Cornell Cooperative Extension

Central New York Dairy, Livestock and Field Crops

Field Crop Update May 31-June 4, 2021

1. **Field Observations**
2. **Growing Degree Days**
3. **Pest Monitoring**

1. Field Observations

While almost all of us have taken first cutting, I noticed that as of a few days ago, some fields in the higher elevations (especially to the west of our region) still were not cut - though this may no longer be true as I type! As alfalfa begins to regrow, we will want to monitor the new growth for alfalfa weevil and potato leafhopper. I will monitor these pests in fields around the region starting next week, but it's easy enough to do yourself as well: Potato Leafhopper Scouting and IPM Thresholds in Alfalfa.

Winter grains are looking excellent, and crops I've seen in the lower Mohawk Valley area are nearing full anthesis - and this is the time to monitor or spray to prevent fusarium head blight in winter wheat if you've had trouble with it in the past. I've seen an abundance of crown rust on buckthorn trees, which means we should keep an eye on spring oats. A number of different rust species can infect buckthorn and *not* oats, so this is another pest that is difficult to forecast.

I have yet to see any cereal leaf beetle in the fields I've checked, but that doesn't mean it isn't out there. Our friends in western NY have seen a few fields with lots of leaf beetle mating activity, so if you see any in your field, *please let me know*! We need to collect some larvae to hopefully reinvigorate what was a very successful biocontrol program that has lost steam over the years. So keep me in the loop….

Soybean aphid has been spotted in other parts of the state, so this is another pest to watch for as we get into June. I'll be checking for it as I make my rounds, but the management threshold is an average of 250 aphids/plant if plant development is prior to early pod fill (R4). Natural enemies can keep lower populations in check, so we should resist the temptation to spray on first sight.

A few of you have mentioned some random, uniform inconsistency in no-till corn emergence this spring. When we dig down, the kernels have germinated but have not yet broken the soil surface. This can happen as a result of a number of factors: the usual rocks getting in the way of consistent planting depth and seed-soil contact, inconsistency in the moisture of the ground at planting due to intermittent rainfall that can affect germination timing or seed depth, or a slight variability in the vigor of the seed. Regardless, all of these cases have shown that the seed germinated successfully. Time will tell just how far behind these stragglers are, and if it will

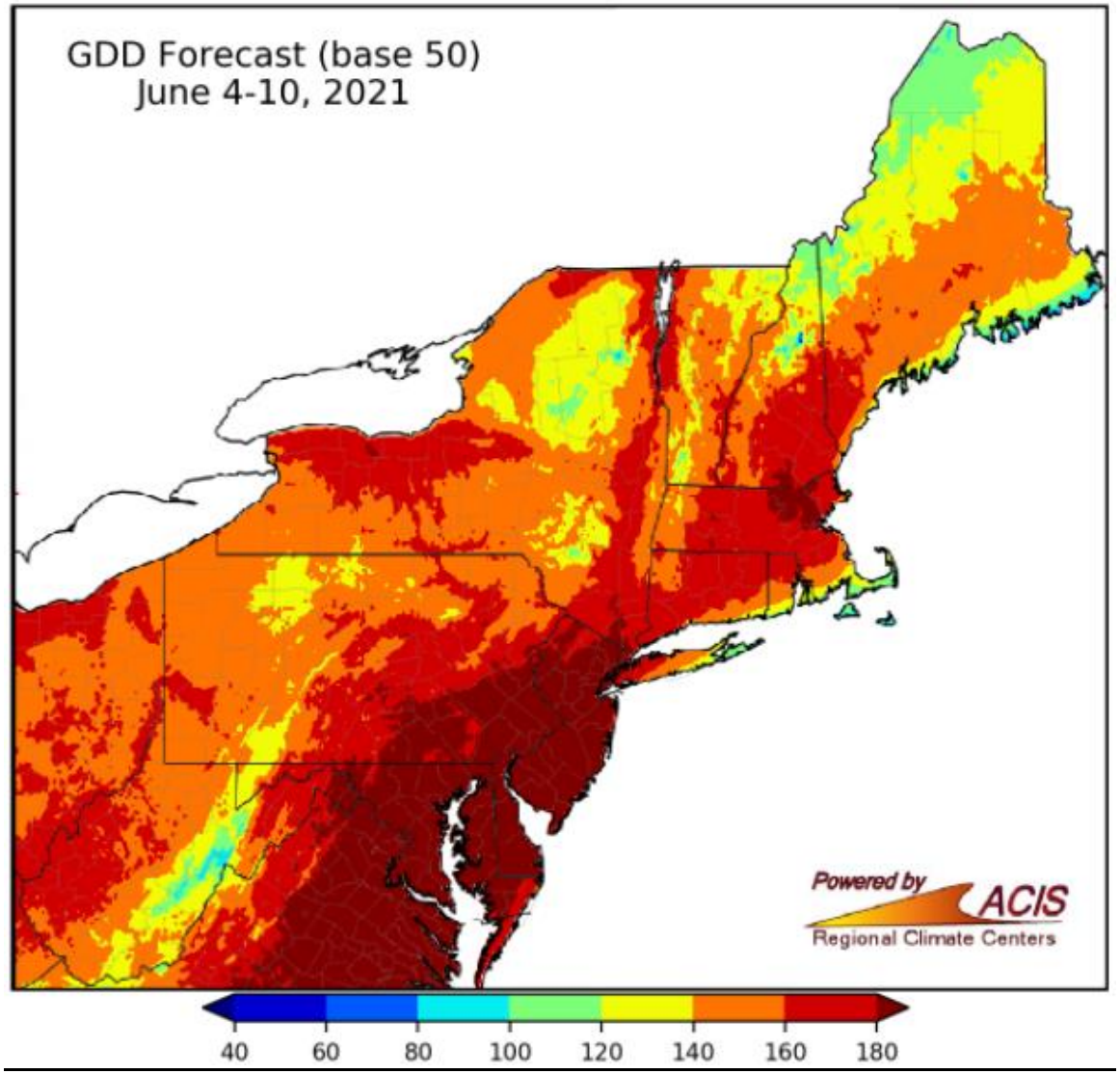
impact yield. Hopefully the recent rain and warm weather will help the stragglers catch up. Cold temperatures at night can slow emergence, but the forecast is telling us that we will *not* have that issue over the next 7-10 days.

