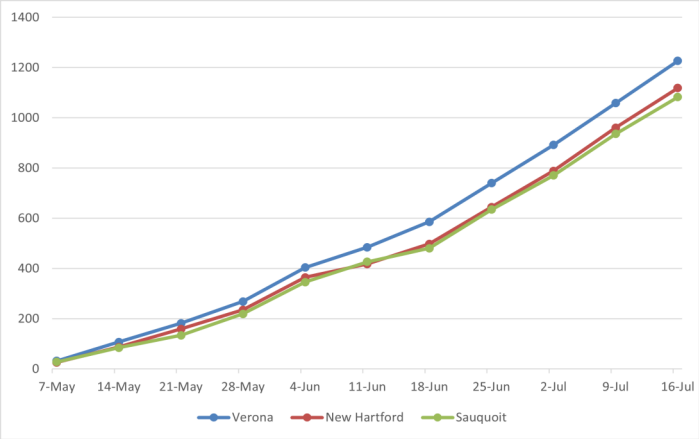
Oneida County Scouting Report
July 20, 2023

Weather: For the week ending on July 16th

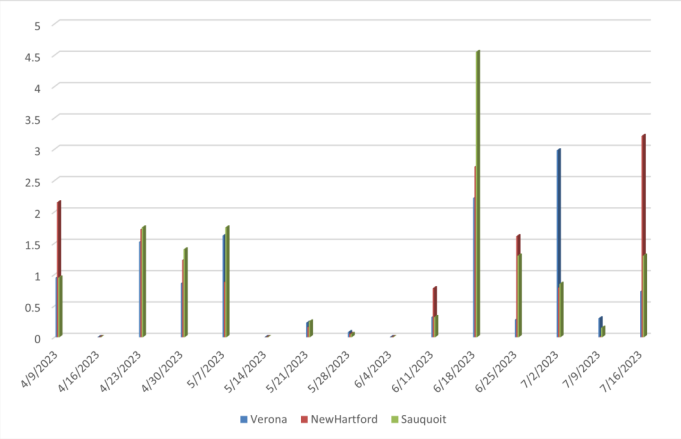
Running total of GDD,s base 50 starting May 1st to July 16th for **corn 1143 GDD base 50**
Rainfall total for the month of April was 4.1" with 1/2 in 3 events. 1.69" for the month of May; 1.06", 5.8" for month of June. 1.7" ave for the week ending July 9th (0.7" to 3.1")

Cropping activities: Some grass hay being harvested, manure application, herbicide applications and N sidedress.

GDDs base 50F



Weekly Rainfall (inches)



Crop Conditions:

Hay

Potato leaf hopper Alert

Six of 9 fields that I swept today (7/19) were over threshold for potato leaf hopper. These stands were all mature from bud stage to 5% flower. If you have fields that at this maturity you should consider sweeping them and counting PLH. 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).

Always remember to scout new seedings because they are more vulnerable to PLH damage.

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 ½ 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

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

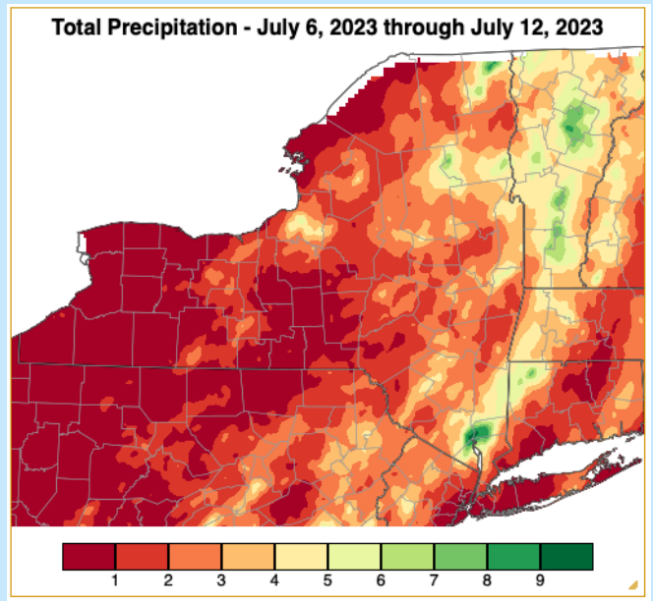
Still finding a cup of aphids in 30 sweeps in scouting this week.

