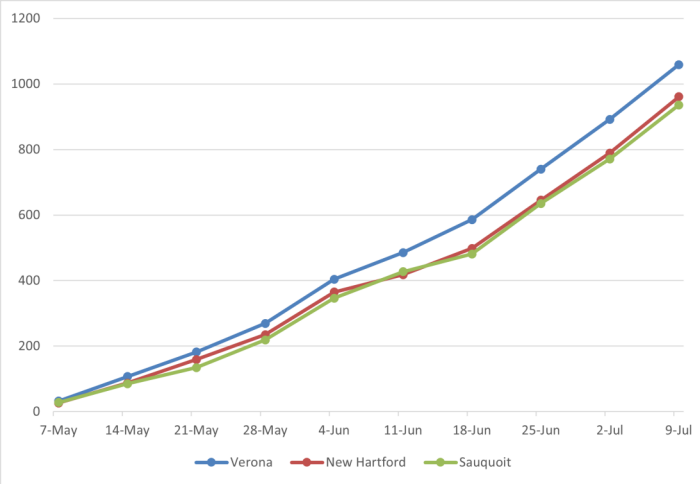
Oneida County Scouting Report
July 13, 2023

Weather: For the week ending on July 9th

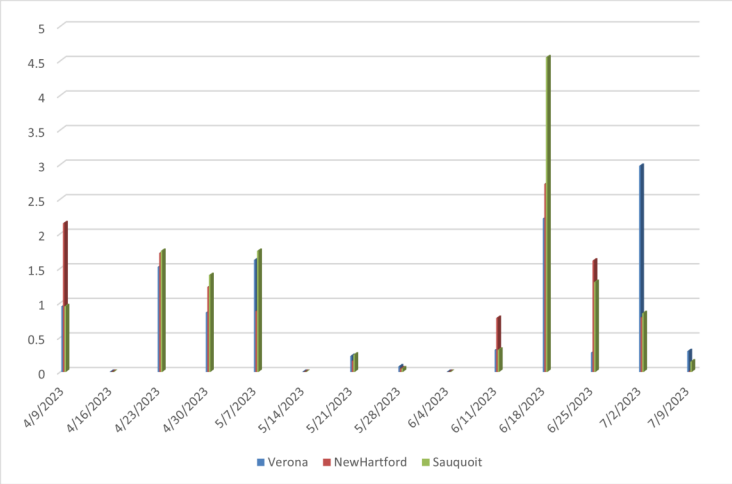
Running total of GDD,s base 50 starting May 1st to July 9th for **corn 985 GDD base 50**
Rainfall total for the month of April was 4.1" with 1/2 in 3 events. 1.69" for the month of May; 1.06", 5.8" for month of June. 0.15" for the week ending July 9th.

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

GDDs base 50F



Weekly Rainfall (inches)



Crop Conditions:

Hay

The 2nd cut has been taken on most fields now. New seeding alfalfa is beginning to bloom.

I swept 5 alfalfa fields 7/11, all the fields where 2nd cut was taken there were few PLH 0-5 PLH per 30 sweeps . One field that had not been harvested had 36 PLH per 30 sweeps. The picture below shows leaf hopper burn. I haven't asked any growers yet, but, I suspect that neither 1st or 2nd cut had average yields. It is probably a good idea to add N to grass stands to increase yield in the next harvest given that we have received rain recently.

This is a good time to add nematodes for corn rootworm control to hay stands that will be rotated to a multi year corn rotation next year. Applying them now or after 3rd cut gives them ample time to find a food source to help them over winter. Joe Lawrence and Mike Hunter performed trials to see if they could be applied with manure. They found that this method of application was suitable as long as they were applied within 30 minutes after being added to the manure tanker.

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.

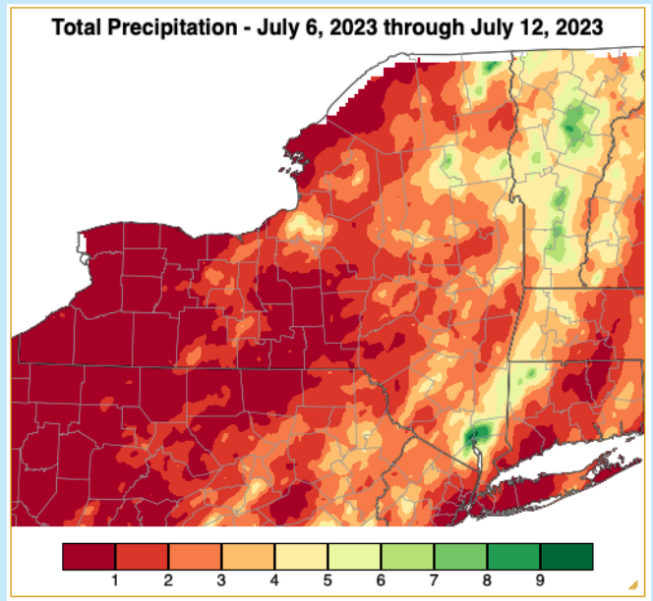
Still finding a cup of aphids in 30 sweeps in scouting this week.

