
	Grass/alfalfa mix	4	15	6	0	6	6	30
	Pasture w/ dandelion	1	2	4	0	0	2	7
	Alfalfa	1	0	3	3	0	2	3

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

Weather and Crop Update

(Taken from this week's [Southwest Michigan field crop update](#) by Bruce MacKellar and me)

Corn: Michigan was 63% planted as of June 9th, behind every other state except Pennsylvania (50%) and not far ahead of Indiana (67%). About half of those acres have emerged and most of the crop looks fair to good overall. As noted above, corn is receiving side-dress nitrogen applications in advanced fields, emerging in others, and is in nearly all stages in-between across the countryside. We are seeing a wide variety of colors in corn fields, which says we are having some issues with getting nitrogen applied, leaching has occurred, or both. One tell-tale sign is that the darker soils, especially in the lower portions of the fields, have better color. With all of the rainfall, we should not be seeing much of this in low lying areas. If you applied nitrogen early, you may want to collect a PSNT nitrogen sample to check how much N is still with us. Some of this may also be coming from sulfur deficiency. Both nutrients can move out of the profile with excess rainfall.

Weed control is also becoming an issue on some fields that were no-till planted but conditions have been too wet to traffic with sprayers. We are creating some epic ruts in fields this season. The only thing that could be considered a trend is that there seems to be more pockets of giant ragweed in fields in southern Cass County than has been seen in the past—not whole fields, but small areas. This is probably worth keeping an eye on. Later planted corn needs warm weather and drier conditions to keep moving. Neither may be in the cards during the short term. All the management options from here on out should be reduce growth setbacks. Carefully weigh weed control options that set the crop back a bit during normal growing seasons because the corn will need all the help it can get to reach maturity before a fall frost.

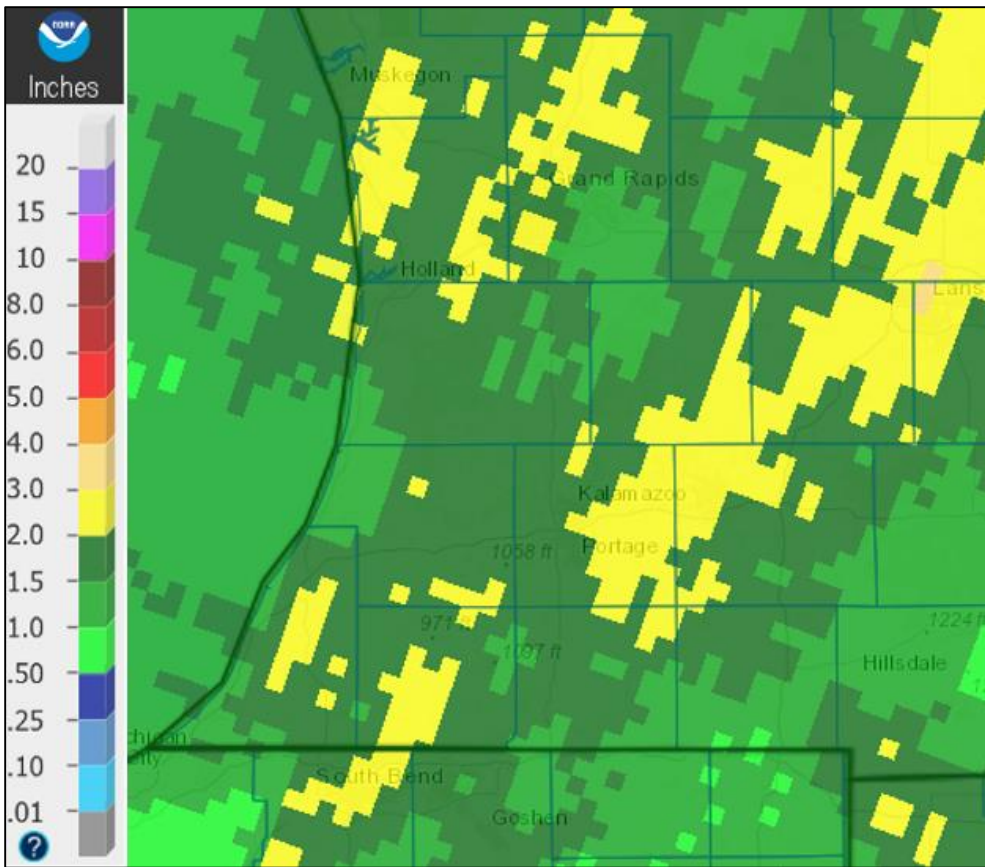
Watch for signs of leaf diseases and be prepared to treat early if the stand has good yield potential, especially for tar spot. Dr. Martin Chilvers will be talking about tar spot on next week's [Virtual Breakfast](#). We are nearing the time for first generation European Corn Borer moth flight, so fields that are organic or were planted to non-Bt corns should begin to be on your scouting calendar. Early planted corn is the most susceptible to 1st generation ECB, later planted corn for second. Given Michigan's planting progress, we should have a little of both for them to munch on.

