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Checking the Back Forty

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Kevin H. Ganoe, Field Crop Specialist
5657 State Route 5, Herkimer, NY 13350
Phone: 315-866-7920 Cell: 315-219-7786
khg2@cornell.edu

Heat caught up! Mowers at the ready!

I wanted to follow up to my last newsletter on looking at growing degree days and how growing seasons are different. The difference is the reason behind our 1st Cutting Forage Quality Updates every May. When 50 percent of hay crop dry matter is in the first cutting and it tends to have the highest digestibility of the year it makes a lot of sense to get this as right as possible.

At the right are three tables which show the differences of Growing Degree Days (GDD) comparing 2017 to 2018 for May 1 and 15. As I shared previously this is info that is available at the Network for Environment and Weather Applications (NEWA) website and available to you to use. The information there is for GDDs of Base 40 of which alfalfa is really Base 41 but it will get us close enough to make the point.

Table 1. Growing Degree Days Base 40° F for March 1 to May 1

Location	2017	2018
Oriskany Falls	394	102
Sherburne	348	87
Laurens	338	82
Sprakers	337	80
Cobleskill	347	92
Amsterdam	371	93
Saratoga Springs	395	118
Gansevoort	404	116

Table 2. Growing Degree Days Base 40° F or March 1 to May 15

Location	2017	2018
Oriskany Falls	497	398
Sherburne	440	360
Laurens	420	349
Sprakers	447	359
Cobleskill	448	376
Amsterdam	495	384
Saratoga Springs	544	434
Gansevoort	559	416

Table 1 has GDDs from May 1 this year and in 2017. As we indicated in our 1st Cutting Updates and in my last Checking the Back 40 at May 1 in 2017 we had grass that needed cut. Look at the growing degree days for May 1 2017 in Table 1 and also look at Table 3 and the GDDs for May 15, 2018. GDDs for the locations are approximately the same but as a calendar date there are 2 weeks difference.

As pointed out in the last newsletter GDDs aren't perfect for predicting NDF. But they do give us a feel for the growing season and getting lined up to harvest. As we look at GDD predictions for the next five days taking into the next monitoring date, May 22, we can see that GDDs should be increasing at the same steady rate they have been. **Having this kind of data only adds to the confidence in our predictions of needing to harvest grasses now and that for some farms in our area they need do also be considering mowing mixed stands now or in the near future.**

(continued)

GDDs for Corn

A question that was raised last year, and I have had it even again this spring looking at the idea of planting corn and having enough GDDs to get the corn to harvest either for silage or for grain. Here is a website that can allow you to look at the date you plant and given 15 year and 30 year averages for GDDs and also the recorded known yearly min and max GDDs:

http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/

The Climate Smart Farming group at Cornell has a website with various useful climate related tools but the one that caught my eye was the one that calculated GDDs for corn or other crops that might use a Base 50 or 86/50 calculation. So a 86/50 GDD just acknowledges that corn doesn't grow below 50 F° and stops growing above 86º F. The Northeast Regional Climate Center has air temperature data on a 2.5 mile grid that is used to make these calculations.

In Table 4 I have put in GDDs for planting May 1 and 10 at thirteen locations around our region and calculated the GDDs to date (May 17).

Table 4: GDDs for May 17		Planting Date May 1 GDDs 86/50				Planting Date May 10 GDDs 86/50			
Location	Elevation	Season To Date	15 Year Average	30 Year "Normal"	Period of Record	Season To Date	15 Year Average	30 Year "Normal"	Period of Record
Canastota	420	205	151	144	62-225	72	71	68	30-105
Bouckville	1170	186	131	123	42-188	65	62	58	20-89
Sherburne	1115	190	138	130	28-188	67	65	61	13-88
Bainbridge	1000	175	135	127	27-184	56	63	60	13-87
Oneonta	1107	188	135	131	31-182	64	63	62	14-86
Richfield Springs	1580	162	119	116	26-173	53	57	55	12-83
Frankfort	530	176	132	126	44-187	60	63	60	21-89
Cobleskill	937	187	130	126	34-192	65	61	59	16-92
Cherry Valley	758	191	140	136	39-197	67	67	64	18-93
St Johnsville	650	164	121	121	30-176	58	58	57	14-83
Fultonville	489	210	152	144	48-214	78	72	69	23-101
Galway	749	189	134	135	36-196	66	63	64	17-93
Saratoga Springs	365	208	148	146	43-208	77	70	69	20-98

First I can't encourage you enough to the use the site yourself and enter your own field information if you can find the time. I hope to keep a running account of GDDs with planting dates of May 1, 10, 20 and June 1. Will have more info as the growing season goes on.

How to use it initially is even just looking at emergence. You should expect corn to take 110 to 120 GDDs from planting to emergence. If you got corn in around May 1 then you should expect to see it out of the ground by now. Point being if you aren't seeing plants something is wrong. If you planted May 10 then it is clear there is more heat needed to get to emergence. GDDs were ahead of average or normal if planted May 1 but GDDs were more normal for corn planted May 10.

Again will expand this table as the season progresses and point out other milestones for corn growth along the way.