

Oneida County Scouting Report

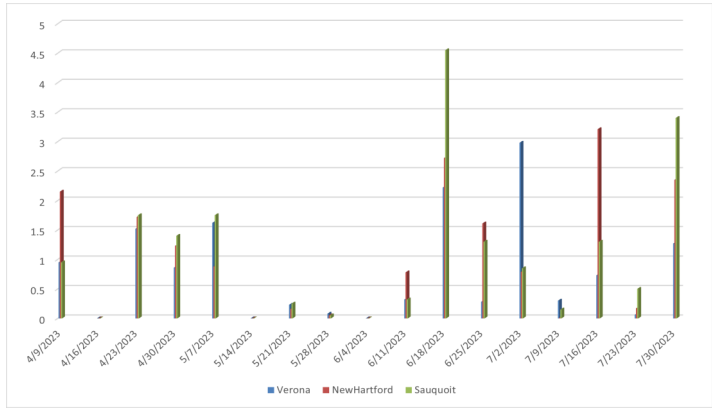
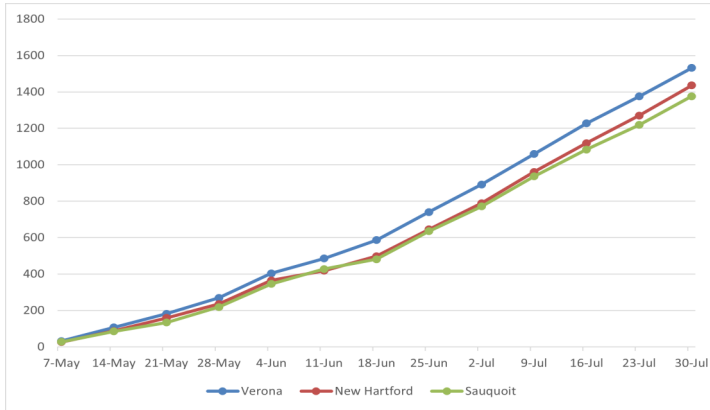
August 3rd, 2023

Weather: For the week ending on July 30th

Running total of GDD,s base 50 starting May 1st to July 30th for corn 1448 GDD base 86/50

Rainfall total for the month of April was 4.1” with 1/2 in 3 events. 1.69” for the month of May; 1.06”, 5.8” for month of June. 2.3” ave week ending July 30th (1.3” to 3.4”)

Cropping activities: Some hay being harvested, some new seedings being planted, wheat harvest complete
 GDDs base 50F Weekly Rainfall (inches)



Crop Conditions:

Hay

Potato leaf hopper

All of the fields I swept this week were below threshold for PLH. They ranged in height from 6” to 17” harvested within the last 2 weeks. I did pass some flowering hay fields that had symptoms similar to the field pictured below indicating loss from PLH feeding. If you had significant PLH before harvest you should sweep fields a week later to see if they need to be treated. The next page has details of scouting protocol . If you are within 10 days of harvest then harvest otherwise consider an appropriate insecticide (mustang or baythroid).



Potato leaf Hopper



Very low numbers of PLH 0-5 PLH/30 swps in fields that had been harvested. 36 PLH / 30 swps in a field that had not been harvested.

Good time to be checking new seedings— they are more vulnerable to PLH injury

Potato leaf hoppers don't over-winter in our area. They are brought up by storms from our south. They have piercing sucking mouthparts that they use to stick into the veins of leaflets of alfalfa plants to suck out the juices loaded with carbohydrates. In the process they leave behind a toxin that closes the conductive tissue and the leaflet dies from that point out to the leaf tip. Leaf hoppers can multiply quickly: one female potato leaf hopper can lay up to 200 eggs in its life span, eggs hatch in 10 days and the nymphs become adults in 12 days and begin laying eggs. Potato leaf hoppers can reduce yield by 1/2 ton / acre. They can significantly reduce protein levels in the harvested hay. They also can shorten the longevity of the stand by reducing the amount of carbohydrates produced and stored in the root system for over-wintering. Potato leaf hoppers are especially harmful to new alfalfa seedlings which do not have significant root reserves and are very vulnerable.

If you have swept your field and it is over threshold you have two choices: If you are within 10 days of harvest then harvest early. This removes the food source and significantly reduces the population of nymphs (because they cannot fly away) . This method may not work this season because I found only adults when I was scouting. Adult PLH have wings and can migrate to another field. Make sure you recheck fields after harvest and treat with an insecticide if the population exceeds an economic threshold.

If you are above an economic threshold and not within 10 days of harvest you should consider applying an appropriate insecticide. Baythroid and Warrior II are labelled for mixed swards of alfalfa and grass.