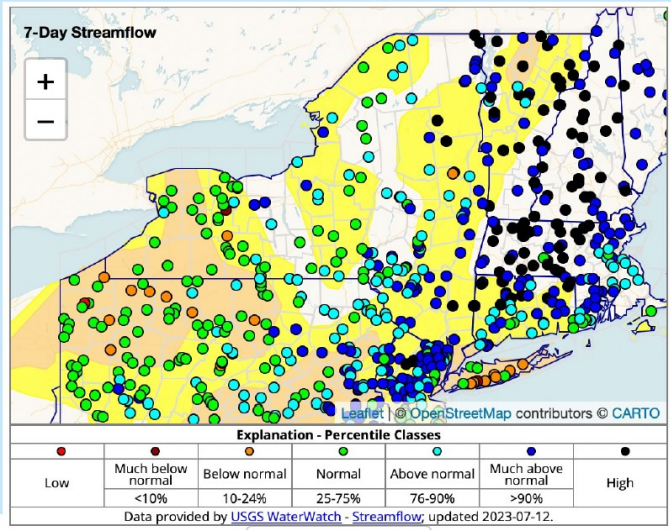
See table below for insecticide efficacy

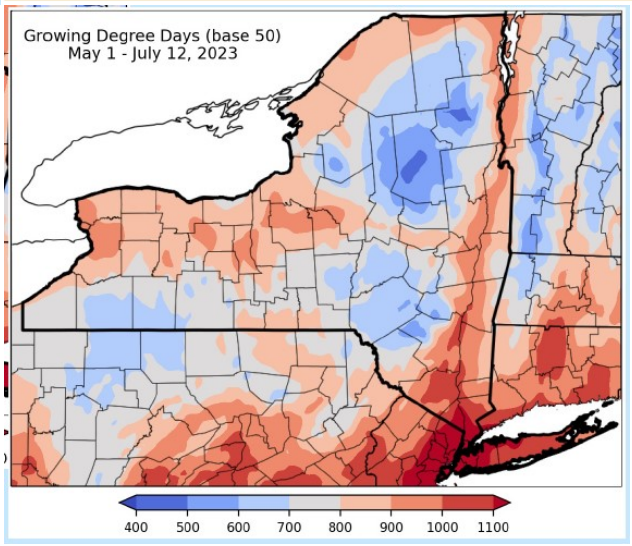
Active Ingredient (Example Product(s))	Alfalfa Weevil	Armyworm	Pea Aphid	Potato Leafhopper	Comments
alpha-cypermethrin (*Fastac)	X	X	X	X	
cyfluthrin (*Baythroid XL)	X	X	X	X	For use in mixed stands (alfalfa/grass); see label.
dimethoate (*Dimethoate)	X		X	X	
flupyradifurone (*†Sivanto)			X	X	
lambda-cyhalothrin (*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.