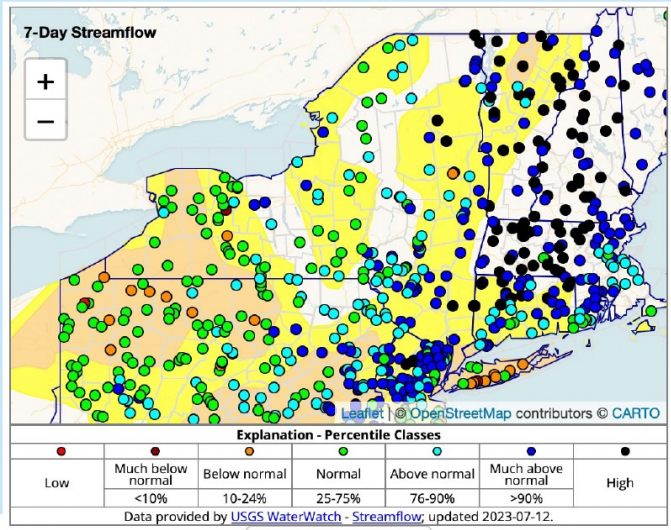
See table below for insecticide efficacy

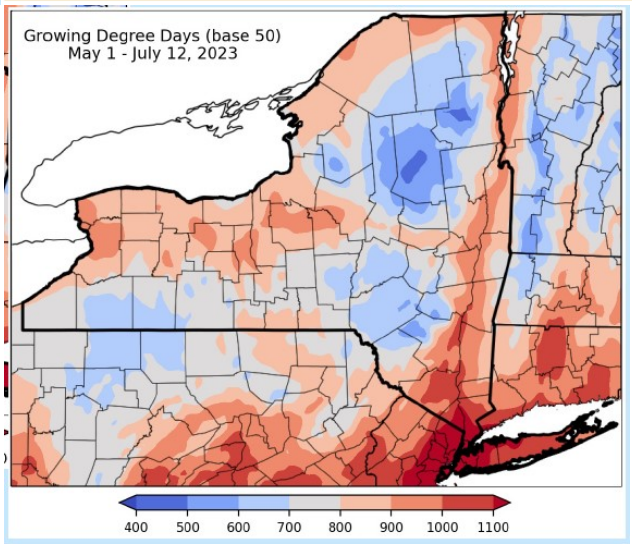
Active Ingredient (Example Product(s))	Alfalfa Weevil	Armyworm	Pea Aphid	Potato Leafhopper	Comments
alpha-cypermethrin (*Fastac)	X	X	X	X	
cyfluthrin (*Baythroid XL)	X	X	X	X	For use in mixed stands (alfalfa/grass); see label.
dimethoate (*Dimethoate)	X		X	X	
flupyradifurone (*†Sivanto)			X	X	
lambda-cyhalothrin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

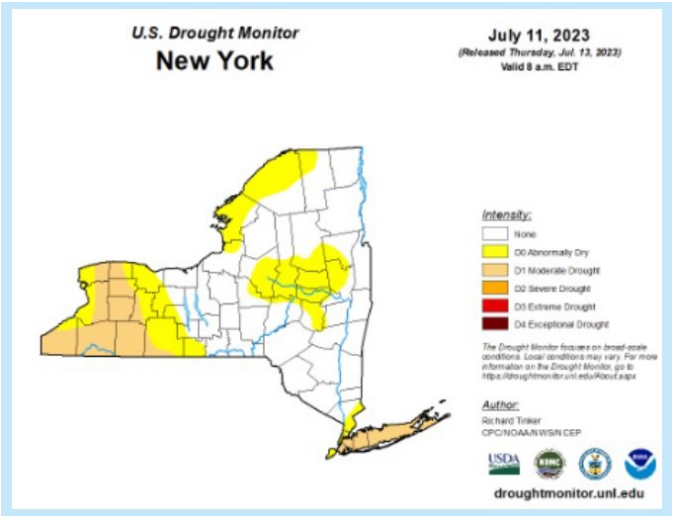
- **Get ready to take soil samples in 3rd year alfalfa stands to evaluate potassium levels.**
- **Consider no till seeding red clover (8lbs/ac) in stands with decreasing numbers of alfalfa in stands for silage harvest (plant last week in July 1st week in August)**
- **Count alfalfa crowns after regrowth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

