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# Checking the Back Forty

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**Weather Data for Week Ending Sunday, July 15, 2012**

As of the week ending July 15 early planted corn fields are tasseling/silking this week especially early maturing hybrids. Table 1 shows the average temperature was 4-5°F higher than normal. GDDs remain above normal and are approaching 2 weeks ahead of normal. Table 2 shows rainfall continues below normal and corn has been showing signs continued drought stress. Since the end of this weather data on Sunday morning most areas picked up in the neighborhood of a .5 inch on Sunday afternoon. So yesterday, Monday July 16 corn was not looking quite as stressed. However as Bill Cox, our Cornell University grain specialist points out corn will transpire that .5 inch of water in two days at this stage so given the temperatures and lack of rainfall predicted we should be seeing stress again by Wednesday or Thursday.

**Table 1. Growing Degree Days**

| | Temperature (°F) | | | | Growing Degree Days (GDD)-Base 50°F | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Station | High | Low | Avg | Departure from normal | Week of May 21-27 | Since April 22, 2012 | Departure from normal | Since May 7, 2012 | Departure from normal | Since May 20, 2012 | Departure from normal |
| Cobleskill | 90 | 50 | 72 | 4 | 153 | 1113 | 237 | 1087 | 247 | 969 | 206 |
| Morrisville | 89 | 52 | 71 | 5 | 148 | 982 | 155 | 940 | 146 | 840 | 120 |
| Norwich | 91 | 50 | 72 | 4 | 153 | 1118 | 244 | 1069 | 233 | 959 | 202 |
| Oneonta | 89 | 50 | 71 | 5 | 150 | 1154 | 347 | 1099 | 323 | 970 | 263 |

**Table 2. Rainfall Data**

| | Precipitation (Inches) 1/ | | | |
|---|---|---|---|---|
| Station | Week | Departure from normal | Season | Departure from normal |
| Cobleskill | 0.03 | -0.81 | 9.82 | -2.30 |
| Morrisville | 0.15 | -0.69 | 10.47 | -1.41 |
| Norwich | 0.11 | -0.73 | 11.00 | -1.18 |
| Oneonta | 0.15 | -0.76 | 10.16 | -2.90 |

Looking ahead 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.

*From the USDA National Agricultural Statistics Service New York Field Office and the New York Department of Agriculture and Markets*
*1/ Season accumulations are for April 1st to date. Weekly accumulations are through 7:00 AM Sunday Morning*

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# Potato Leafhopper Resistant Alfalfa Varieties Show Their Stuff

Keith Waldron, NYS IPM

Potato leafhopper (PLH) populations have been increasing the past few weeks and many alfalfa fields across the state now showing signs of PLH injury including: yellowing of leaf tips (known as *hopperburn),* stunting, reduced biomass, and decreased leaf protein concentration.

Potato leafhopper is a migratory insect, and source populations develop in the Gulf Coast and southeastern states. Factors affecting the arrival time and development rate of PLH in the northeastern USA include weather patterns, temperature, and host plant species availability. Drought stress conditions can further add to PLH impacts. In NY, PLH damage on alfalfa can be expected annually. However, severity of infestations is variable across years and counties. Conditions this season have been quite favorable for PLH populations and their potential to pose significant economic risk to alfalfa.

The prevalence of PLH injured fields provides a perfect opportunity to discuss the value of PLH resistant alfalfa varieties. PLH resistant alfalfa varieties first became commercially available in 1997 and their resistance to PLH has gotten progressively better with each subsequent generation. PLH resistance has been bred into varieties using conventional breeding techniques. The mechanisms of PLH resistance are complex and may involve physical entrapment, antibiosis, non-preference, and tolerance. The glandular hairs appear to be a critical factor for each of these resistance mechanisms. The advantage of PLH resistant varieties is the reduction of PLH impacts – yellowing, stunting, effects on nutritional value of the forage and a reduced need for insecticide applications.

A side by side comparison PLH resistant vs susceptible alfalfa trial was highlighted as part of last week's Cornell Sponsored Seed Growers Field Day in Ithaca. This event provided the opportunity to view a replicated field trial with 4 PLH resistant and 7 susceptible alfalfa varieties. For comparison, "Vernal" and "Oneida VR", were included as 2 non-PLH resistant industry standards. Two of the featured PLH resistant varieties are Cornell experimental varieties in development. A photo of the plots reveals the advantage of PLH resistance – greener and taller alfalfa. This trial was planted May 10, 2010 and does not receive an insecticide. Sampling damaged vs healthy appearing alfalfa in one replication of the experiment this week determined:

Avg. Susceptible: 3.4 PLH adults / 62.6 PLH nymphs, 7" tall (7 entries)
Avg. Resistant: 1.25 PLH adults / 0.75 PLH nymphs, 15.25 " tall (4 entries)

As can be seen in the pictures (Page 3) recent advances in the development of PLH resistant alfalfa have made the planting of resistant alfalfa a viable alternative to insecticides for the management of leafhoppers. Planting the newest generation of PLH resistant alfalfa hybrids is strongly suggested for the management of PLH in both clear alfalfa seedings and in stands mixed with grass species. Please refer to the alfalfa variety tables available on the Cornell Forage Project web site: (http://plbrgen.cals.cornell.edu/cals/pbg/programs/departmental/forage/) and in the Cornell Guide for Integrated Field Crop Management (www.fieldcrops.org) to evaluate the different available PLH resistant alfalfa varieties.

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Potato leafhopper (PLH) susceptible vs PLH resistant alfalfa varieties in Cornell's Forage Trials in Ithaca, NY 7/11/12

*Reference:*
*http://nysipm.cornell.edu/fieldcrops/tag/pestrpt/default.asp*

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## Watching for second generation armyworm… Now is the time!

If you have concerns about being hit by the next generation of armyworms now it the time to go scout your grass fields. There have been a few reports from western NY of seeing some second generation armyworms. To date my understanding is that these sightings have not been in the threshold range but do point out the need to continue to be vigilant. Not sure I am seeing this as an overall problem but one that could hit some fields on some farms.

Remember that looking for armyworm means getting down and looking at the soil surface and under any trash. Those found in western NY are only .25 inch long and will be around a few more weeks.

## Continued watch on potato leafhoppers and two spotted spider mites

Potato leafhoppers (PLH) are still around and will continue to be a problem through August. It is very important that you scout for and treat fields if you have PLH over threshold. Take a look at back issues of Checking the Back 40 for more details.

I have not seen or had any reports of two spotted spider mites locally but suggest for soybeans in particular, but also corn you keep a watch.

## Alternative forages

I have had people ask what else they might grow this summer to provide additional tonnage. Right now if we don't get some rain not sure there is anything to plant because you won't get in the ground or get it to grow if you do.

Being more positive if you have the land available and we get some moisture oats will make at least several tons of DM planted August 1 and taken off about the beginning of October. You can plant later than that but you risk lower yields and actually getting the crop off at the right dry matter.

Corn silage will be early so a good chance to get cover crop on of rye or triticale and take it off in the spring for early forage.

*Reference:*
*Oats—Ohio State University Extension, C.O.R.N. Newsletter 2011-24 July 26 - August 2, 2011*

*Rye—http://www.ansci.cornell.edu/pdfs/pd2007october20.pdf*

*Triticale—http://nmsp.cals.cornell.edu/publications/factsheets/factsheet56.pdf*