

Central Maryland Crop Scouting Report

UNIVERSITY OF
MARYLAND
EXTENSION



Week Ending 5/7/2023

Introduction

Happy Monday! Welcome to the second installment of the Central Maryland Crop Scouting Report from the University of Maryland Extension. Agriculture Agents in Frederick, Howard, and Montgomery Counties are offering free agronomic crop scouting for growers in Central Maryland. These reports will be available to the grower, providing a field-scale report of the observations and recommendations to address any potential concerns observed. These reports are compiled and summarized to provide a general overview of observed trends for all readers of the report.

As mentioned in the first report, there are many details still to work out in the reporting and delivery of these reports. In this, the Central Maryland Team has decided to release these reports on Monday in an effort to supply additional forward-looking thought processes and ensure additional time to compile crop conditions.

Growers and agronomists; feel free to provide any observations or trends you have come across while scouting—we appreciate your involvement and participation. Finally, if you would like to have an Agriculture Agent with UME come to scout your fields, please visit <https://go.umd.edu/CMD-IPM-Scouting> to complete the Google Form, or contact any one of the Ag Agents:

UME - Frederick: Mark Townsend, Agent Associate. mtownsen@umd.edu, (301) 600-3578

UME - Howard: Nathan Glenn, Agent Associate. neglenn@umd.edu, (301) 375-0260

UME - Montgomery: Kelly Nichols, Agent: kellyn@umd.edu, (301) 590-2807

Frederick County

Wheat:

Wheat is progressing rapidly with all of the fields that I have walked in the last few weeks showing heads (Feeks 10). Some early planted wheat had begun pollination. Though still in the early stages of pollination, anthers are visible. Scouted fields appear to be in good condition and have responded well from the much needed rains. However, with cooler temperatures and ample rainfall since the last report, conditions have nearly reversed since last report.

Much of the weed pressure remains the early season culprits including roughstalk bluegrass and small winter annuals at heading. Later season weeds were emerging including pokeweed and marestail in fields that had not received a spring herbicide application.

Field localized tan spot infections were observed with relative inconsistency across the individual field as well as other fields. Disease pressure has been notably low in scouted fields thus far. Given the previously warm, dry weather conditions this is not especially surprising. However, moving forward beyond this cooler wet weather may present a greater potential for disease pressure to emerge more visibly.

As we move later into spring, mature cereal leaf beetle (CLB) populations are observed with relative infrequency. In this, fields with observed populations of adults were re-scouted as the adults complete their egg laying and larvae begin to feed. This is the time of year to maintain a watchful eye over larvae populations for current as well as future management. CLB larvae were observed in two scouted fields with relative consistency.

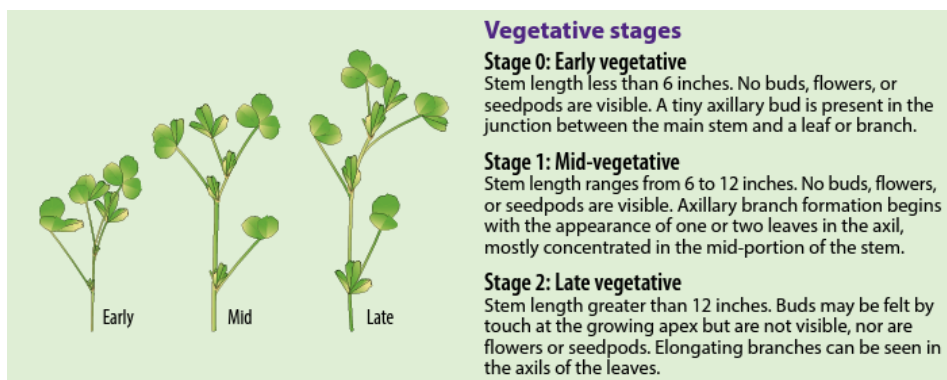


These fields did not exhibit the Economic Injury Level (EIL) as defined in the UMD IPM scouting guidelines at one CLB larvae/flag leaf. Do note, CLB damage after head emergence has been shown to have relatively insignificant yield effects. However, populations were significant. Growers were advised of these conditions as flag-leaf damage was observed (image above).