You can learn quickly how to scout for potato leaf hopper by watching this video:

<https://www.youtube.com/watch?v=-LTa6Sqe3js>

Potato Leafhopper Sequential Scouting Plan

		Crop Height							
		<3"		3" - 7"		8" - 10"		>10"	
Sweep	Set	N	M	N	M	N	M	N	M
1	1	*	*	*	*	*	*	*	*
2	2	*	*	*	*	*	*	*	*
3	3	2	* 9	9	* 20	19	* 41	44	* 75
4	4	4	* 11	14	* 25	29	* 50	64	* 95
5	5	5	* 13	18	* 30	39	* 60	84	* 115
6	6	7	* 15	23	* 35	49	* 70	104	* 135
7	7	9	* 16	28	* 40	59	* 80	124	* 155
8	8	11	* 18	33	* 45	69	* 90	144	* 175
9	9	13	* 20	28	* 49	79	* 100	164	* 195
10	10	19	20	49	50	99	* 100	199	200

Each sweep set=10 sweeps * indicates need to sample another set

A chart was developed through research to determine the economic threshold for PLH in alfalfa at different heights. An example would be: At 3" height of alfalfa an economic threshold would be reached at 9 potato leaf hoppers in 30 sweeps but if you had 2 or less PLH in 30 sweeps you would be below the threshold. 1 set of sweeps is 10 swings of the net in a pendulum motion across your body as you are walking through a section of the field always sweeping a new area.

If your alfalfa is 10" or greater which fits a number of local fields then 75 or more plh in 30 sweeps would be over threshold. My recent scouting of a number of fields went from 66-100 plh in 30 sweeps.

To buy a net do an internet search for greatlakesipm.com.

They have 15inch nets starting at \$28.



Pea Aphid

Commonly found in hay fields when scouting for other pests. In dry years their numbers can increase tremendously.

No research based action threshold

Using a cup of aphids in 10 sweeps as a estimate for treatment.

Still finding a cup of aphids in 30 sweeps in scouting this week.

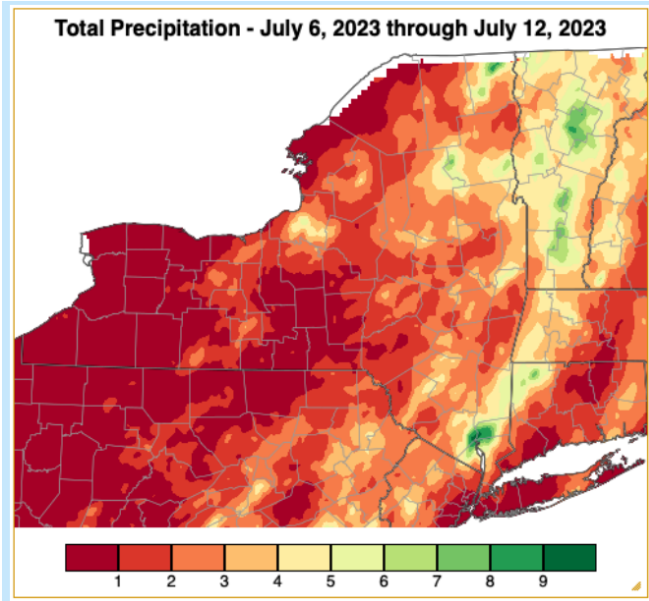
See table below for insecticide efficacy

Active Ingredient (Example Product(s))	Alfalfa Weevil	Armyworm	Pea Aphid	Potato Leafhopper	Comments
alpha-cypermethrin (*Fastac)	X	X	X	X	
cyfluthrin (*Baythroid XL)	X	X	X	X	For use in mixed stands (alfalfa/grass); see label.
dimethoate (*Dimethoate)	X		X	X	
flupyradifurone (*†Sivanto)			X	X	
lambda-cyhalothrin (*Warrior II)	X	X	X	X	
lambda-cyhalothrin + chlorantraniliprole (*†Besiege)	X	X	X	X	
methomyl (*Lannate LV)	X	X	X		
permethrin (*Arctic, *Perm-up, *Pounce 25WP)	X	X	X	X	
afidopyropen (*†Sefina Inscalis)			X		
zeta-cypermethrin (*Mustang Maxx)	X	X	X	X	For use in mixed stands (alfalfa/grass); see label.

