Cornell Cooperative Extension

Central New York Dairy, Livestock and Field Crops

Field Crop Update – 8 September 2022

1. **Announcements**
2. **Field Observations**
3. **Growing Degree Days**

1. Announcements:

From Gary Bergstrom, Professor of Plant Pathology, Cornell University:
"Tar spot of corn was first observed in New York last fall in two fields in Erie County. The first observation of tar spot in New York in 2022 was confirmed today (9/7/2022) in southwestern Chautauqua County. Tar spot stromata were not evident two weeks ago but are prevalent now on lower and middle leaves and some on upper leaves. Tar spot is more prevalent on field borders than in the center of the field. Recent rains across much of the state have been very conducive for tar spot development wherever spores may be present. Corn is too far along for the disease to affect yield. But we have an opportunity to document the current geographic range of tar spot in the state this year, and that will be helpful in planning management strategies for the future. Now is an excellent time to scout corn fields, especially silage fields that may be harvested soon. Diagnosis is all about finding the raised black fungal stromata (see photo) which cannot be wiped or scratched off the leaf surface as insect frass can. Please contact your local Cornell Cooperative Extension Field Crops Educator if you think you may be observing tar spot stromata. Follow-up leaf samples will be sent to the Bergstrom Lab at Cornell for disease confirmation.":

2. Field Observations

Lots of silage harvest activity happening today and through this weekend. Be safe!

Check your silage crops' whole plant dry matter to make sure you're ready to harvest – your crop may be ready before you know it! See our recent emails regarding Corn Plant Dry Down and Kernel Processing. Here's a reminder from Joe Lawrence (PRO-DAIRY):

"The status of the corn crop is highly dependent on where you are in the state this year but in areas with drought stress (but not complete plant death from drought) it will be really important to watch kernel maturity in combination with whole plant dry matter. In these fields the plants look pretty ugly but the kernels continue to attempt to mature. You will see in the attached that the year and health of the plants makes a difference in how much ear DM contributes to whole plant DM vs. stover DM. For this droughty scenario this could look more like the data from 2019 where the plants are not healthy and therefore contribute slightly more to whole plant DM but ear DM is still driving the dry down process and patience is needed to allow this to happen: https://ecommons.cornell.edu/handle/1813/104222."

And to assess the effectiveness of this year's nutrient plan, see this factsheet and this factsheet on the Corn Stalk Nitrate Test.

3. Growing Degree Days as of Aug 31st: *See: Climate Smart Farming Growing Degree Day Calculator*
Growing degree days (GDD) are calculated by taking the average daily temperature and subtracting the base temperature for development of a given organism ((High + Low)/2 – base temp = GDD). For corn silage, we are using base 50/86, as corn development starts at 50 degrees F and ceases above 86. ***Check your location, planting date, and silking date.*** *Silage corn needs 750-800 GDD (depending on hybrid maturity) after silking to reach a whole plant DM of 32%. Under typical late season dry down conditions we can expect the crop to reach 35% DM four to seven days later* (Remember that we can expect to accumulate **20-25 GDD per day**, or even up to 30, so this is not a large window). For more details, see this article. ***No matter what the numbers say, always check your crop to see how close you may be to harvest:***

Hybrid relative maturity	GDD from silking to reach ~32% DM
101-110	800
96-100	750
<96	750 or slightly less (extrapolated)

Time to make plans (35% DM anywhere between 5 – 11 days from now, depending on maturity)

Gas up the harvester and the trucks (35% DM in 2 – 8 days, depending on maturity)

See you in the field (35% in less than a week):

It's either already in the bunk or it's going in the bin or for high-moisture corn (DM likely > 30-40%)

As of: 24 Aug 2022 (Base: 86/50)			Planting Date				Silking Date				
Location	Elevation (ft)	Latitude N	May 10	May 15	May 20	May 25	July 17	July 20	July 23	July 26	July 29
Poland	675	43.23	1953	1871	1829	1759	991	927	852	792	736
Canastota	420	43.08	2275	2180	2131	2056	1157	1079	997	924	863
Saratoga Springs	365	43.08	2200	2106	2054	1980	1086	1012	936	866	811
Frankfort	530	43.03	2173	2084	2037	1957	1088	1016	939	872	811
Galway	749	43.02	2099	2010	1961	1892	1048	977	902	835	782
St Johnsville	650	43	2008	1925	1882	1807	997	929	855	791	736
Fenner	1480	42.97	2011	1926	1886	1821	1037	966	889	824	771
Fultonville	489	42.95	2129	2042	1994	1919	1058	986	910	843	785
Bouckville	1170	42.93	1982	1900	1860	1792	1012	942	868	803	751
Richfield Springs	1580	42.85	1907	1831	1790	1718	964	898	827	764	712
Cherry Valley	758	42.81	1898	1824	1783	1712	962	897	824	761	709
Burlington	1959	42.72	1834	1759	1721	1656	945	881	812	750	703
Sherburne	1115	42.69	2046	1964	1919	1848	1036	966	893	826	773
Cobleskill	937	42.68	2075	1996	1949	1876	1048	978	902	835	778
Oneonta	1107	42.47	1797	1724	1685	1621	936	873	805	744	698
Oxford	1499	42.4	1920	1839	1796	1730	986	921	850	785	733
Bainbridge	1000	42.3	1968	1886	1840	1771	1010	942	871	807	754