Alfalfa:

Image Credit: Kansas State University

Scouted alfalfa fields appeared in good condition. Stands had been in place from 1- 3 years. Fields were just starting to enter the late vegetative stage. Buds could be felt, but have not yet emerged.

**Corn:**

The corn crop is mostly planted, most of which is in VE (emergence) and other early planted corn is moving into V1. Scouted fields showed good emergence and moderate vigor; this was reduced however given the temperatures of last week. Seedlings generally appeared slightly yellow given the cooler temperatures. Emerging seeds faced the challenge of initially imbibing cool rainwater. This is known to reduce seedling vigor as plants struggle to accumulate the necessary heat and nutrients.

Scouted fields did not contain any below ground pest pressure in the form of slugs, rootworm, or seed corn maggot. However, these are pests of concern in which scouts would be best served digging roots to determine pest pressure.

Early burndown herbicide applications remained clean, however later applications may not have accrued the necessary heat units for effective action. In this, weed pressure was generally variable in scouted fields with some fields showing a moderate degree of weed seed germination from pokeweed, dock, and marestalk.

—Mark Townsend, Agent Associate.

Montgomery County

Wheat is heading. One corner of one field near Poolesville was beginning to flower. With the weather warming up this week, we'll likely see more flowering. The [head blight risk assessment tool](#) is showing a low to medium risk over the next 2-4 days. Cereal leaf beetle larvae and adults present in low to moderate numbers. They have not reached the threshold, which is one larva greater than 1/8 inch long per stem over a portion of the field.

The first cutting of grass hay has started. Corn that emerged before last week is yellow as a result of the cooler, wet weather. Occasional slug damage seen. Soybean planting has started.

--Kelly Nichols, Agriculture Agent.

Weather

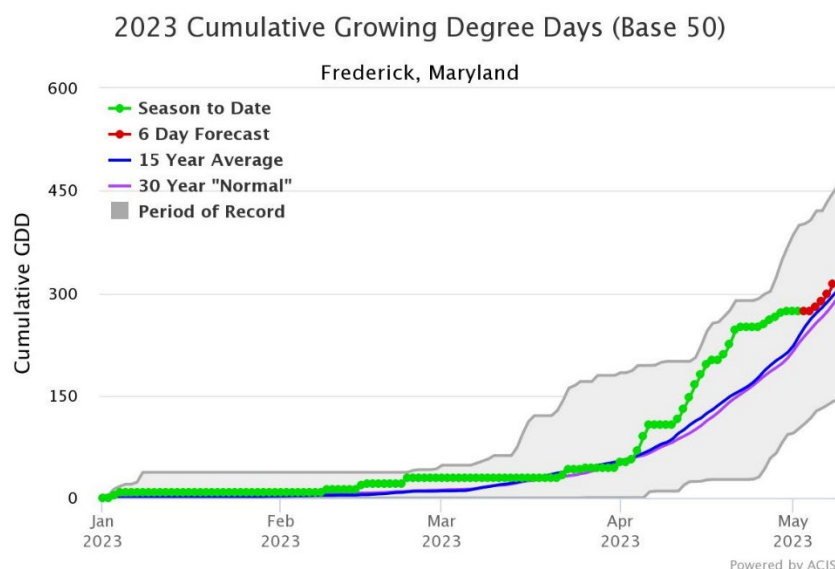
Below is an article written by Mark Townsend for the May 2023 installment of Agronomy News, a monthly newsletter provided by UME and UD Agriculture Agents.

It feels that most years we find ourselves finding something abnormal about the weather. This year is no exception and in some ways is even more different from our "abnormal-normal".