Soybeans: We are all over the board on soybean growth and development, with the majority being fairly small. Michigan was 45% planted and 23% emerged as of last week. Virtually all said in the corn section can be said for soybeans as well. The most visible weed species in fields continues to be marestail. This has not been a good year for tillage, so many no-till beans will have more marestail this year than normal. Hopefully either LibertyLink or RoundupReady Xtend varieties were planted so there can be some effective post emergence options. With heavy rainfall on the morning of June 13th, we will probably see more delays in finishing planting on heavier soils. Some fields may have poor stands because of planting in wet conditions. After the soybeans move beyond the cotyledon or early unifoliate stage, patchwork planting directly into the stand, especially with a planter, will do minimal damage to the existing plants and provide opportunity to increase the number of plants per acre in lieu of taking out the original stand.

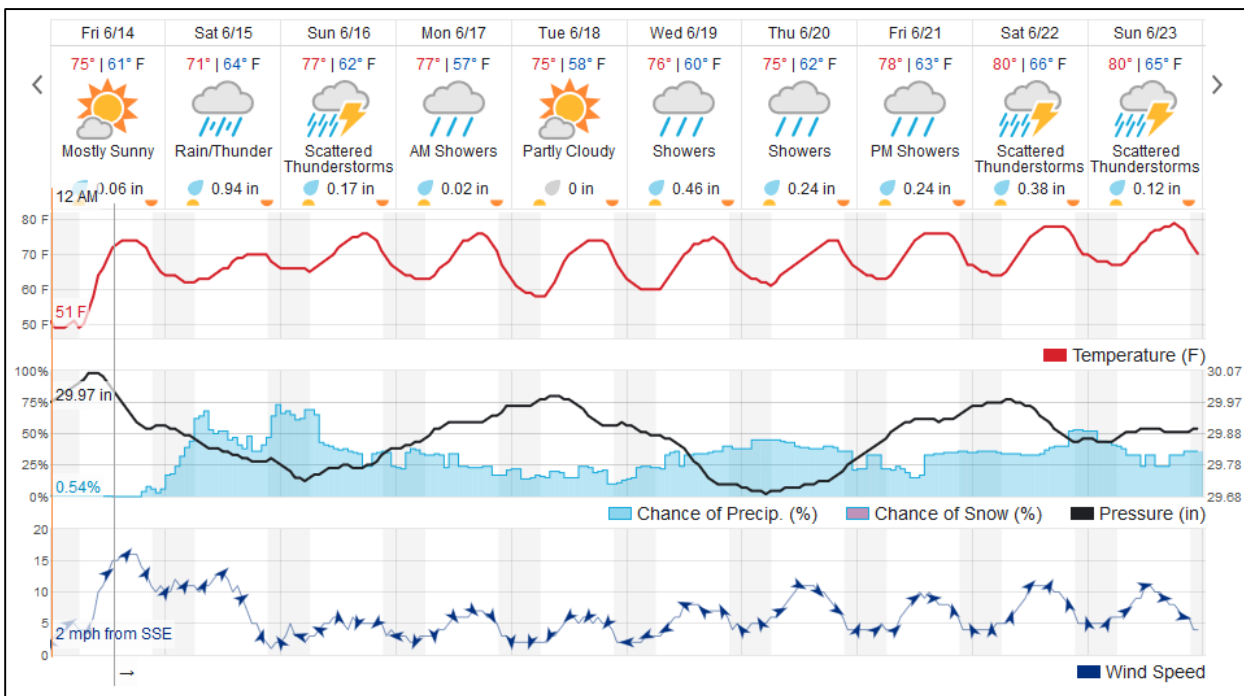
Wheat: The crop continues to look good in the southwest. Most fields were treated for head scab protection, which given the weather and the crop, looks to have been warranted.