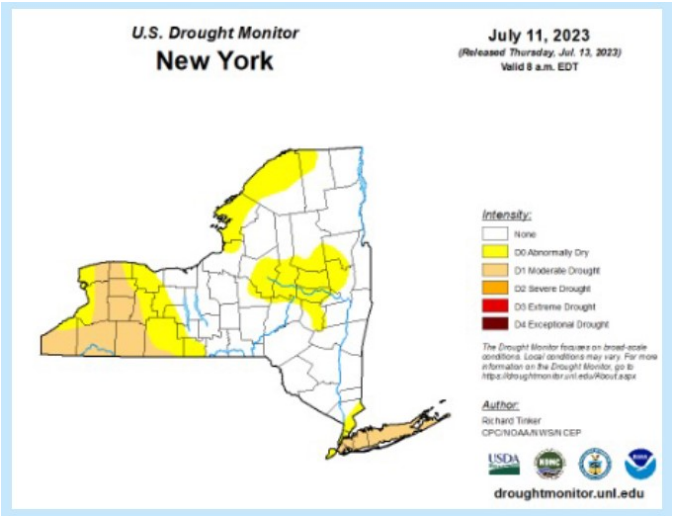
- **Get ready to take soil samples in 3rd year alfalfa stands to evaluate potassium levels.**
- **Consider no till seeding red clover (8lbs/ac) in stands with decreasing numbers of alfalfa in stands for silage harvest (plant last week in July 1st week in August)**
- **Count alfalfa crowns after regrowth 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**

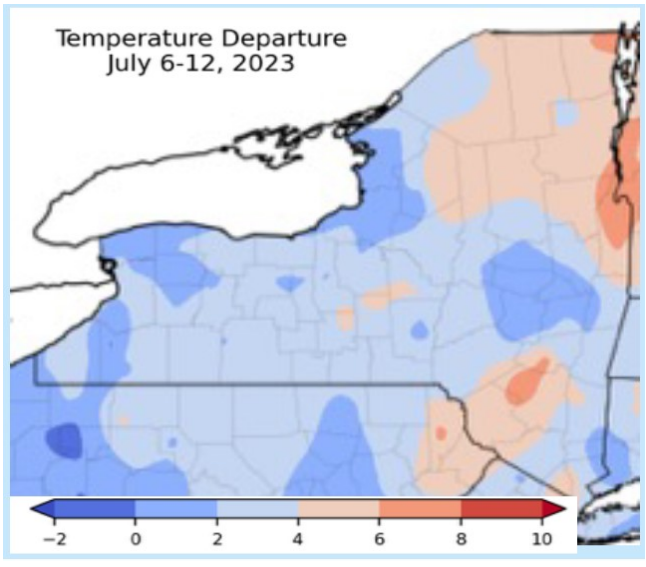
Weather

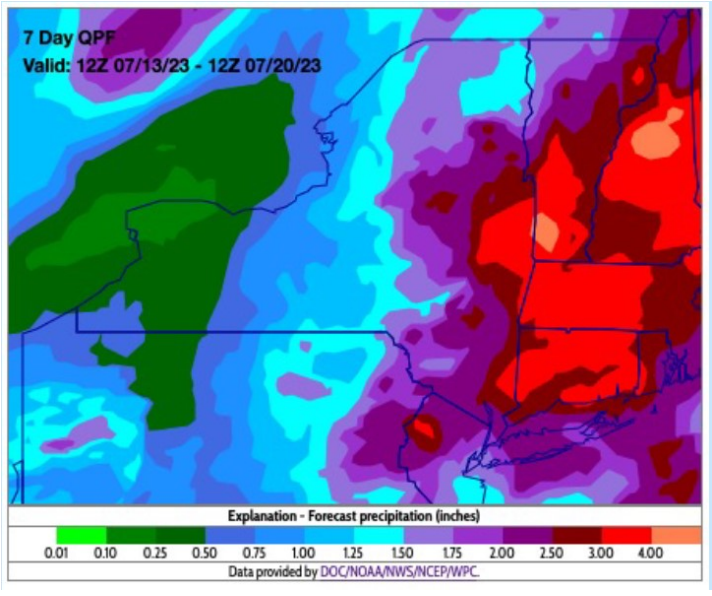

Total Precipitation - July 6, 2023 through July 12, 2023
1 2 3 4 5 6 7 8 9


7-Day Streamflow
Leaflet | © OpenStreetMap contributors © CARTO
Explanation - Percentile Classes
Low
Much below normal
<10%
Below normal
10-24%
Normal
25-75%
Above normal
76-90%
Much above normal
>90%
High
Data provided by USGS WaterWatch - Streamflow; updated 2023-07-12.