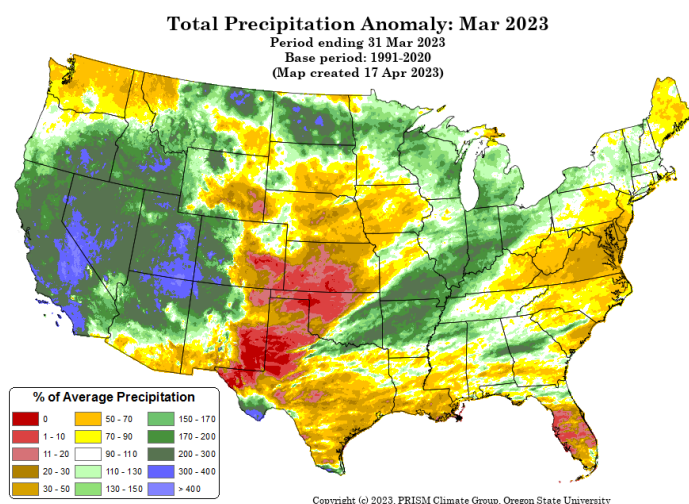
Put lightly, the 2022-2023 winter was mild. There were only a handful of instances where we fell significantly below freezing and stayed there for more than a night or two. In fact, the average temperature from January to March of 2023 of 43.4 degrees Fahrenheit, was the second warmest on record in the 128-year NOAA Statewide Time Series dataset, just falling behind 2012 at 43.5 degrees Fahrenheit (a tenth of a degree difference).

With this comes a significant accumulation of Growing Degree Days (GDD), a heuristic tool measuring the accumulation of heat through time which can be used to predict the development of crops and insects during the growing season. For review, GDDs are calculated by taking a simple average of the high and low daily temperatures subtracted from some base level. The base level is determined for each crop representing the lowest temperature the plant may still develop. For wheat and other small grains, the base temperature is often 32 or 40 degrees F, while warm season crops like corn and soybeans have a GDD base temperature of 50 degrees F.

Figure 1 is a cumulative line chart illustrating the accumulation of growing degree days since the start of the year in Frederick, MD. These data were obtained from the [Cornell Climate Smart Farming \(CSF\) Growing Degree Day Calculator](#) measured at a Frederick County, MD location, and a base temperature of 50 degrees (corn/soybeans base).



The chart illustrates the significant accumulation of GDDs in the last three months with the green line-and-dot figure poised well above the 15 year and 30 year averages. Of note is the rapid accumulation of GDDs in early to mid-April—illustrated by the rather large upward slope in a relative short period of time. Though we have not set any records, illustrated by the gray-bands above and below the data, we certainly came close in mid-April. This run-up coincided with abnormally dry conditions as well.



On the precipitation front, the region has generally been below average coming out of the winter months. Data from NASCE Prism Climate Group at Oregon State and USDA RMA (Figure 2) illustrates the precipitation anomaly, or difference in rainfall compared to the average from January to March for the continental US.

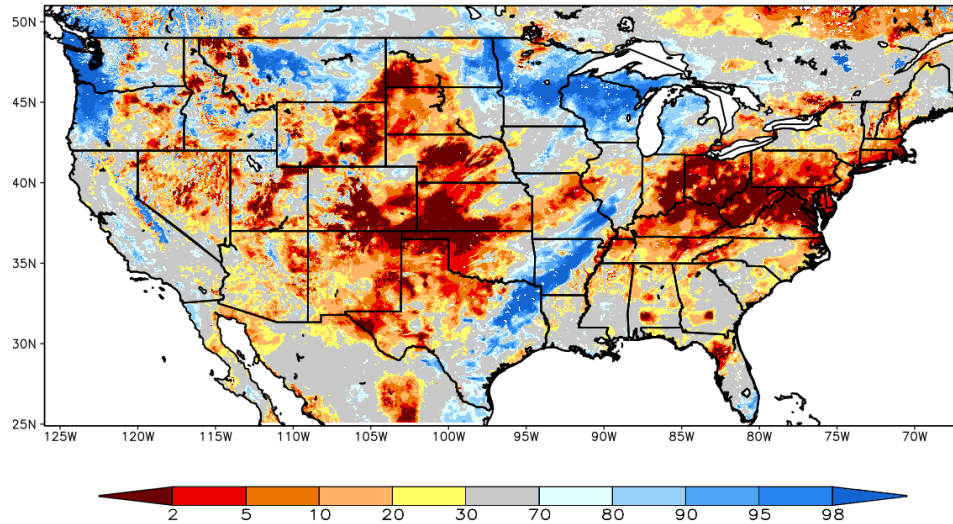
We may observe how the Mid-Atlantic held a range from 50-70% of average rainfall for the time period ending on March 31st.