Alfalfa and mixed grass hay: We managed to put up a lot of 1st cutting hay in pretty decent shape over the last weekend, especially where corn and soybeans were in the ground. Yields were likely quite good based on initial reports.

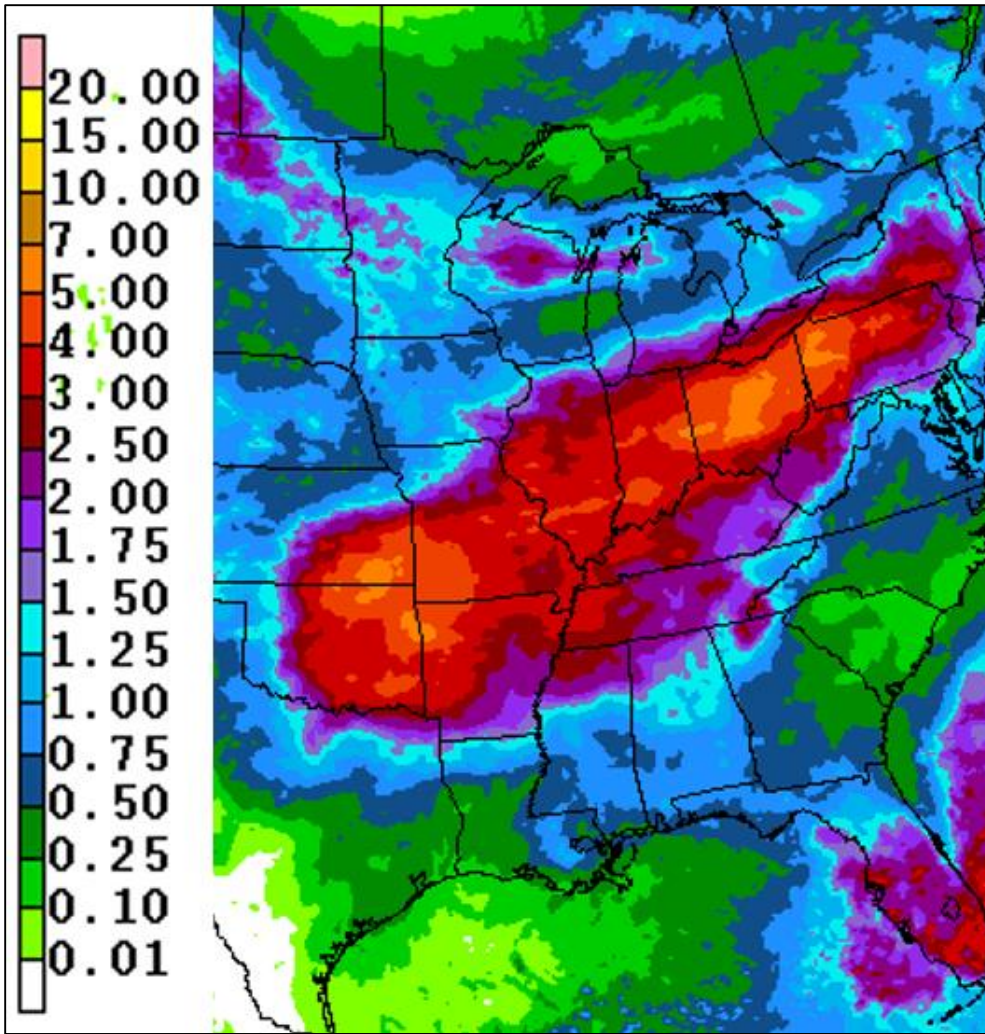
Weather: Last week was a bright spot this spring with normal to above-normal temperatures and a break in the rain early last week. Unfortunately, that will not be the case for this coming week. The weather system that came through yesterday was unusual for June—the upper air pattern that brought rain and cold temperatures is more normal in March. Rainfall totals for the next 7 days are predicted to be as high as 3 inches or more which means we may not see equipment moving in fields again for a while. We are on track for June to be the fourth “wetter-than-normal” month in a row this spring. All of the National Weather Service outlooks—6-10 day, 8-14 day, and 3-4 week—are calling for cooler and wetter than normal conditions. However, there is a slight possibility of some moderation at the end of the month according to MSU's ag climatologist Jeff Andresen.