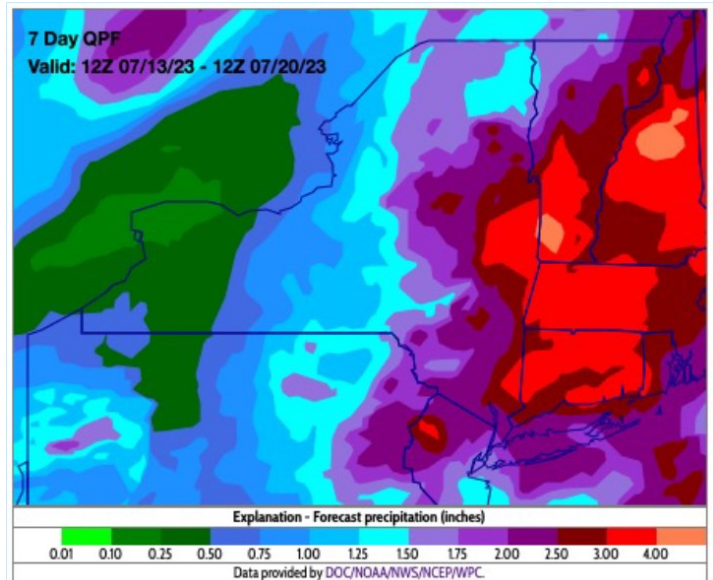
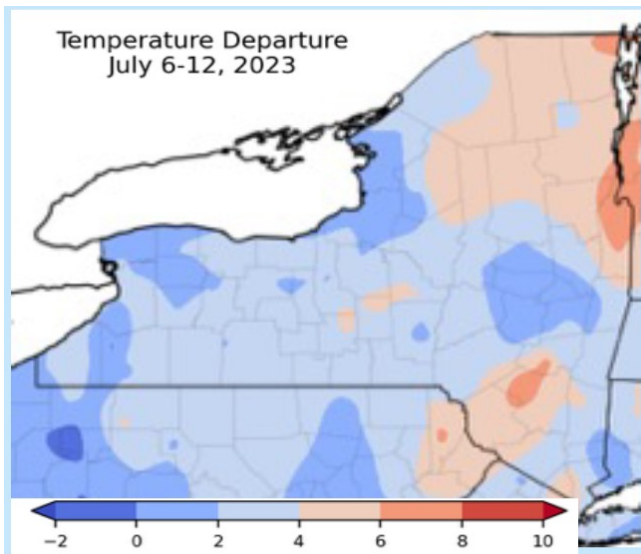
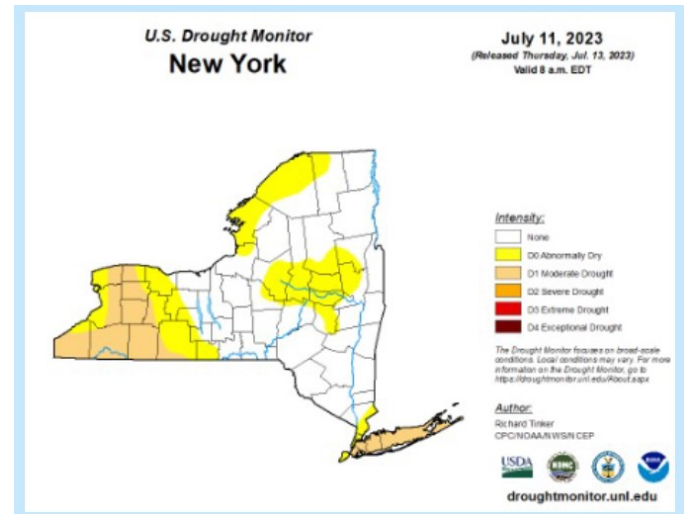
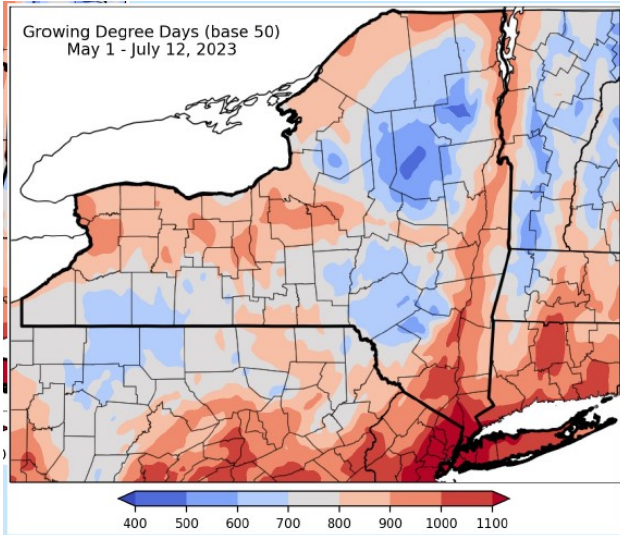
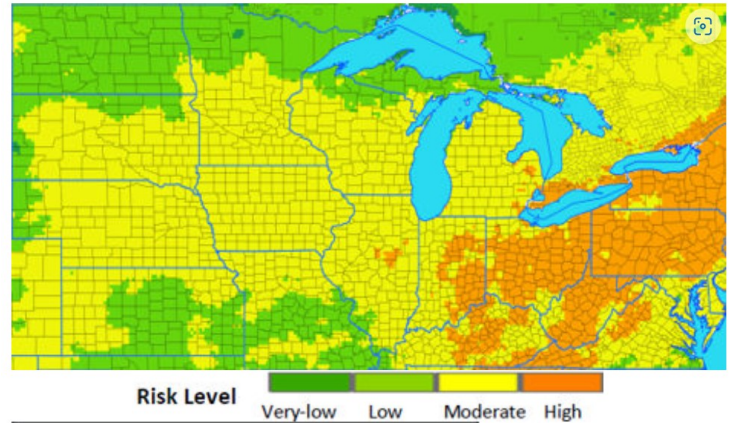
- ♦ **Get ready to take soil samples in 3rd year alfalfa stands to evaluate potassium levels.**
- ♦ **Consider no till seeding red clover (8lbs/ac) in stands with decreasing numbers of alfalfa in stands for silage harvest (plant 1st week in August if possible)**
- ♦ **Count alfalfa crowns after regrowth of your 3rd cutting (minimum of 5 crown/sq ft) to continue managing as alfalfa. You can choose to change your management and treat as a grass or identify this field for rotation and plan to hit it with glyphosate this fall**