The saying, “April showers bring May flowers” generally holds true in Maryland: on average and depending on the region in Maryland, we receive 3-5” of rainfall in April. This year, much of the region did not receive significant precipitation from April 1st to April 21st. Other regions only had to hold out another week to April 27th -28th to finally quench their thirst. These much needed rains have brought much of the region at or near seasonal averages—bittersweet news for some crops that were in the rapid-development stage during the dry-period and for others that were “dusted-in” (planted into dry soil) in mid-April.

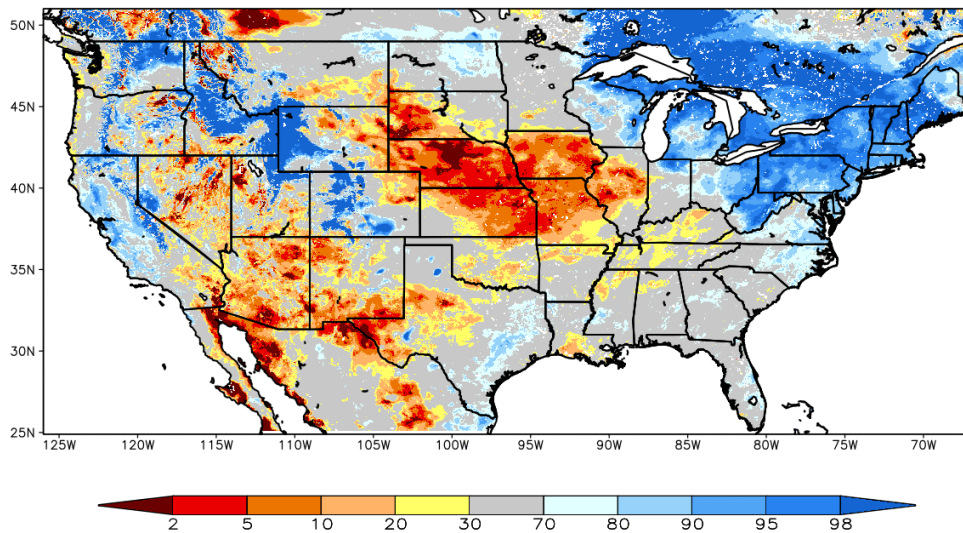
Speaking of; soil moisture has obviously reflected precipitation trends. Figures 3 and 4 are NASA Soil Moisture models based on satellite data. Figure 3, shows the model before our first rain on April 21st, while Figure 4 is the most recent model at the time of

writing. We may observe how drastic the change in soil moisture has been in the last two to three weeks moving from a significant deficit (red areas, Figure 3) to nearly oversaturation (darker blue areas, Figure 4).