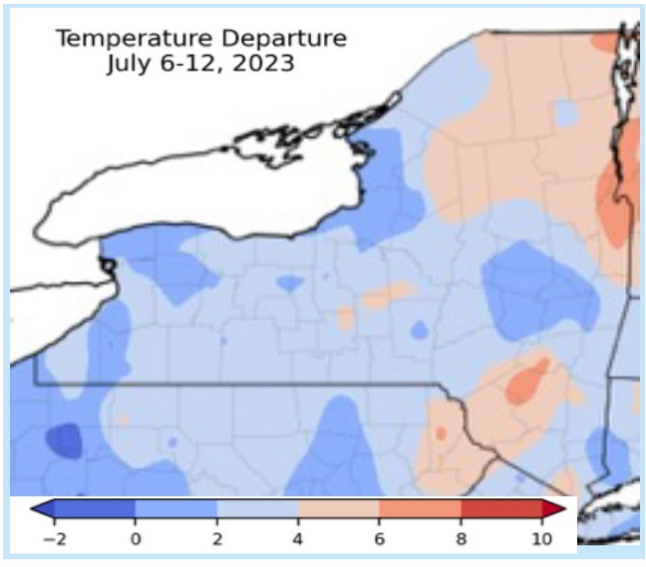
Weather

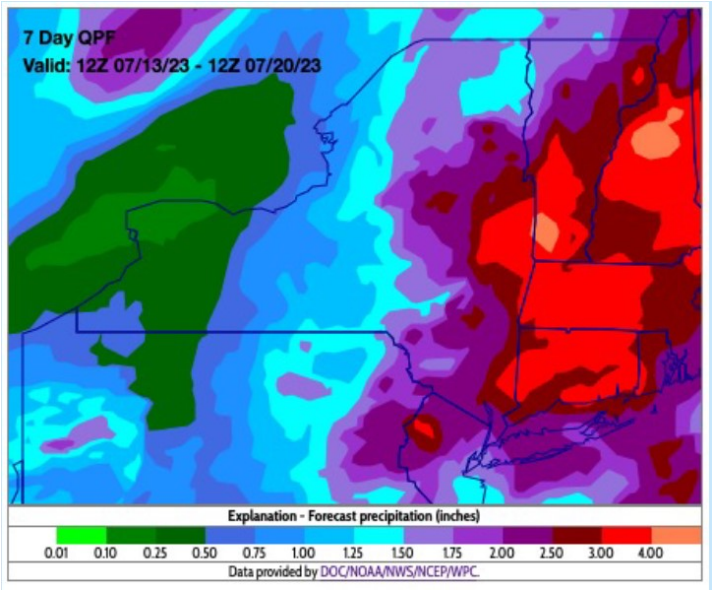

Total Precipitation - July 6, 2023 through July 12, 2023
1 2 3 4 5 6 7 8 9


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

Most growers are checking combines now getting ready for wheat harvest.

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 sprayer line.

Observing weed escapes in soybean fields without canopy closure

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

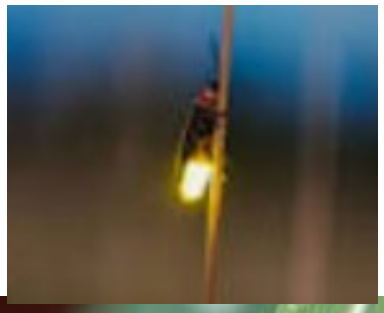
Soybeans 4th trifoliate stage, good size nodules very evident on the plants roots. You can split them open. If they are actively fixing N they will be pink or red in color. These nodules were slightly pink. Their activity level may have been impacted to dry

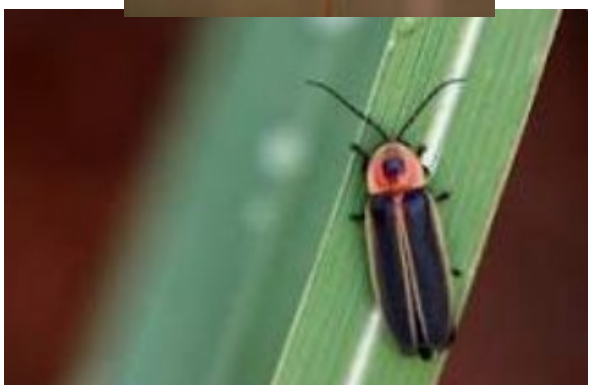
In scouting soybeans this week 7/11 I found a few fields that were at 5th trifoliate stage.
A number of fields were at first flower (R1) or R2 stage.
We are now entering the time frame when weather and other factors will impact yield.

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
- Most of the fields I scouted this week were v8 to v10….I could see 8—10 collars.
- I didn't see any signs of northern corn leaf blight, eyespot or any other common foliar diseases even on BMR corn hybrids
- Also not seeing any yellow leaves at the base of plants …. So no nitrogen deficiencies
- 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 recent 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 have also noted more flexibility in stalks in recent scouting

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

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.