2. Growing Degree Days as of June 2nd (*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.

As of: 2 June 2021			Planting Date: April 26 (*Base 86/50*)				Planting Date: May 10 (*Base 86/50*)			
Location	**Elevation (ft)**	**Latitude N**	**2021 to date**	**15 yr avg**	**30 yr avg**	**Record L-H**	**2021 to date**	**15 yr avg**	**30 yr avg**	**Record L-H**
Poland	675	43.23	**297**	340	302	168-424	**246**	251	212	109-338
Canastota	420	43.08	**345**	400	358	229-494	**278**	290	249	146-376
Saratoga Springs	365	43.08	**363**	379	349	220-485	**284**	276	245	151-374
Frankfort	530	43.03	**334**	387	350	212-481	**268**	283	244	139-377
Galway	749	43.02	**342**	364	340	227-472	**273**	264	237	153-368
St Johnsville	650	43	**303**	341	316	198-449	**248**	252	221	131-359
Fenner	1480	42.97	**287**	332	289	172-426	**232**	246	204	111-321
Fultonville	489	42.95	**335**	377	342	223-481	**269**	276	239	151-382
Bouckville	1170	42.93	**292**	339	296	182-424	**234**	250	208	119-330
Richfield Springs	1580	42.85	**278**	322	296	177-421	**224**	237	206	115-334
Cherry Valley	758	42.81	**274**	310	289	180-422	**221**	230	203	119-337
Burlington	1959	42.72	**268**	314	292	179-412	**213**	231	204	118-326
Sherburne	1115	42.69	**319**	367	324	199-451	**248**	269	226	129-356
Cobleskill	937	42.68	**316**	348	320	213-472	**251**	256	224	142-374
Oneonta	1107	42.47	**268**	313	294	181-422	**209**	229	205	120-331
Oxford	1499	42.4	**269**	337	300	188-433	**208**	246	210	123-343
Bainbridge	1000	42.3	**295**	353	317	204-454	**224**	256	221	136-361

As of: 2 June 2021			Planting Date: May 17 (*Base 86/50*)				Planting Date: May 24 (*Base 86/50*)			
Location	**Elevation (ft)**	**Latitude N**	**2021 to date**	**15 yr avg**	**30 yr avg**	**Record L-H**	**2021 to date**	**15 yr avg**	**30 yr avg**	**Record L-H**
Poland	675	43.23	**197**	195	157	75-259	**83**	126	97	40-169
Canastota	420	43.08	**221**	226	184	100-298	**94**	145	113	54-187
Saratoga Springs	365	43.08	**217**	214	182	107-273	**85**	138	114	51-186
Frankfort	530	43.03	**212**	218	181	98-283	**88**	139	111	49-187
Galway	749	43.02	**210**	205	175	108-267	**82**	133	109	47-186
St Johnsville	650	43	**198**	196	164	92-261	**80**	127	101	42-172
Fenner	1480	42.97	**191**	194	152	79-275	**75**	127	94	38-178
Fultonville	489	42.95	**209**	214	178	106-279	**87**	138	110	51-188
Bouckville	1170	42.93	**191**	196	154	81-262	**74**	128	96	37-170
Richfield Springs	1580	42.85	**181**	184	152	83-242	**70**	120	94	35-162
Cherry Valley	758	42.81	**179**	180	150	86-247	**70**	118	93	36-161
Burlington	1959	42.72	**174**	179	150	84-235	**66**	117	92	35-160
Sherburne	1115	42.69	**200**	209	168	91-262	**79**	136	104	39-176
Cobleskill	937	42.68	**197**	199	166	106-275	**79**	130	104	45-179
Oneonta	1107	42.47	**171**	177	151	86-241	**65**	115	93	34-157
Oxford	1499	42.4	**168**	190	155	91-250	**65**	124	96	35-167
Bainbridge	1000	42.3	**181**	198	164	98-263	**73**	130	102	38-171