SPoRT-LIS 0-10 cm Soil Moisture percentile valid 21 Apr 2023

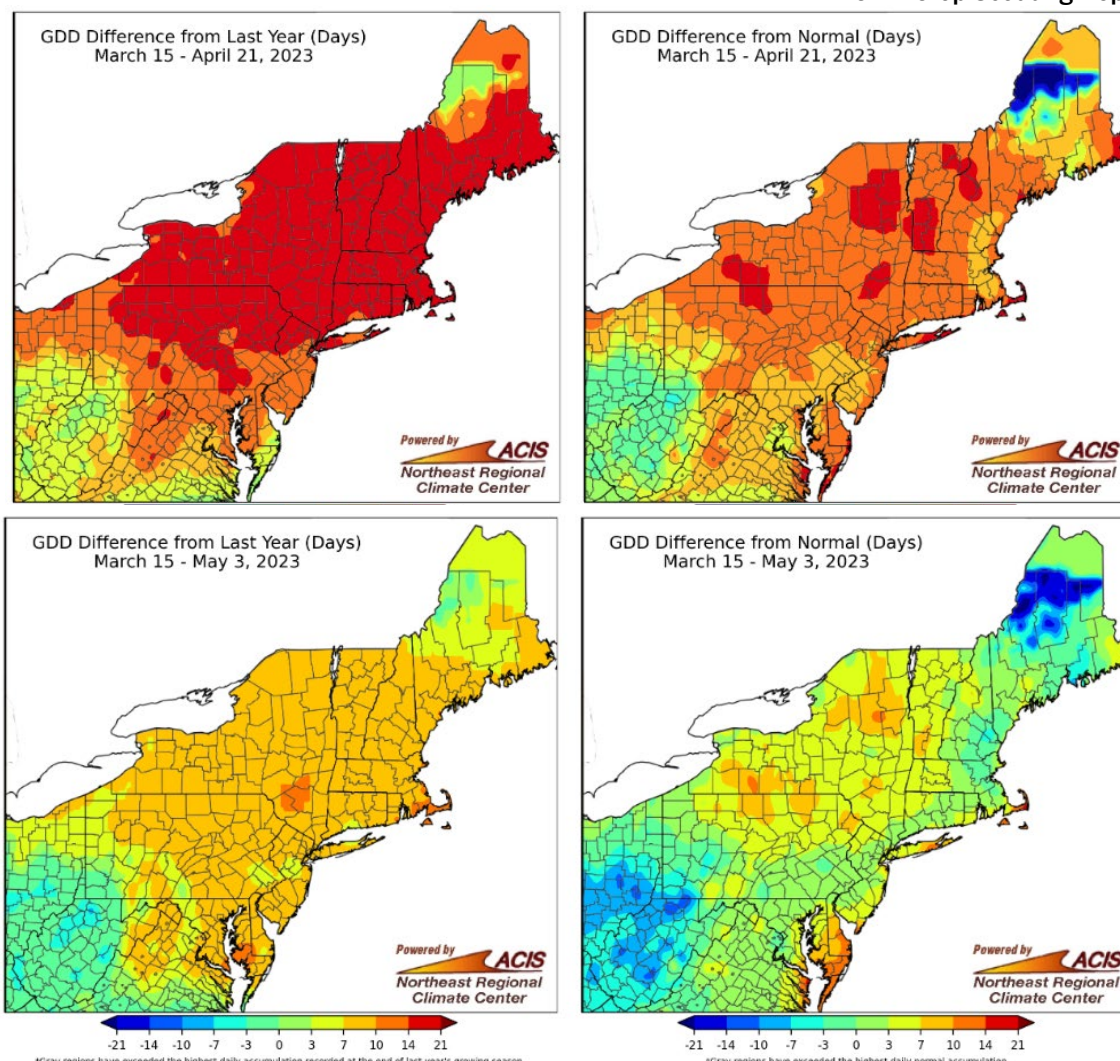


SPoRT-LIS 0-10 cm Soil Moisture percentile valid 03 May 2023



****NOTE****
****Experimental****

Though we have received much needed rainfall it has come at the expense of temperature and GDD accumulation. Looking back at Figure 1, we have leveled-off significantly in accumulation rate in the last few weeks of April and into May, and are approaching the 15 and 30 averages.



Additionally, data from the Northeast Regional Climate Center (Figures 5 and 6) illustrate the GDD Difference from last year for the Mid-Atlantic and Northeastern United States by county modeled at 4/21 and 5/3 respectively.

The comparison of the charts again yields useful information indicating that we were about 10-14 days ahead of last year and 7-10 days ahead of the average on 4/21. The cool temperatures much of the region has felt has made up this difference as we sit about 3-10 days ahead of last year with generally little difference on average.

In terms of agronomics, there are many potential takeaways that one can derive from these observations. Though generally speaking, it may be useful to begin scouting for diseases in small-grain crops especially as we move into reproductive phases of crop development paired with the recent spell of cooler, wet weather. Though we may be outside of the typical window, powdery mildew tends to propagate well in these conditions; and though recent fusarium head-blight models have not indicated a potential concern, this could change given recent weather patterns. In any event, keeping-tabs on crop conditions during this period is generally best practice.

Similarly, it may prove useful to scout seedling crops for root damage from cool, wet weather loving pests like seedcorn maggot, wireworms, white grubs, corn rootworm,

and slug. Additionally, a “flag-test” may be worthy to assess emergence of recently planted crops as germinating seed may be weakened by imbibing colder soil water.

Though as gloomy as looking back on recent weather may be, it does appear that drier and warmer weather is in the immediate forecast. Here’s to May flowers!

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