

Checking the Back Forty



Kevin H. Ganoe
Regional Field Crop Specialist
 Central New York Dairy & Field Crops Team
 Cornell Cooperative Extension of
 Chenango, Herkimer, Otsego,
 and Schoharie Counties
 5657 State Route 5, Herkimer, NY 13350
 Phone: 315-866-7920 Cell: 315-219-7786
 FAX: 315-866-0870
 khg2@cornell.edu

Weekly Growing Degree Days and Rainfall thru July 24, 2011

Station	Temperature (°F)				Growing Degree Days (GDD) (Base 50°F)					Precipitation (Inches since 4/1/2011)			
	High	Low	Avg	Departure from normal	Week of July 18- July 24	Since May 8	Departure from normal	Since May 22	Departure from normal	Week	Departure from normal	Season	Departure from normal
Cobleskill	93	59	77	9	188	1211	230	1118	217	0.31	-0.46	17.94	4.06
Morrisville	96	61	78	10	195	1200	266	1092	235	0.97	+0.20	16.71	3.05
Norwich	97	55	77	9	192	1247	267	1120	222	0.17	-0.58	22.11	8.20
Oneonta	95	56	77	10	189	1227	319	1115	279	0.18	-0.68	21.22	6.16

*From the USDA National Agricultural Statistics Service New York Field Office and the New York Department of Agriculture and Markets
 Weekly accumulations are through 7:00 AM Sunday Morning*

We are tracking Growing Degree Days (GDD) during the season using 50°F as a base temperature. There will be two dates of reference for these GDDs, May 8 and May 23, 2011. Rainfall accumulation will be from April 1 on.

We certainly picked up a lot of heat units last week as all May planted corn is at or is moving toward tasseling/silking. We are certainly ahead for GDDs at least by a week or more so there is more of a chance corn can be harvested at the desired moisture and that yields will still be reasonable.

It should take 1250 GDDs for 96-100 RM hybrids and 1300 GDDs for 101-105 RM hybrids to reach tasseling/silking. Expect to harvest 96-100 RM hybrids for silage at about 750 GDDs after tasseling/silking and for 101-105 RM hybrids at about 800 GDDs.

References:

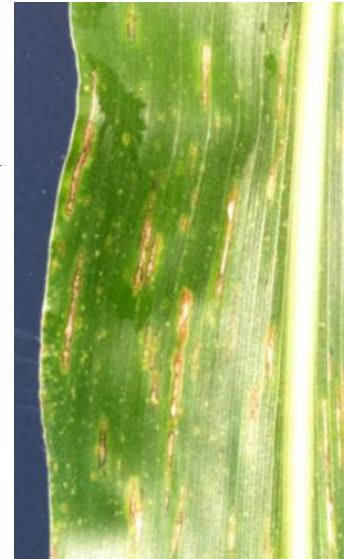
Using the Number of Growing Degree Days from the Tassel/Silking Date to Predict Corn Silage Harvest Date
 Bill Cox, Crop and Soil Sciences, Cornell University
<http://css.cals.cornell.edu/cals/css/extension/cropping-up-archive/Vol16No4A1.pdf>

Corn Diseases: Now is the time to look!

Tasseling is an excellent time to be scouting for corn diseases. I can not report finding any major disease problems at this time but over the past few years we have seen more disease issues so I would encourage it is time to take a look at your fields. There has certainly been pressure to consider using fungicides for disease control and I can only encourage to have some idea of what diseases are present before making the decision to treat fields with fungicides.

Northern Leaf Spot (*Bipolaris zeicola* race 3):

This is the one disease I have found in several fields this year and have confirmed it with Dr. Gary Bergstrom at Cornell. There are a number of “races” and race 3 is the one typically found in commercial hybrids and in inbreds. The lesions of Northern Leaf Spot have what appears to be a chain of “pearls” or white dots running parallel with the leaf veins. The fungus causing the disease overwinters on corn residue in the field and spores spread to this years crop under cool damp conditions. Northern Leaf Blight is not known to reduce corn yields or cause economic loss in corn hybrids but can be a problem in seed fields with corn inbreds. Rotating crops and increasing tillage can reduce the incidence of this disease.



Reference: <http://ohioline.osu.edu/ac-fact/0029.html>



Northern Corn Leaf Blight (*Exserohilum turcicum*)

The tan lesions of Northern Corn Leaf Blight (NCLB) are boat shaped as if you were looking down from above; a long elliptical shape pointed at both ends. Infection by the fungus can occur when there are long periods of free water on the leaf and temperatures are more moderate, 65-80° F. It is more likely to occur in valleys or bottom land where the dew and morning fog hang on, typically toward the end of the growing season. Spores spread from a lesion to form new ones on the same or nearby leaves under favorable conditions and soon lesions on the same leaf will coalesce. This is where the yield reductions occur as leaves lose their ability to photosynthesize. If the disease is present on leaves at or above the ear two weeks before or after tasseling severe yield reductions can occur.

The best prevention for NCLB is to plant hybrids that are known to have considerable resistance on a regular basis. We have had instances over the past few years where when the weather conditions were right and spores present there was an economic loss to a few fields. If you scout fields in the pre-tassel to silk stage and find lesions consider using fungicides to prevent the disease spreading in the leaves at or above the ear.

Reference:

<http://www.extension.purdue.edu/extmedia/BP/BP-84-W.pdf>

Gray Leaf Spot

(*Cercospora zeae-maydis*)

Gray Leaf Spot (GLS) lesions are known by their straight sides parallel to the leaf veins and their gray appearance. This gray appearance is most noticeable once the leaves mature and you hold them up to light, the gray color is a stark contrast. This disease is most prevalent where no-till or reduced tillage provides sufficient corn residue from year to year. We have seen this disease more over the past several years although as of this date I have seen little this year.



Like NCLB, GLS is more likely to develop under moderate temperatures and when free moisture is available on leaves, favoring mid to late summer development. Also like NCLB, it is important to scout the corn pre-tassel to determine if GLS is present if you are to use a fungicide effectively because you need to prevent the disease from developing on the leaves above the ear. Unlike NLCB the GLS spores are more likely to come from a local source like the field itself.

If GLS is a problem for you search out hybrids with resistance and also look to rotate out of corn as is feasible to reduce corn residue. Increasing tillage to reduce the residue can also help. Fungicides can be used to maintain yield potential if you see the disease developing.

Reference:

<http://ohioline.osu.edu/ac-fact/0038.html>

Corn Rootworm: Now is the time to look!



OK. this is not one of those quizzes or cute tests someone comes up with; yes, the picture on the right is actually upside down and this is a Northern Corn Rootworm adult at left. The picture was taken this week and is a reminder that this is the time, silking, when you need to be scouting fields for adults. Their presence this year is an indicator of the risk for rootworms in next years corn in that field.

What may be critical is that adults tend to move to fields that are pollinating/silking to feed and so they will end up in some of the later planted corn that will silk late. If you have some later planted corn keep in mind it might be a place where these adults end up laying eggs in next years corn. If these fields are to be planted to corn next year rootworm resistant varieties and/or insecticides may be necessary.