

Central Maryland Crop Scouting Report

UNIVERSITY OF
MARYLAND
EXTENSION



2023 Eighth Edition
Week Ending 6/19/2023

Introduction

Happy Monday! Welcome to the eighth 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

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Frederick County

Wheat:

Much of the scouted fields were in the dough development stage while others were moving into ripening stages (Feekes 11.1-11.4). Some fields appeared nearly ready for harvest, as such harvest will begin shortly.

Estimated yields appear to be average to above average given our notably fair winter and spring. Though the recent drought has made for some interesting conditions for spring crops, winter wheat and barley have fared rather well.

I will reiterate once more, the observed trend of Barley Yellow Dwarf: The image below was taken at the 2023 Small Grain Field Day plots.



Interestingly, the observed pressure was far greater than scouted fields in Frederick. The agronomy team at the Wye-REC indicated that they had observed significant aphid pressure early in the season, thus illustrating the cause of the disease prevalence. Similarly, one could observe the degree to which genetics played in determining BYDV susceptibility: plots directly next to each other varied in severity with some varieties expressing extreme infections while others showed slight discoloration at the tip of the flag-leaf.

With this in mind, it may be best to start thinking about variety selection for next year's wheat crop, paying careful attention to BYDV susceptibility ratings as the large aphid population observed this year may confer a large population moving into next year under the right circumstances.

Similarly, planting date, seed-treatment, and early season insect management strategies may be worthwhile.

Alfalfa:

Continue scouting for dry weather pests like potato leaf-hopper and grasshoppers. Please refer to the following dynamic IPM decision making guide:

[https://www.udel.edu/content/dam/udelImages/canr/pdfs/extension/sustainableagriculture/pestmanagement/Insect Control in Alfalfa 2023.pdf](https://www.udel.edu/content/dam/udelImages/canr/pdfs/extension/sustainableagriculture/pestmanagement/Insect%20Control%20in%20Alfalfa%202023.pdf)

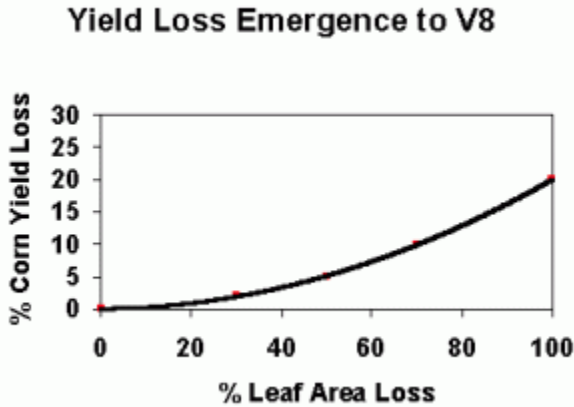
Additionally, though the dry weather has held off much of the typical disease pressure, be on the look-out for foliar diseases as we continue into the growing season. Growers: it may prove useful to ensure adequate potassium and sulfur fertility before second cutting. No less important, ensure identification of the correct pest/condition; boron deficiency looks a lot like potato leaf-hopper damage.

Corn:

Though some regions caught a rain or two, we're still rather dry. In this, much of the corn appears stalled at V5, in that the growth rate relative to normal appears far slower. All dug plants in scouted fields had what could only be described as terrific root growth. Vertical and lateral root development was incredibly expansive as the crop continues to hunt for soil moisture.

Though the root development is positive, many fields appeared stressed with curled, smaller leaves, especially on eroded hillsides and lighter soils. Field margins next to waterways and

close to bottoms obviously appeared in far better condition. For a related discussion on this topic, please refer to the short article titled [“Linking Soils and Water” in the Frederick News Post published on 6/19](#).



Drought's effect on yield is well documented in many papers and factsheets from various Universities. A terrific resource on this topic is from NC State at the following web address: <https://corn.ces.ncsu.edu/corn-production-information/the-impact-of-early-drought-on-corn-yield/> (Right image from the same source).

In the resource, it is important to note that though there is some observed reduction in yield from early season drought, a 20% yield reduction would require a nearly an

80-100% reduction in leaf area in VE – V8 corn.

This being said, the real danger to yield as a result of moisture stress comes later in the season as corn moves beyond V8 and into tasseling and reproductive stages. To some extent, this is good news as rains are projected in the near term.