Weather

Disease Risk Rating



ONE-MONTH RISK MAP



Wheat

Wheat harvest is complete now with reports from 70-90bu/ac. No reports on DON yet.



- Now there is an opportunity to plant a cover crop in these fields
- Consider No-tilling, kill germinating wheat seedlings with glyphosate before planting
- Plant sorghum to amass a lot of biomass to increase organic matter
- Plant red clover to produce nitrogen for a following corn crop
- Plant buckwheat to smother weeds but mow before it flowers (about 60 days)
- Plant turnips to help reduce surface compaction
- Plant a mixture of oats and turnips to combine a quick cover for fall erosion prevention / compaction relief and no need for termination in the spring.
- For more info on cover crop species, planting dates and rate:

<https://covercrop-selector.org/>



Cover Crop Chart



GROWTH CYCLE		PLANT ARCHITECTURE		RELATIVE WATER USE	
A	= Annual	☿	= Upright	●	= Low
B	= Biennial	*	= Upright-Spreading	●●	= Medium
P	= Perennial	≡	= Prostrate	●●●	= High

--GRASS--			-----BROADLEAF-----										--GRASS--						
-----LEGUME-----																			
A	ANNUAL FESCUE															A	BROWNTOP MILLET		
A	BARLEY															A	FOXTAIL MILLET		
A	OAT	A/B	CAMELINA	A/P	MUSTARD	A	BALANSA CLOVER	A	CHICKPEA	A/P	MEDIC	A	COWPEA	A	CLUSTER BEAN	A	BUCKWHEAT	A	PEARL MILLET
A	WHEAT	A	PHACELIA	A/B	CANOLA	A	BERSEEM CLOVER	A	PEA	A	LUPIN	A/P	LABLAB	A/P	JACK BEAN	A	QUINOA	A	PROSO MILLET
A/B	ANNUAL RYEGRASS	A	FLAX	A	RADISH	A	CRIMSON CLOVER	A	LENTIL	A	FABA BEAN	A/P	FENUGREEK	A	VELVET BEAN	P	CHICORY	A	GRAIN SORGHUM
A	CEREAL RYE	A	KALE	B	TURNIP	B/P	RED CLOVER	A/P	LESPEDEZA	A/B	SWEET CLOVER	A/P	PIGEONPEA	A	MUNG BEAN	A	CUCURBITA	A	SUDAN GRASS
A	TRITICALE	A	SPINACH	B	BEET	P	WHITE CLOVER	P	BIRDSFOOT TREFOIL	P	ALFALFA	A	PARTRIDGE PEA	A	SOYBEAN	A	SAFFLOWER	A	TEFF
P	SALINE TOLERANT	A/B	CHARD	A/B	CARROT	P	KURA CLOVER	A/B	VETCH	P	SAINFOIN	A	SUNNHEMP	A/P	PEANUT	A	SUNFLOWER	A	CORN