Growing Degree Days (base 50)
May 1 - July 12, 2023
400 500 600 700 800 900 1000 1100


U.S. Drought Monitor
New York
July 11, 2023
(Released Thursday, Jul. 13, 2023)
Valid 8 a.m. EDT
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Richard Tinker
CPC/NOAA/NWS/NCEP
droughtmonitor.unl.edu


Temperature Departure
July 6-12, 2023
−2 0 2 4 6 8 10


7 Day QPF
Valid: 12Z 07/13/23 - 12Z 07/20/23
Explanation - Forecast precipitation (inches)
0.01 0.10 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.50 3.00 4.00
Data provided by DOC/NOAA/NWS/NCEP/WPC.

Wheat

wheat harvest has started with growers reporting good yields and moisture from 16-21%.

Penn State website for fusarium head blight risk level.
https://www.wheatscab.psu.edu/

There were reports of stripe rust in western NY. They are also seeing leaf stripping from cereal leaf beetle as pictured in the photo to the left (saw some of this leaf damage in a few plants in a few fields today 6/21. Also noted speckling of leaves and powdery mildew on some plants 6/20.

Stripe rust has been found in some wheat fields in western NY. If you see symptoms like those on the leaf to the left please give me a call at 315 269-5599

The oat fields I have scouted have been clean. Only a spot of rust .

Soybeans

Post emergence weed control in soybeans

Broadleaf Annual Weeds					
Herbicides	**Common Lambsquarters**	**Horseweed (Marestail)**	**Redroot Pigweed**	**Common Ragweed**	**Velvetleaf**
Postemergence					
Basagran 5L	Fair	-	Poor	Fair	Good
Classic[2]	Poor	Fair[2]	Good	Fair	Fair
Cobra	Poor	-	Good	Good	Good
*Engenia[3]/*XtenidMax[3]	Excel	Good	Good	Good	Good
FirstRate[2]	Poor	Fair[2]	Poor	Excel	Good
Enlist One[4]	Excel	Good	Good	Good	Good
Harmony SG[2]	Good	-	Good	Poor	Poor
*†Pursuit	Poor	-	Good	Fair	Good
*Reflex/Flexstar	Poor	-	Good	Good	Poor
Resource	Poor	-	Poor	Fair	Excel

Annual Grass Weeds					
Herbicides	**Barnyardgrass**	**Crabgrass**	**Foxtails**	**Fall Panicum**	**Witchgrass**
Postemergence					
Assure II, Fusilade DX, Poast, *Select Max	Excel	Excel	Excel	Excel	Excel
Classic	Poor	Poor	Poor	Poor	Poor
*†Pursuit	Good	Fair	Good	Fair	-

Leaf cupping in soybeans indicates growth regulator (24D, dicamba) injury

Herbicide injury observed in this field with clean break at spray- er line.

Observing weed escapes in soybean fields without canopy closure

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

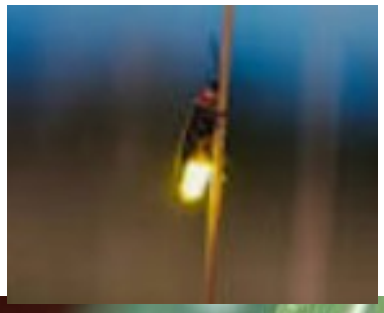
Soybeans 4th trifoliate stage, good size nodules very evident on the plants roots. You can split them open. If they are actively fixing N they will be pink or red in color. These nodules were slightly pink. Their activity level may have been impacted to dry