Scouted fields had generally low weed pressure as weeds appear to be suffering from the drought as well. Most predominant pressure came from Canada thistle, pokeweed, hemp dogbane and young johnsongrass.

Deer damage was observed in three fields at the margins.

All scouted fields had some degree of slug damage though none of the damage affected germination and emergence. In this, the damage is typical and is not considered especially concerning as we move into the season where the affected crop will shortly outgrow its damage.

No foliar diseases were observed in scouting trips.

Soybeans:

Scouted beans appeared in okay condition. Like everything, the soybean crop could use a rain. Though the old adage, “the only drought resistant corn is a soybean” rings true again as very limited drought stress symptoms were observed in scouted soybean fields.

Early planted soybeans are approaching V4 while later beans remain in the V2 – V3 stages. Slug damage was observed in all scouted fields, though the affected soybeans appeared to be growing out of the damage as newer trifoliates appeared healthy and without damage.

With dry weather looking to linger longer, please begin to scout for dry weather pests like spider mites and soybean aphids. Though these pests are generally reserved for later in the season, we may find ourselves slightly ahead of normal in regards to these pests given our recent weather pattern. IPM guidelines suggest an action threshold at 250 aphids per plant, however given recent crop prices and generally lower application costs, this value may be more economically advantageous at a slightly lower level.

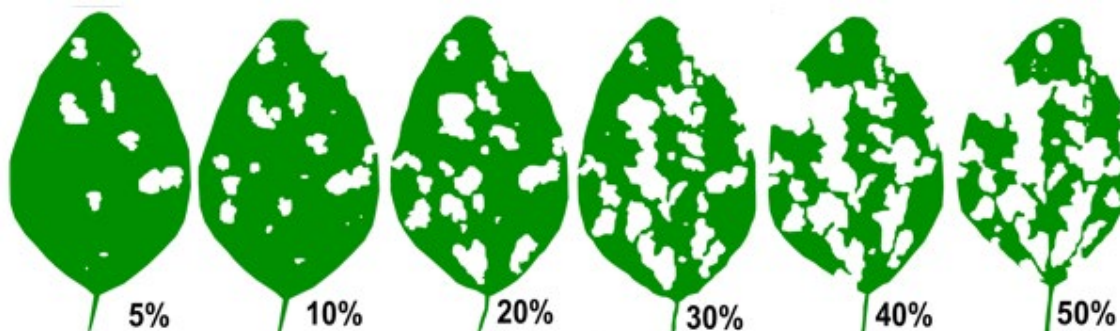
Japanese beetle pressure was observed along field margins of two scouted fields feeding on Hemp Dogbane. No beetles were observed in the fields themselves. However, this pest will be one of importance moving forward as the growing season continues. The following chart from [Perdue University Field Crop IPM](#) does well to describe the IPM action thresholds for Japanese Beetle in Soybeans.

Percentage Defoliation*										
Soybean growth stage	Market price - \$5/bu Cost of treatment					Market price - \$6/bu Cost of treatment				
	\$6/A	\$8/A	\$10/A	\$12/A	\$14/A	\$6/A	\$8/A	\$10/A	\$12/A	\$14/A
V1-2	40-50	45-55	50-60	45-55	55-65	35-45	40-50	45-55	45-55	50-60
V3-4	40-50	45-55	50-60	55-65	55-65	40-50	45-55	45-55	50-60	50-60
V5-6	45-55	45-55	50-60	55-65	55-65	40-50	45-55	50-60	50-60	50-60
V7+	40-50	40-50	45-55	50-60	55-65	35-45	40-50	40-50	45-55	50-60
R1	25-35	30-40	35-45	40-50	40-50	25-35	25-35	30-40	30-40	35-45
R2	20-30	25-35	30-40	35-45	35-45	20-30	25-35	25-35	25-35	30-40
R3	15-25	20-30	20-30	25-35	25-35	10-20	15-25	20-30	20-30	20-30
R4	10-20	15-25	15-25	20-30	20-30	10-20	10-20	15-25	15-25	20-30
R5	15-25	15-25	20-30	20-30	25-35	10-20	15-25	15-25	15-25	20-30
R6	15-25	20-30	25-35	25-35	30-40	10-20	20-30	25-35	25-35	30-40