Soybeans

- Solid field of soybeans
- Canopy closure
- No visible weed escapes
- No visible areas of beans with setbacks from excessively dry or wet conditions
- No areas that indicate diseases
- Do you have to scout this field?..... Yes.... We have experienced periodic rainfall and humidity which can support disease development especially under a closed canopy
- Penn state has a great publication to help growers identify common soybean diseases [Soybean Stem Diseases: What are the Different Symptoms and Signs? \(psu.edu\)](http://www.psu.edu/extension/soybean-stem-diseases-what-are-the-different-symptoms-and-signs/)
- As we approach harvest time I will find out if we can send samples in for soybean cyst nematode analysis
- Below are some things I saw in local fields

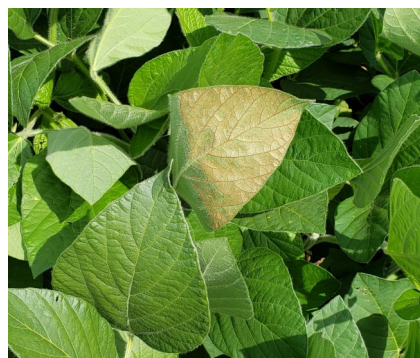


Only seeing soybean aphids in small numbers 10-20/plant

- Remember that an insecticide is only recommended when soybean aphids are 250 per plant, the numbers are rising, there is insufficient predators, and the plants aren't at R5 stage
- Many times you will see lady bird beetles and lacewings feeding on soybean aphids if there is a significant number in a field
- You will also see the white skins of aphids on leaves and heavily infested leaves will be cupped



Starting to see this leaf injury probably from Japanese beetles, or Mexican



- Picture above is sunscald– will not impact yield
- Pictures to the right show Japanese beetles, green clover worm and grasshoppers all of which have been in local fields and consume soybean leaves. Remember that you have to lose 15% of the plants foliage before yield is impacted
- The picture to the left shows a soybean plant at R3 stage (beginning pod) with the pods at the upper end of the plant averaging 3/16"



Corn



- Many corn fields in the county are full tassel now. I hope silage producers had a chance to note when their individual fields tasseled to help them plan harvest timing. Thanks to Joe Mushala for planting some sweet corn at the edge of his field creating some crop art for the neighborhood.
- I scouted fields for corn rootworm but didn't see one western or northern corn rootworm in any of the fields I scouted. I also didn't see any Japanese beetles feeding on the silks.
- I did see a few pink lady bugs.... Pictured below
- I didn't see any signs of northern corn leaf blight, eyespot or gray leaf spot. I also looked at some fields with BMR hybrids and only saw a few spots of northern corn leaf spot
- Seeing some yellow leaves at the base of plants indicating plant recycling N from lower leaves didn't see this often yet
- Weed control is good to excellent in most fields and canopy closure has occurred denying light to any weeds below
- I haven't seen any goose necked plants so no corn rootworm damage
- I have seen some leaf burning and spotting in the lower canopy from previous nitrogen applications
- I have also seen more 2nd generation corn plants (plants that are at least 2 leaves behind the average maturity of the stand) in some fields.
- I did see some hail damage in a field in the southern part of the county

Pink lady bug

Mixed generations of plants in some corn fields

This will usually reduce crop yields. The reduction is going to depend on the number of second generation plants and the disparity of their maturity

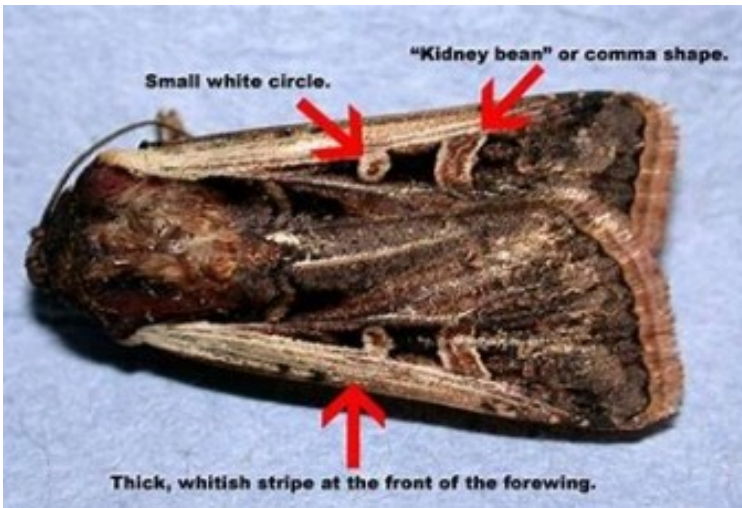


Pest Monitoring– western bean cutworm

Western bean cutworm can over winter in our area or migrate into our area in storm systems from our south and west. They seem to be more capable of overwintering in coarse soils. We have these types of soils in the north east and north west corners of the county and also in Rome area and spots in Verona. Locations where they over winter can be sites with higher populations. The moths are attracted to pre tassel corn to lay their eggs. Multiple larva will feed on ears causing yield loss especially in grain corn. To date a few trials conducted by Joe Lawrence have not shown a relationship between WBCW infestation and mycotoxin levels in corn harvested as silage.