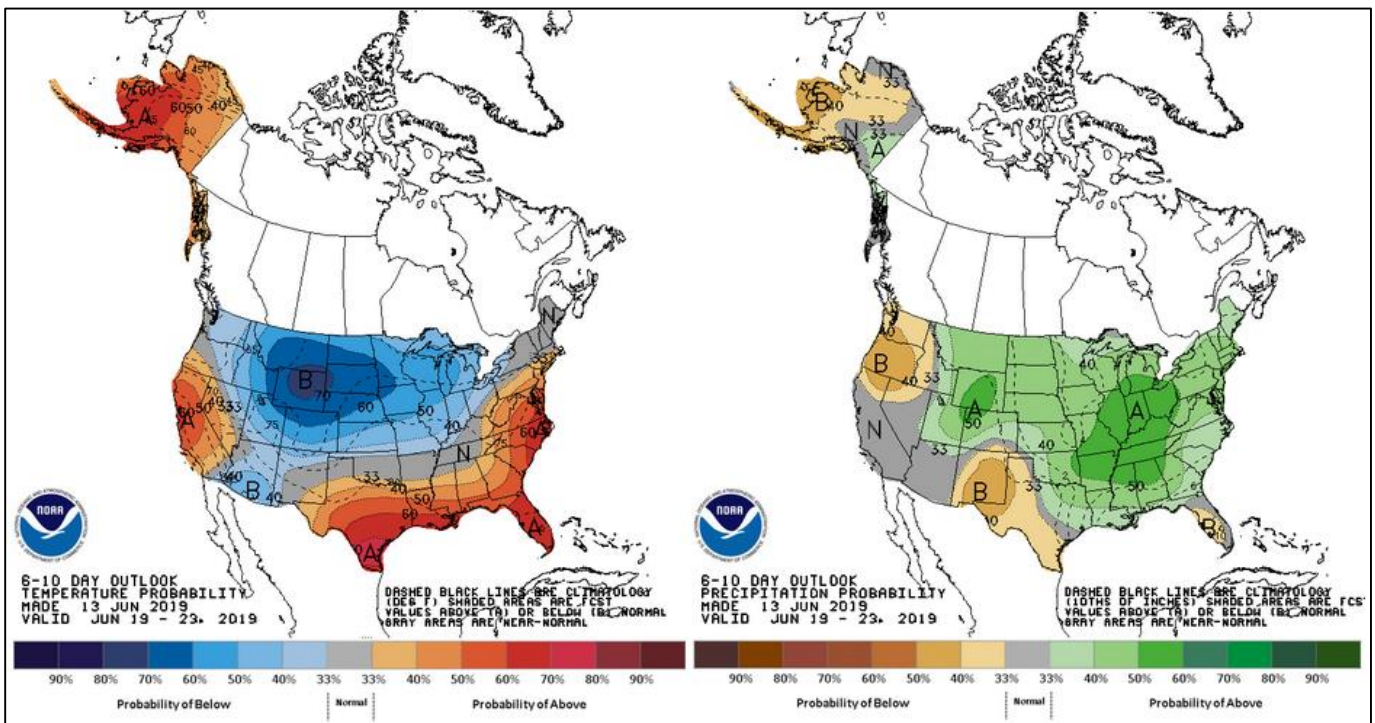
Precipitation totals for week ending June 14, 2019. Rainfall totals ranged from 0.53-2.25 inches at Enviroweather stations in the region with an average of 1.58 inches.