Percentage Defoliation*										
Soybean growth stage	Market price - \$7/bu Cost of treatment					Market price - \$8/bu Cost of treatment				
	\$6/A	\$8/A	\$10/A	\$12/A	\$14/A	\$6/A	\$8/A	\$10/A	\$12/A	\$14/A
V1-2	35-45	40-50	40-50	40-50	45-55	30-40	35-45	40-50	40-50	45-55
V3-4	35-45	40-50	45-55	45-55	45-55	35-45	40-50	40-50	40-50	45-55
V5-6	40-50	45-55	45-55	45-55	50-60	40-50	40-50	45-55	45-55	45-55
V7+	35-45	35-45	40-50	40-50	45-55	35-45	35-45	40-50	40-50	45-55
R1	20-30	25-35	30-40	30-40	30-40	20-30	25-35	25-35	30-40	30-40
R2	15-25	20-30	25-35	25-35	25-35	15-25	20-30	20-30	25-35	25-35
R3	10-20	15-25	15-25	15-25	20-30	10-20	15-25	15-25	15-25	20-30
R4	10-20	10-20	10-20	15-25	15-25	5-15	10-20	10-20	15-25	15-25
R5	10-20	10-20	15-25	15-25	20-30	10-20	10-20	15-25	15-25	15-25
R6	15-25	15-25	20-30	20-30	25-35	10-20	15-25	20-30	20-30	20-30

* The defoliation level needed before a control is applied will vary somewhat depending on insect numbers and stage of development, growing conditions, variety grown, expected yield, economic factors, and plant population counts. All of these factors must be taken into consideration when making control decisions. The defoliation figures are shown as a range in each category. This range is included so that limiting factors can be considered. When few limiting factors are present, the control decision value will normally be at the higher end of the scale. Under some circumstances or conditions management guidelines given above may need to be adjusted. Based on 50 bushels per acre yield.

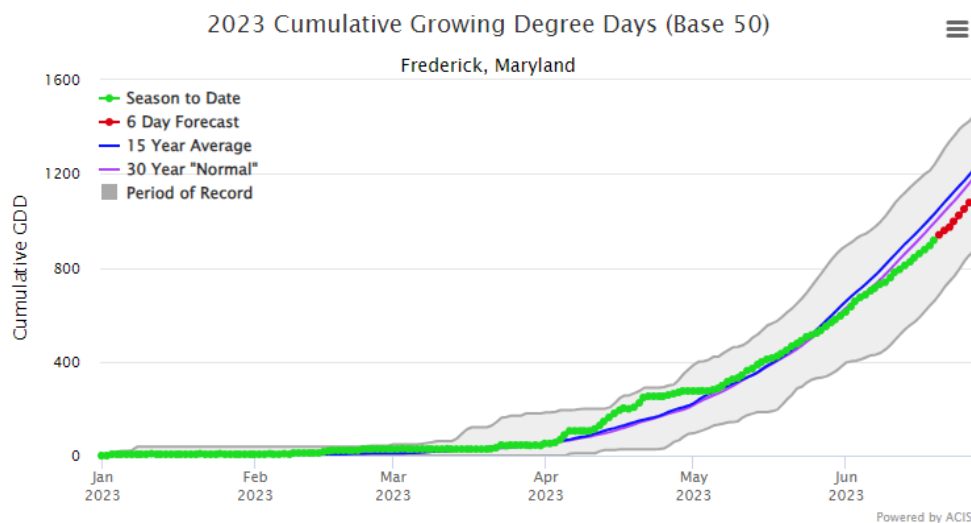
As always, the image below illustrates relative defoliation of soybeans.