CCE has a trap set up in Rome this year to monitor western bean cutworm moth flights and will report moth numbers each week.

Western Bean Cutworm Moth



Western Bean Cutworm Moth Counts			
Date	Camden	Annsville	Rome
7/26/2023	62	27	7
8/2/2023	68	21	26
8/9/2023			
8/16/2023			

Scouting:

- Look for egg masses on the upper leaves of corn and young caterpillars feeding on reproductive tissue, including pollen in whorls, the tassel, or in the silks; the caterpillar eventually will find their way to the developing ear.
- A generally accepted economic threshold for western bean cutworm is 5% of plants having eggs or larvae, so corn grain and silage fields above this level would

WBCW egg masses



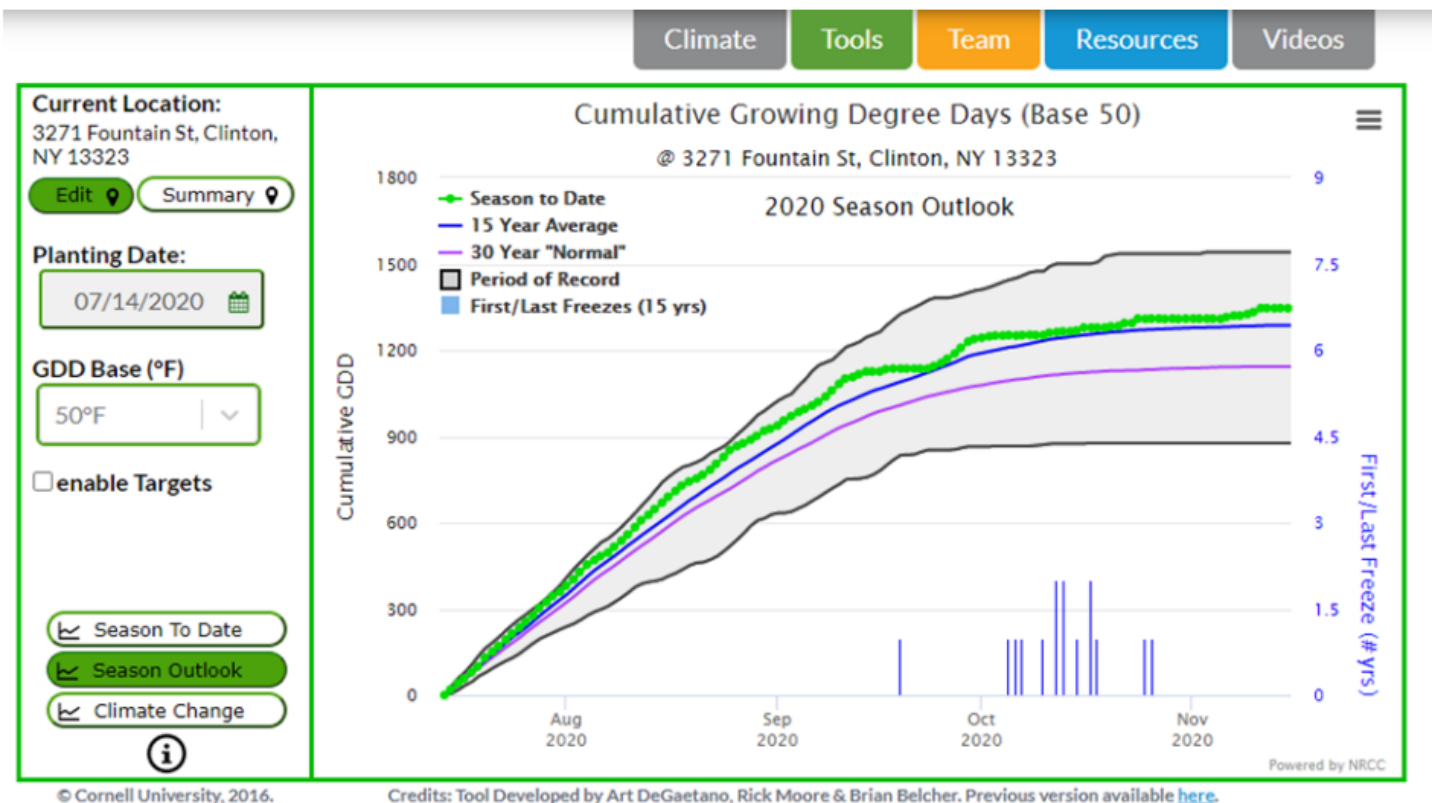
- Of course, the timing of this application is key because it needs to occur after eggs hatch but before caterpillars enter ears and are protected from insecticides by husks
- Fields that do not have populations that exceed the economic threshold are unlikely to benefit from insecticides and may actually suffer if the insecticide flares aphid populations, which grow in the absence of natural enemies

