

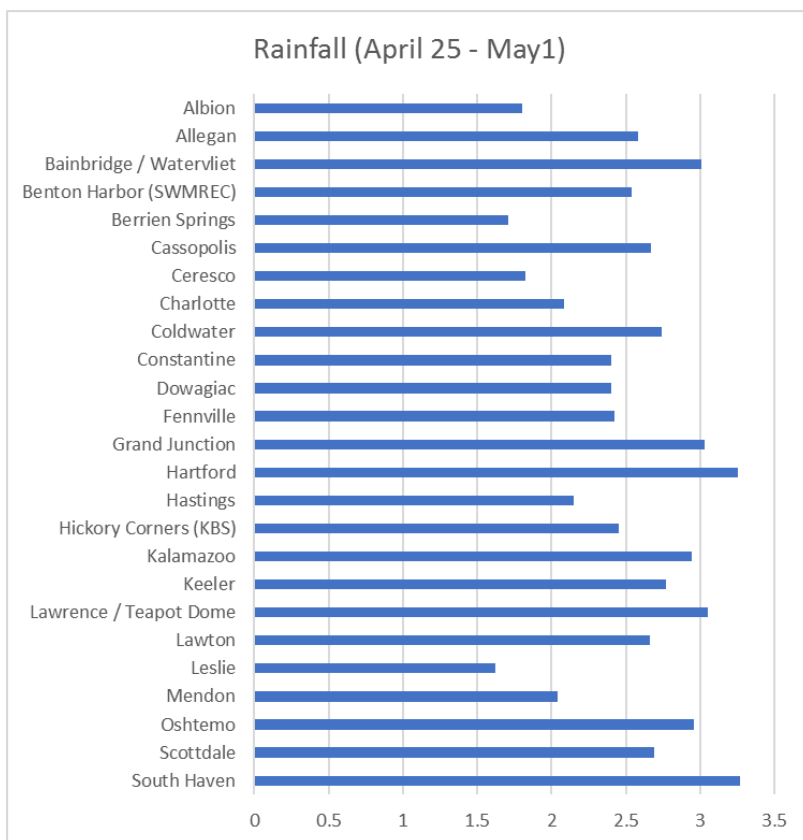
Southwest Region Report

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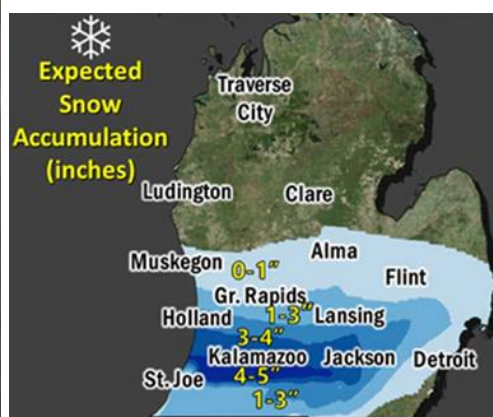
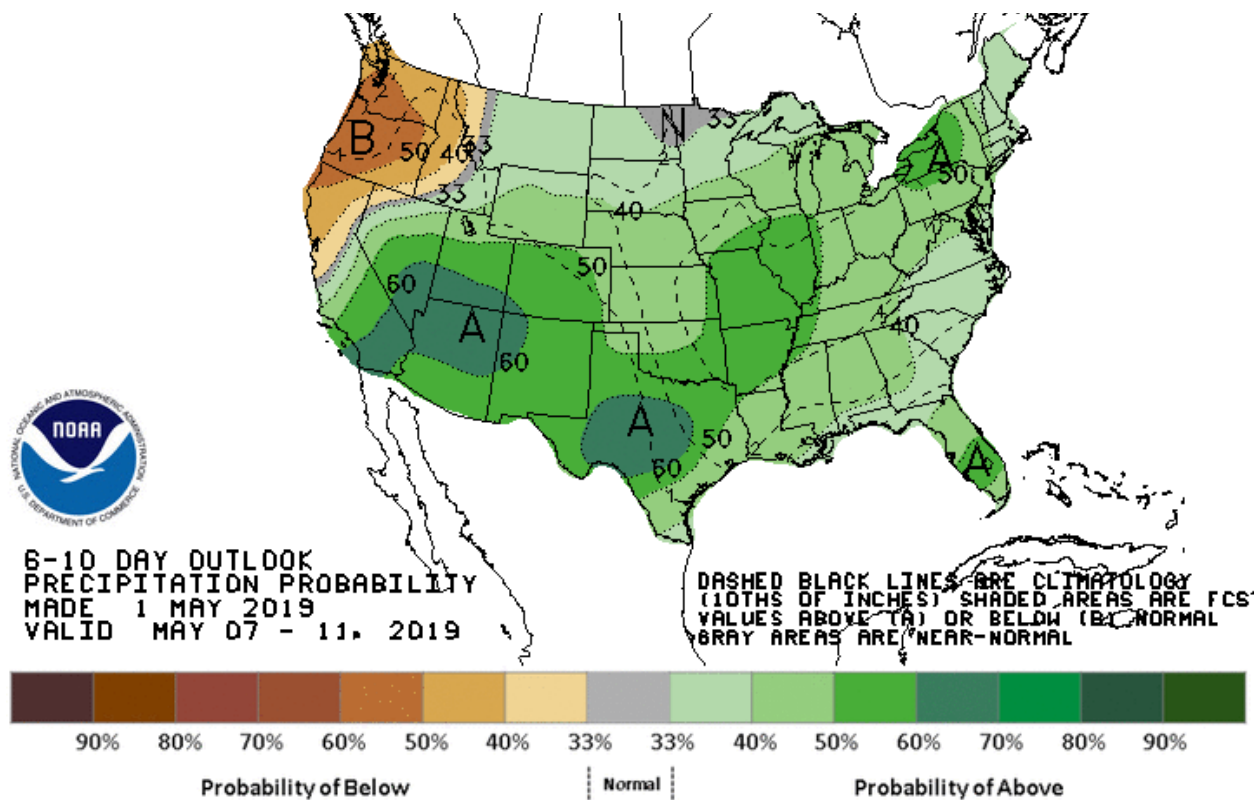
Ready, Set ... Wet!

Deck: The 2019 field season was just about to get rolling when wet snow and heavy rains brought agricultural operations to a quick standstill.

Planters were just getting rolling on southwest Michigan's lightest soils when mother nature returned the region to winter on Saturday afternoon. Falling temperatures and raindrops gave way to huge snowflakes across a pretty good swath of lower southwest Michigan on April 28th. Parts of Van Buren County received as much as 4 inches of snow. After a brief respite from precipitation on Sunday, heavy rainfall and thunderstorms returned to the area on Monday and Tuesday. Drier conditions the previous week allowed for tillage work and a little bit of planting. We will be monitoring soybean fields for signs of chilling injury from the near freezing water from snow melt on Sunday.



Flooded field following recent rain in southern Allegan County. Picture was taken on May 1st.