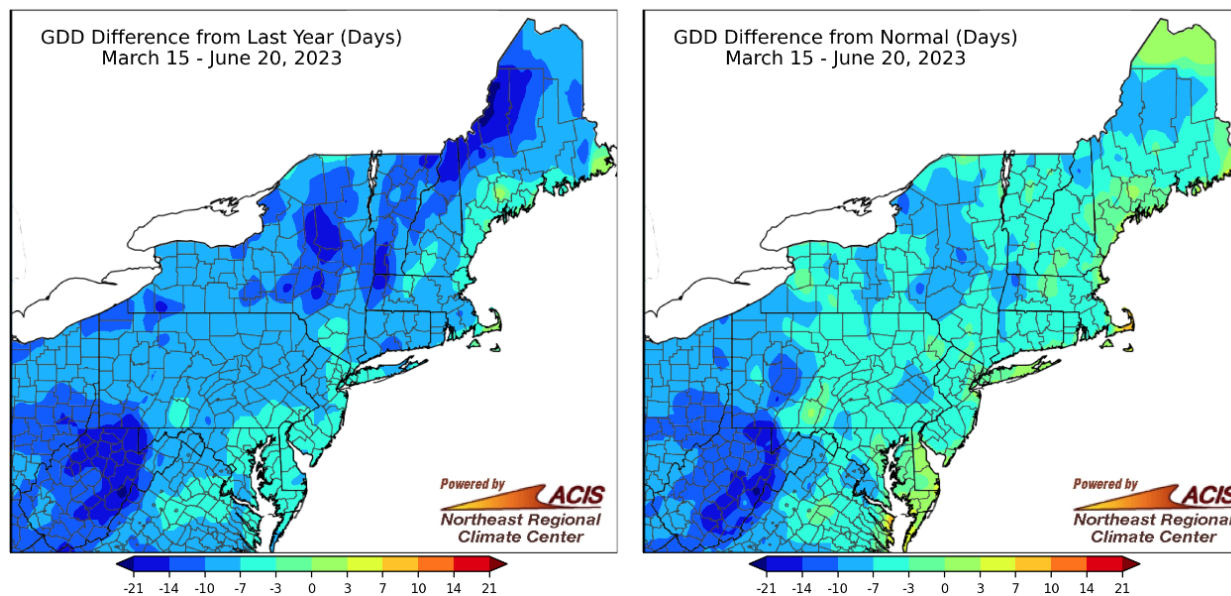
—Mark Townsend, Agriculture Agent Associate.

Weather

Since last week, we accumulated 137 GDD. This brings the seasonal total (Jan 1st to June 19th) to 917 GDD. As we move into the warmer months of the year we will observe an increase in accumulation rate, as seen here. The chart here from the [Climate Smart Farming GDD Calculator](http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/) (<http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/>) set to Frederick, MD illustrates that we are still below the 15-year average and at the 30-year average in terms of GDD accumulation.



As noted in a previous report, this represents a dramatic slow-down in terms of rate of GDD accumulation from the month of April.



Thankfully, parts of the region have received much needed rains over the last few days. However, many other locations are yet to receive any meaningful precipitation.

Ambient Weather Network (<https://www.ambientweather.com>) hosts publicly available weather data from privately owned weather stations. Our region has a good many of these stations, which proves valuable for the following analysis. However, do note that these data are not generated from vetted sources, but rather are from a cohort of private citizen offering their

weather data for others consumption. In this, there could be differences in positioning that could effect accuracy.

Regardless, below is a summary of the most recent precipitation at selected locations throughout Frederick County, MD.

Station: "Picnic Woods, Jefferson"		Station: "JEREG-WS5000, Mount Airy"	
Precip Date	Daily Accumulation	Precip Date	Daily Accumulation
6/12	0.52	6/12	0.17
6/14	0.17	6/14	0.1
6/16	0.2	6/16	0.19
6/19	0.1		0.46
SUM	0.99		

Station: "Mark Manor, Adamstown"		Station: "Cactus3, Thurmont"	
Precip Date	Daily Accumulation	Precip Date	Daily Accumulation
6/12	0.25	6/12	0.52
6/14	0.05	6/14	0.16
6/16	0.06	6/16	0.38
	0.36		1.06

Station: "BYWeather, Woodsboro"		Station: "Keystone Farms, Keymar"	
Precip Date	Daily Accumulation	Precip Date	Daily Accumulation
6/12	0.31	6/12	0.35
6/14	0.07	6/14	0.07
6/16	0.26	6/16	0.31
6/19	0.01		0.73
	0.65		

Station: "Frog Hollow, Myersville"		Station: "My Weather Station, Ijamsville"	
Precip Date	Daily Accumulation	Precip Date	Daily Accumulation
6/12	0.56	6/12	0.06
6/14	0.08	6/14	0.1
6/16	0.3	6/16	0.03
	0.94	6/19	0.11
			0.3

The 10-day forecast predicts additional precipitation for our area with estimated totals nearing 3" of accumulated precipitation:

ECMWF 00Z 240hr fcst Valid for: 07:00 PM (Central) Friday 2023-06-30