- There are a couple of concerns with hail damaged corn
- First the potential impact on pollination and ear fill
- Disease infection at the site of wounds especially on the stems
- Standability– stalk rots developed from injury
- Growers usually select to harvest stands hit by hail as silage



Planning timing of corn silage harvest

Using **climate smart farming** GDD calculator to plan silage harvest Just a reminder that you can go to this link: <http://climatesmartfarming.org/tools/csf-growing-degree-day-calculator/> and easily scroll on a map to the location of your corn field. Enter the date that the corn in that field formed an opened tassel and track GDDs from that date. You can save the location and return to check the accumulation of GDDs from the date of tasseling. Once you get to 800 GDDs you can grab some whole plant samples and check the dry matter level. I entered July 14th as the date of tassel for 2020 at this site in Kirkland and it used the weather data from a 2 mile area around that location and calculated that 800 GDDs were accumulated on August 23rd from that July 14th start date. I could grab a sample of whole plants from the field, chop them up and do a dry matter test to see how close the field is to havest moisture.



Corn Rootworm scouting and management

Western corn rootworm



Northern corn rootworm



Corn rootworm (CRW) Corn will have new silks in many local corn fields soon that will attract corn rootworm adults. This is an annual opportunity for local growers to save money on future seed purchases. Taking a half hour to scout a field and scouting the field once a week for 3 consecutive weeks for corn rootworm thresholds can indicate if you have a need for CRW control. The scouting procedure is as follows. : step into the field 50', grab the silk of the corn plant, start counting CRW on the plant from top to bottom counting western corn rootworms as 1 and northern corn rootworms as 0.5 western equivalents (see pictures above). Go to a plant 10 ft away and continue your count, go to a third plant and continue your count. Repeat this procedure in the middle of the field and then at the far end of the field. Compare your total count with the chart below. So if you counted beetles on 9 plants and found only one western corn rootworm then you were under threshold. If you counted 17 or more you are over threshold. If you were somewhere in between you have to continue your counting until you are either over or under threshold for the number of plants in your sample. If you are over threshold, you have the option to rotate to another crop, if this was your first year of corn next year you could use a seed treatment like poncho 1250 or you could plant a GMO with BT for corn rootworm. If you are under threshold and planting corn the following year you could plant a conventional variety with significant savings.

Sequential Sampling Plan for Corn Rootworm															
plant	N	T	RT	plant	N	T	RT	plant	N	T	RT	plant	N	T	RT
1				15	7	23		29	20	36		43	34	50	
2				16	8	24		30	21	37		44	35	51	
3	11			17	8	25		31	22	38		45	36	52	
4	12			18	9	26		32	23	39		46	37	53	
5	13			19	10	27		33	24	40		47	38	54	
6	14			20	11	28		34	25	41		48	39	55	
7	15			21	12	28		35	26	42		49	40	55	
8	16			22	13	29		36	27	43		50	41	55	
9	1	17		23	14	30		37	28	44		51	42	55	
10	2	18		24	15	31		38	29	45		52	43	55	
11	3	19		25	16	32		39	30	46		53	43	55	
12	4	20		26	17	33		40	31	47		54	44	55	
13	5	21		27	18	34		41	32	48		55	44	55	
14	6	22		28	19	35		42	33	49					

Weeds that are in local row crop fields

Horsenettle



Virginia creeper



Lambsquarter



Pokeweed



Curly dock



Redroot Pigweed



Mallow



Milkweed



Burdock





Hemp Dogbane



Field Bindweed







Yellow nutsedge












Soft rush

Poisonous weeds in pastures

Common name	Problem/symptoms	Toxic ingredient – toxicity dosage
Bouncing bet 	Leaves and stem – delayed for several days; depression, vomiting, abdominal pain, diarrhea	Saponin – amount equivalent to 3% (dry wt.) of sheep wt. killed within 4 hr.
Buttercups 	Leaves and stem especially in flower. Dried hay loses toxicity – anorexia, salivation, weakness, convulsions, breathing difficulty, death	Protoanemonin – toxicity reported to vary with species, age, and habitat. Generally 1-3% of body weight necessary.
Cherry, black 	Leaves (wilted leaves are worse), stems, bark and fruit – anxiety, staggering, breathing difficulty, dilated pupils, bloat, death	Cyanogenic glycosides (cyanide, HCN) – Less than 0.25 lb leaves (fresh wt.) can be toxic to 100 lb animal. Leaves from several small to mid sized branches are sufficient to kill an adult animal.
Clover species	Vegetation – Hairballs; Sweet clover: nose bleeding, anemia, abdominal swelling	Coumarin with sweet clover - varies
Fern, bracken 	Entire plant – Dullness, fever, bleeding, loss of appetite, and salivation	Glycoside thiaminase – Cattle fed 50% bracken for 30 to 80 days was toxic. Others report that only 20% of diet for 30-60 days was toxic.
Garlic, wild	All plant parts – tainted milk and meat	Only toxic in large quantities