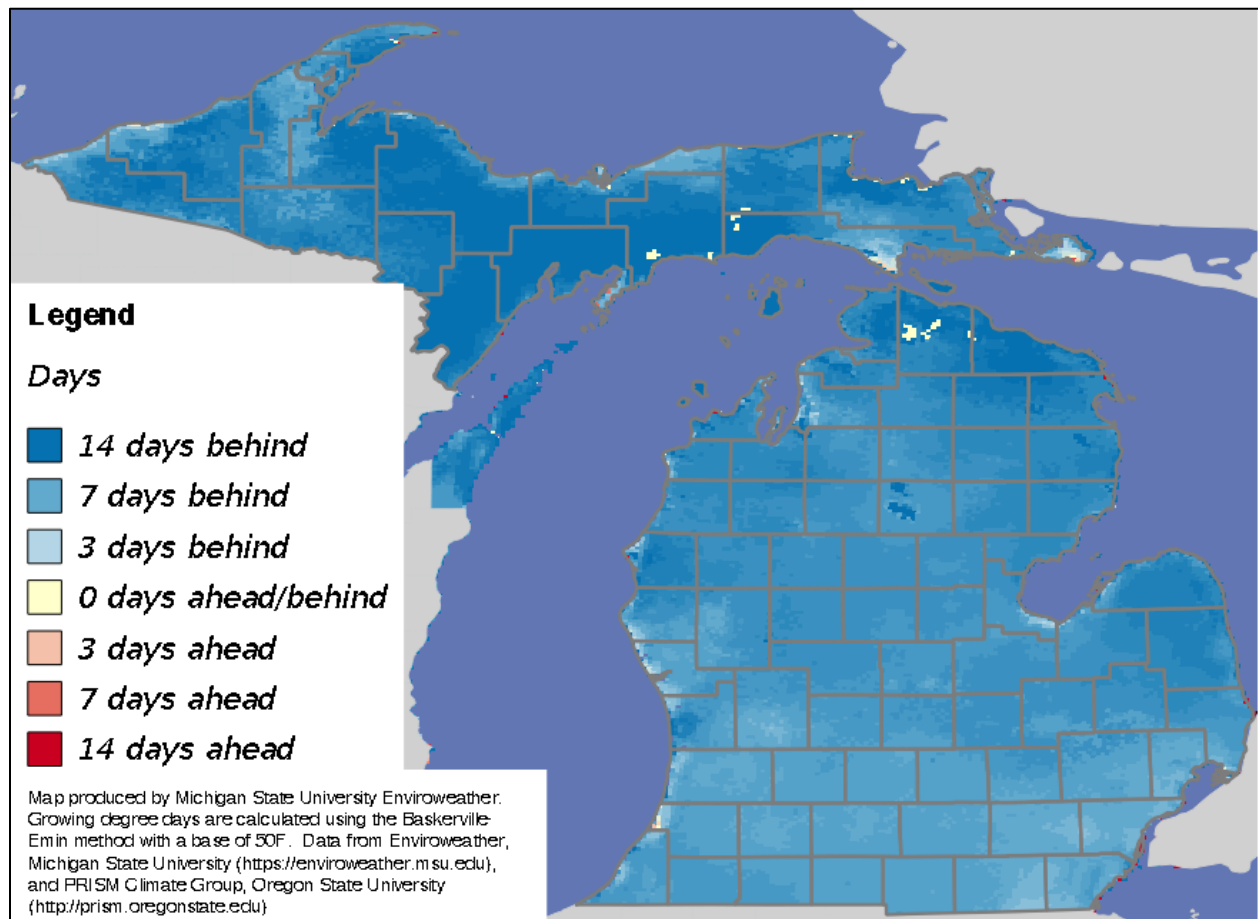


Swollen soybean seed planted a day before snowfall; watching for potential chilling injury symptoms. Snowfall prediction from Grand Rapids weather.gov were pretty accurate in terms of areas of potential impact. Special thanks to the NWS for the image.

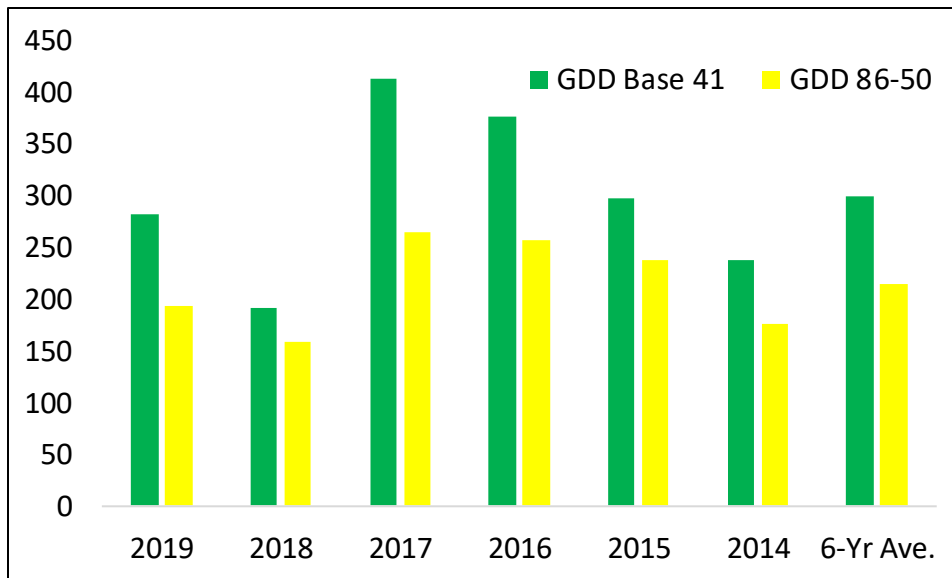
Iowa State University Cropping Systems Specialist Dr. Mark Licht wrote in a recent article that [water imbibed by the seed during the first 24 hours is the most critical to seedling injury](#). Dr. Licht reports that