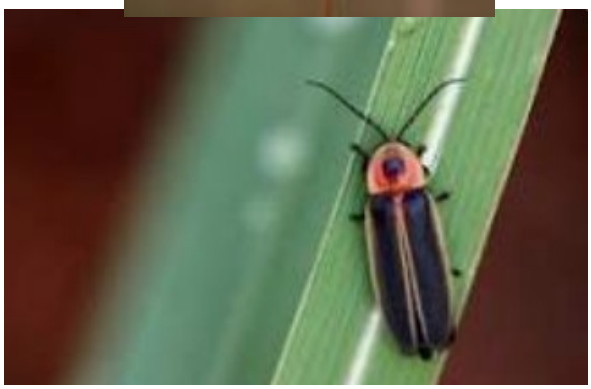
Many of the fields I scouted today were R2 stage (full flower) now and some R1 (first flower). We are now entering the time frame when weather and other factors will impact yield.

Corn

How many of you noticed the lightning bugs arriving about 3 weeks ago?

Their appearance coincides with the hatching of corn rootworm larva and the beginning of their feeding on corn roots.





Corn

- The corn field above is about ready to tassel Scouted a number of fields today many have tassels that are inches away from emergence now
- A smaller number of fields are v10 stage now….
- I didn't see any signs of northern corn leaf blight, eyespot or any other common foliar diseases even on BMR corn hybrids
- 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 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.
- The stands I scouted today had stiff stalks when compared with 10 days ago

BMR corn hybrid with brown midvein

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

Observing non uniformity of maturity in some areas in fields. One grower pointed out that he had this situation in a portion of a field that didn't work up well (chunky clods like in this picture). This could cause the planter to plant seeds at different depths or create air pockets either delaying emergence.

Agronomist use symbols to represent corn growth stages. V1 indicates you can view the back side of the leaf where it attaches to the stem and see a white or green line called a collar. You would not be able to see the collar if a leaf was still in the whorl. Many fields this week were at the v8stage (8 collars visible). At the v5 stage the growing point is above ground and plants can be snapped and will not recover. Researchers suggest making nitrogen side dress applications at v4– v5 stage for optimal N uptake by the plant. Corn plants go through very quick vegetative growth spurt starting at the v5 stage.

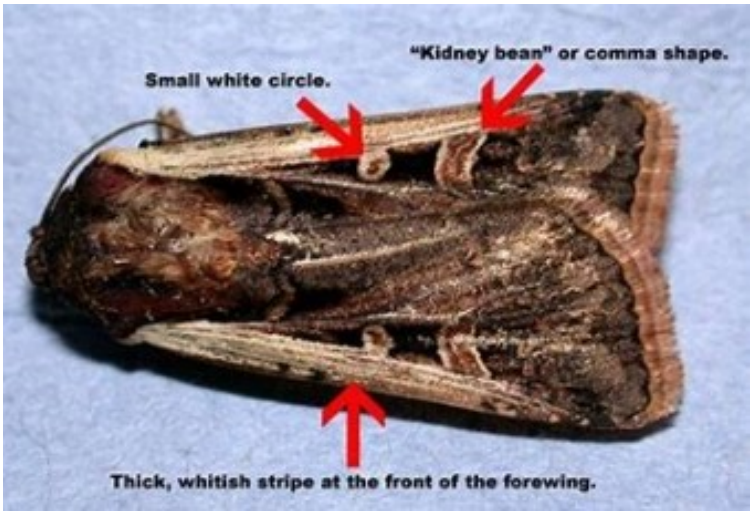
Impact of drainage and weeds on corn is apparent in this field showing N deficiency

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.