<p>Hemlock, poison</p> 	<p>All plant parts – nervousness, salivation, vomiting, diarrhea, weakness, paralysis, trembling, dilation of pupils convulsions, and coma, death</p>	<p>Coniine and others (pyridine alkaloids) – 0.5 to 4% (fresh wt.) equivalent of cattle wt. is toxic. In horses, 0.25% of body weight.</p>
<p>Horsenettle</p> 	<p>All plant parts, esp. the berries - salivation, colic, gastrointestinal irritation, diarrhea, muscle tremors, weakness, drowsiness, and depression</p>	<p>Solanine – remains toxic even in dry hay. Also, 12-36 hr. after mowing, plant releases sugars making it more palatable to livestock, if overconsumed it can cause sudden death.</p>

<p>Jimsonweed</p> 	<p>Entire plant (seeds are most toxic – Thirst, mood swings, convulsions, coma, death</p>	<p>Solanaceous alkaloids – 10-14 oz for cattle or 0.06 to 0.09% (dry wt.) equivalent of animal body wt. is toxic. Toxins increase during the daylight.</p>
<p>Locust, black</p> 	<p>Leaves (especially wilted), seeds, and inner bark - Causes weakness, depression, anorexia, vomiting and diarrhea</p>	<p>Phytotoxin robin, glycoside robininm – bark extract and powder in amount equivalent to 0.04 – 0.1% of animal wt. toxic to horses. Cattle 10-times more tolerant.</p>
<p>Milkweeds</p> 	<p>Entire plant – depression, muscle tremors, spasms, bloat, difficult breathing.</p>	<p>Glycosides and galitoxin – 0.3 to 0.6% of body weight.</p>

<p>Mustards</p> 	<p>All parts (especially seeds) – oral and gastrointestinal irritation, shaking, salivation, abdominal pain, vomiting, and diarrhea</p>	<p>Thiocyanates, irritant oils, and nitrates (large quantities generally necessary for toxicity)</p>
<p>Nightshade species</p> 	<p>Vegetation, unripe fruit – loss of appetite, salivation, weakness, trembling, paralysis</p>	<p>Solanine – toxic at 42 mg/kg (LD50). 0.1 to 0.3% of body weight.</p>
<p>Pigweed species</p> 	<p>Foliage (worse in drought) – kidney disease, weakness, edema, rapid respiration</p>	<p>Nitrates nitrate oxalates, unknown – 0.5 to 1% of diet. Sheep, hogs, and young calves most susceptible.</p>
<p>Pokeweed, common</p> 	<p>Entire plant, especially roots - gastrointestinal cramps, weakened pulse, respiration, salivation</p>	<p>Phytolactinm – 10 or more berries can result in toxicity to humans. Unknown for livestock, but perhaps 100-200 berries/1000 lb.</p>
<p>Snakeroot, white</p> 	<p>Leaves and stem – constipation, loss of appetite, salivation, rapid respiration. Toxin passes through milk (milksickness).</p>	<p>Trophine alkaloid – varies from 1 to 2% of animal body wt. after 2 weeks. Toxin cumulative.</p>
<p>St. Johnswort</p> 	<p>Flowers and leaves – photosensitivity which leads to redness of muzzle, around eyes, and around white hair.</p>	<p>Hypericin - uncertain</p>

Pasture management



Over mature pasture— more area then can be kept in an immature vegetative state because of low browser pressure.

You can try mowing a small section at 4” height. (1/3ac per animal). Observe their behavior and browsing pressure. Consider mowing another section in 10 days.

This will help restart grass vegetative re-growth with higher quality.



Pasture with higher quality forage, probably was mowed after cows pastured. Still too much pasture area then what is needed by the number of livestock. Can use staged mowing or internal fencing to mob stock smaller sections when in an early vegetative (higher quality) stage.



Over grazed pasture where cattle are eating sticks and stones.

Move to a new pasture with adequate forage if possible or start supplementing

When cattle are moved from this pasture consider spot spraying soft rush, thistles, and docks with 24D. Also consider applying nitrogen at 75lbs per acre to increase rate and quantity of regrowth.