severe imbibitional chilling can result in seed death, 'corkscrewing' of the mesocotyl, and leafing out underground as well as surviving seedlings having reduced seedling vigor. Given the level of soil moisture that was present during the last week of April, it would seem that most fields planted by the middle of last week hopefully should have imbibed soil moisture enough to avoid significant injury. Temperatures recovered nicely into the 50's quickly on Sunday afternoon, which may have helped minimize further effect of chilling injury.

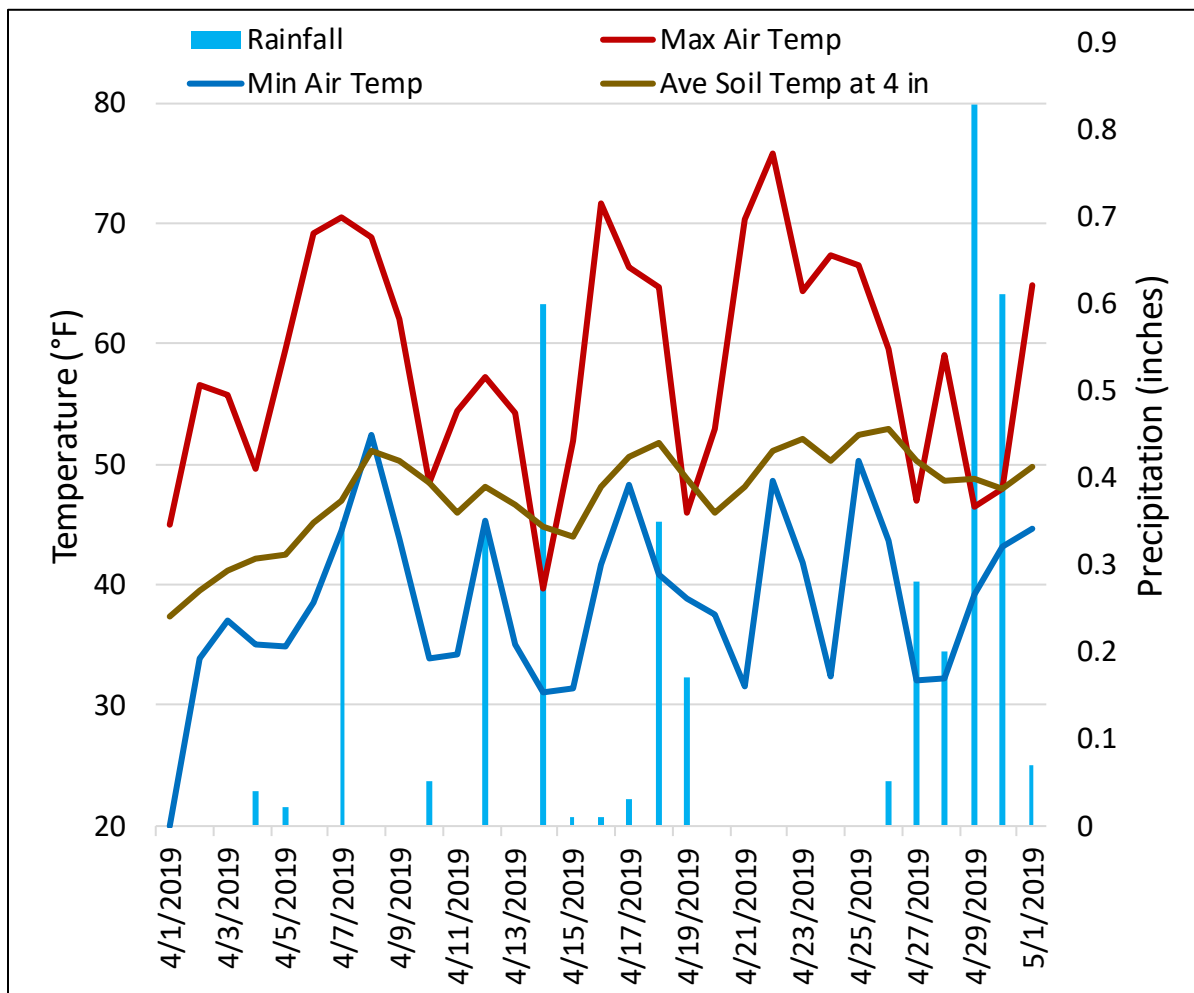
We are still about one week behind in heat units across much of the state compared to normal, but we are not as far behind as we were in 2018. Soil temperatures were progressing nicely in April before moving backwards this past week. Temperatures at the 4 inch depth at the Mendon Enviroweather station (St. Joseph County) had fallen into the upper 40's before rebounding slightly, and they continue to hover around the 50 F mark.