With the warm weather in the forecast, just about all of us can expect another 140-160 GDD over the next 7 days:



3. Pest Monitoring

This year we will again monitor for several pests of corn and soybean, including black cutworm, western bean cutworm, true armyworm, soybean cyst nematode, and the invasive soybean pests (and as-of-yet undetected) silver Y moth and golden twin spot moth.

Black Cutworm						
Week	Munnsville, Madison	Poland, Herkimer	Canajoharie, Montg.	C. Bridge, Schoharie	W. Charlton, S'toga	Oxford, Chenango
April 26	Traps placed					
Apr 26 - May 3	0	0	1	0		
May 3 - 10	0	0	4	0		
May 10 - 17	0	0	0	0	Traps placed	
May 17 - 24	0	0	1	0	0	Traps Placed
May 24 - Jun 1	0	0	1	1	3	0
Total:	0	0	7	1	3	0

True Armyworm						
Week	Munnsville, Madison	Poland, Herkimer	Canajoharie, Montg.	C. Bridge, Schoharie	W. Charlton, S'toga	Oxford, Chenango
April 26	Traps placed					
Apr 26 - May 3	0	0	0	1		
May 3 - 10	0	0	0	0		
May 10 - 17	0	0	0	0	Traps placed	
May 17 - 24	0	0	0	0	0	Traps placed
May 24 - Jun 1	0	0	0	0	0	0
Total:	0	0	0	1	0	0

Trap captures of these pests have been relatively low across the state, with the exception of some locations in western NY and the north country (Lewis Co.). Cutting begins ~300 GDD (base 50) from moth capture, and the damage thresholds are as follows:

Corn at V2 stage (2 fully emerged leaves with leaf collars) – 2 cut plants per 100
Corn at V3 stage (3 fully emerged leaves with leaf collars) – 3 cut plants per 100
Corn at V4 stage (4 fully emerged leaves with leaf collars) – 5 cut plants per 100
Corn at V5 stage (5 fully emerged leaves with leaf collars) – 7 cut plants per 100

The only point of reference for our region based on trap capture is the central Mohawk Valley where we captured our first moths around the beginning of May. We're at about 250 GDD for that region since then, so based on the forecast, we could begin to see cutting next week *if there was substantial egg laying in the crop*. There's no guarantee there will be, especially if your corn field is among other grassy habitats.

While we don't have data for other areas in the region, keep this in mind for your planting date and area (~300 GDD after moth capture/crop emergence). See this article for more information on damage and recommended products: NYS IPM Field Corn Pheromone Trapping Network for 2020 Caught Moths in Mid-April! – What's Cropping Up? Blog

Cutworm monitoring will continue for another week, after which we will continue monitoring true armyworm and begin to monitor for western bean cutworm in the pheromone traps. As I mentioned earlier, I will also begin monitoring alfalfa pests.

Enjoy the nice weather if you can, stock up on cold drinks, and bring the fans and A/C units out of storage!

I want to collect your fall armyworm adults and larvae! While Bt has done a good job of controlling fall armyworm on conventional corn here in the US, it's still a concern in our non-GMO corn and grass crops, and is a major invasive pest in other parts of the world. I'm teaming up with a group in southeast Asia who is studying this pest and its genetic variability around the world, so I'm looking for locations to place pheromone traps so I can collect specimens for them to evaluate. Let me know if you have a field that would be a good trapping candidate this summer, and regardless, please let me know if you encounter larvae:

We want to collect your cereal leaf beetle larvae! Many of you have had issues with cereal leaf beetle in small grains. In the late 1960s and 1970s, USDA released a parasitoid that controlled cereal leaf beetle at very high levels. It was established and did a good job for many decades. In some parts of NYS there are very low levels of these parasitoids left. We are looking to reestablish them in those areas. In 2020 NYS IPM (Jaime Cummings) conducted a survey on the percent parasitism of cereal leaf beetle larvae in several areas of the state. We are looking to conduct the same survey in 2021 as well as continuing to develop a parasitoid insectary refuge on the Cornell Farm in Aurora. This can help us reestablish the parasitoid in areas of the state that might need them. If you have cereal leaf beetle in your fields please let Erik Smith (eas56@cornell.edu) or Ken Wise (klw24@cornell.edu) know and we can come and collect them. We will also let you know the rates of parasitism of the beetles in your fields.