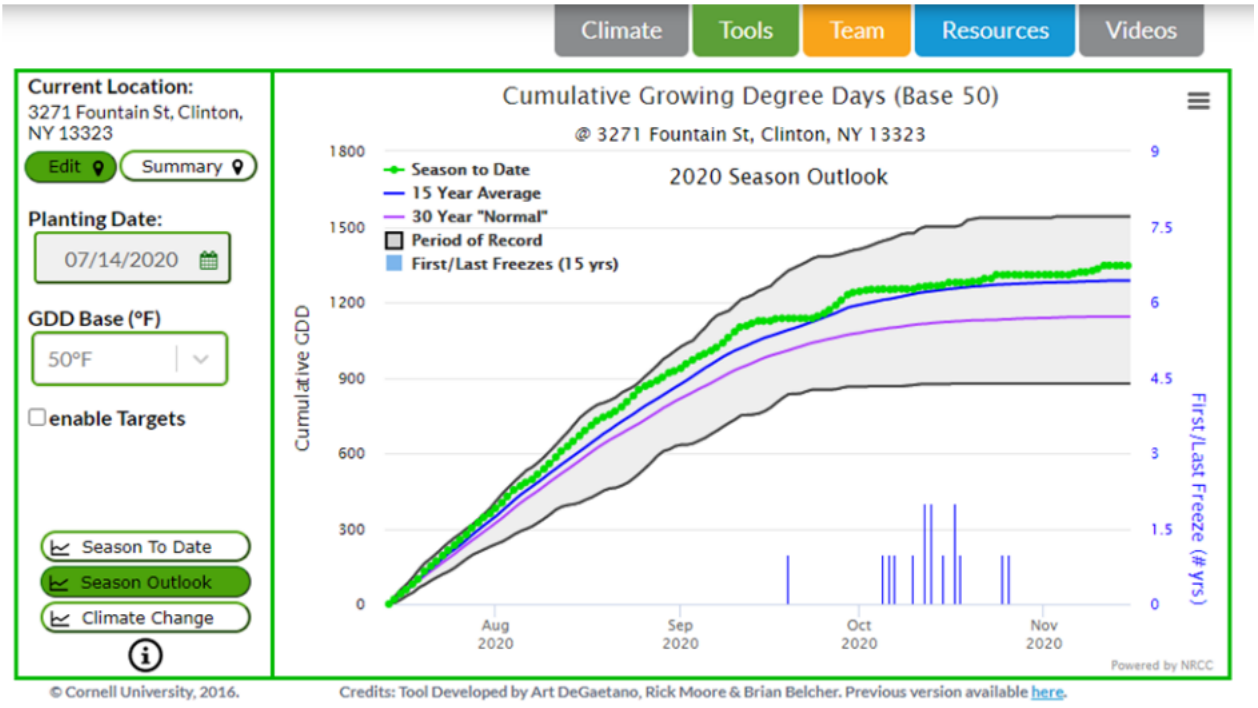
Western Bean Cutworm Moth



WBCW egg masses

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

Hemlock, poison 	All plant parts – nervousness, salivation, vomiting, diarrhea, weakness, paralysis, trembling, dilation of pupils convulsions, and coma, death	Coniine and others (pyridine alkaloids) – 0.5 to 4% (fresh wt.) equivalent of cattle wt. is toxic. In horses, 0.25% of body weight.
Horsenettle 	All plant parts, esp. the berries - salivation, colic, gastrointestinal irritation, diarrhea, muscle tremors, weakness, drowsiness, and depression	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.
Jimsonweed 	Entire plant (seeds are most toxic – Thirst, mood swings, convulsions, coma, death	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.
Locust, black 	Leaves (especially wilted), seeds, and inner bark - Causes weakness, depression, anorexia, vomiting and diarrhea	Phytotoxin robin, glycoside robitinm – bark extract and powder in amount equivalent to 0.04 – 0.1% of animal wt. toxic to horses. Cattle 10-times more tolerant.
Milkweeds 	Entire plant – depression, muscle tremors, spasms, bloat, difficult breathing.	Glycosides and galitoxin – 0.3 to 0.6% of body weight.

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

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 regrowth 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 appling nitrogen at 75lbs per acre to increase rate and quantity of regrowth.