The 10-day forecast for Centreville according to wunderground.com.



Forecast for precipitation totals for the week of June 6-13, 2019. Totals for our region are predicted to be 1.5-3.0 inches.



National Weather Service 6-10 day outlook (June 19-23) for temperature (left) and precipitation (right). The 8-14 day outlook (June 21-27) is nearly identical.

Calendar

Titles are clickable links to online content when highlighted and underlined

- June 15** [Van Buren County Pesticide, Hazardous Waste, Old Tire Collection.](#) 9am-1pm. 801 Hazen St., Paw Paw, MI. Collection will also take place on June 21 in South Haven. Contact the Van Buren Conservation District with questions (269-657-4030x5).
- June 20** [Field Crops Virtual Breakfast Free Webinar.](#) Thursdays 7:00-7:30 AM. This week: “Tar Spot on Corn” with Martin Chilvers. 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>
- June 20** [Malting Barley Field Days - Kellogg Biological Station.](#) 9 a.m.-1 p.m. Kellogg Biological Station, 9702 N 40th Street Hickory Corners, MI. Opportunities to view and learn about malting barley research and interact with industry professionals. Registration encouraged.
- June 24** [Industrial Hemp Production and Irrigation Webinar.](#) 1-3pm. A free webinar focusing on a broad overview of industrial hemp and irrigation issues. Register to receive the participant link. Contact Eric Anderson (eander32@msu.edu) with questions.
- June 26** [MSU Weeds Day.](#) 8:30am-12:00pm. 4450 Beaumont Rd, Lansing, MI. Registration information will be available soon.
- June 26 & 31** [Clean Sweep Pesticide Disposal in Benton Harbor.](#) Available to all MI residents. Collections are for any unwanted pesticides in MI (not fertilizers). Registration is required, forms can be found online or at MSUE and CD offices in Berrien, Cass and Van Buren Counties.
- July 15** [Deadline for FSA Acreage Reporting.](#) Deadline for 2019 acreage reporting for spring seeded crops. Contact your local FSA office for details.
- July 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.
- August 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

[You're invited to a Lunch 'N' Learn](#)

PUBLISHED ON JUNE 14, 2019

Manure Management: Am I doing it right?

[Southwest Michigan field crop update – June 13, 2019](#)

PUBLISHED ON JUNE 13, 2019

2019 is a tale of many growing seasons.

[Industrial hemp webinar to focus on field production and irrigation topics](#)

PUBLISHED ON JUNE 13, 2019

A webinar focusing on a broad overview of industrial hemp and irrigation issues will take place June 24, 2019.

Weed control recommendations for late and prevented planting

PUBLISHED ON JUNE 11, 2019

Due to delayed planting this spring, many critical weed control decisions to be made on planted acres or those that will be planted soon and prevented planting acres.

MSU Cover Crop Team Webinar Series: Soil biology benefits of cover crops

PUBLISHED ON JUNE 11, 2019

The fourth webinar in this series highlights research at MSU looking at the impact of cover crops on the health and diversity of the soil microbial community, and effects on corn yield.

Black cutworm monitoring program in southeast Michigan

PUBLISHED ON JUNE 10, 2019

The goal of this program is to decrease corn growers' reliance on at-planting insecticide applications for black cutworm while still protecting crops from economic injury.

Custom work rates are available for 2019

PUBLISHED ON JUNE 10, 2019

Information for those seeking or providing custom farm work.

Explore malting barley varieties, management and markets at June 20 field day

PUBLISHED ON JUNE 7, 2019

Join researchers, farmers, industry professionals, and Michigan barley enthusiasts alike at the Kellogg Biological Station Malting Barley Field Day.

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