Growing degree day accumulation (base 50 F) compared with normal, March 1 through May 1, 2019.



Historical and current growing degree days for alfalfa (green) and corn (yellow) as reported at the Kalamazoo Enviroweather station.



Air and soil temperatures and precipitation totals in April 2019 for the Mendon (St. Joseph County) Enviroweather station.

The annual Alfalfa Weevil field watching begins.

Alfalfa weevil tip feeding is just getting underway in southwest Michigan hay fields. This is a pest that we regularly expect in fields and can be quite destructive if high populations develop early before we plan to harvest first cutting. The MSU Enviroweather station sites provide modeling for this pest under the field crops, then alfalfa management tabs for each weather station. The model anticipated first feeding around May 9th in the Paw Paw area (Tea Pot Dome Weather Station), but we did find some in the area about 7 days early.



First signs of leaf tip feeding for alfalfa weevil in field near Paw Paw, MI on May 2nd, 2019.

Treatment thresholds are reached when 40 percent of the plants are showing tip feeding, live larvae are present, and you will not be able to harvest within six to seven days. Harvesting earlier is the preferred way of dealing with the pest, if possible, because it saves the cost of the insecticide application and can help preserve biological control organisms. It also helps to protect honey bees, particularly during bloom. Obviously, we are a long way from harvest, as well as the treatment threshold, but it is time to put scouting for the pest on your calendar...

Black Cutworm/Armyworm:

Pheromone trap catches for both black cutworm and true armyworm remain high in many locations across Indiana. In addition, the prolonged wet conditions across large swaths of southern Michigan have allowed cover crops/winter annuals to grow rapidly. This sets the stage for potential challenges from these pests. The nature of outbreaks for these pests is highly sporadic, partially because the moths are deposited by thunderstorm downdrafts. We will be monitoring several traps in the region and reporting on trap counts and peak flight times as the season progresses.

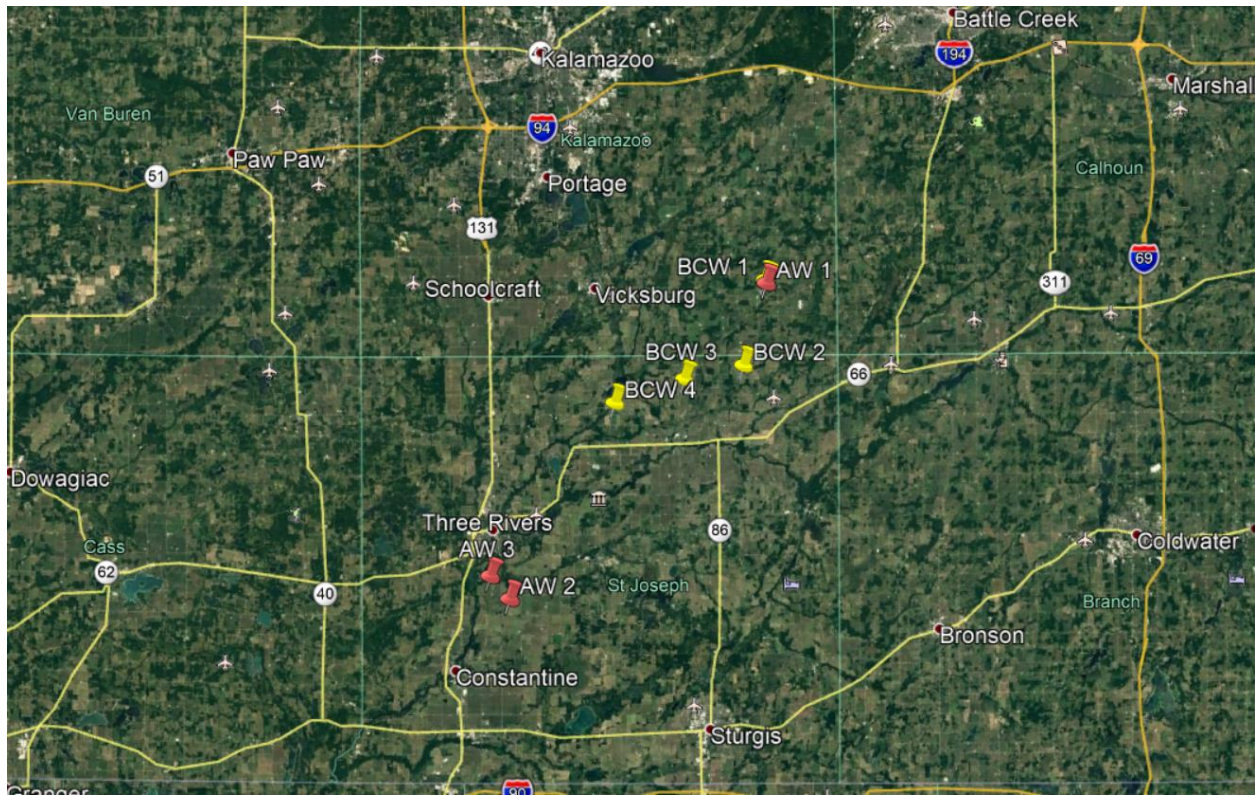


Fields with winter annuals or cover crops make attractive places for Black Cutworms and Armyworms to lay eggs.

The key to understanding your risk for either species is to evaluate the amount of green material and type of field cover that is present in your fields at the time moths arrive and lay eggs. Presumably, this has started now, at least in small numbers. [MSU Extension Field Crops Entomologist Chris DiFonzo wrote an excellent article on what conditions can lead to black cutworm outbreaks.](#) Grassy weeds, cereal cover crops and wheat are very attractive to armyworm moths. Winter annual and emerged annual broadleaf weeds are more attractive to black cutworms. Remember, cutworm larvae clip the plants off at the soil surface, while armyworm tend to feed on the leaves from the edges. Black cutworms often hide under the soil surface during bright sunshine and can be hard to spot. The number of fields that are treated for these pests each year is limited. However, high populations can be very destructive. In addition, [Bt Corns have some activity on cutworm and armyworms.](#) However, it is important to note that the number of caterpillars in the field can have a lot to do with how effective the Bt corns are at controlling outbreaks. Be prepared to scout fields that have suitable egg laying habitat for these species over the next couple of weeks. Also be aware that fields that are beginning to die back from burndown herbicides at the time the eggs are laid may still have infestation problems.



Armyworm outbreak in field near Lawrence in 2018. Note the residual grassy cover at the soil surface.



Location of black cutworm (BCW) and true armyworm (AW) moth traps for the 2019 season.