CLEREL Demo Day- 08/31/2022-
Kim Knappenberger

CROP UPDATE
September 1, 2022

Cornell Cooperative Extension
Lake Erie Regional Grape Program

PennState Extension

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Click here to watch Podcasts

The Lake Erie Regional Grape Program is a Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extensions in Chautauqua, Erie and Niagara county NY and in Erie County PA.

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Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

In The Vineyard

Success!

The Cornell Lake Erie Research and Extension Laboratory Research Demonstration Day was held on August 31, 2022, at our AgriTech Station in Portland, NY. The weather was just right for an informal walking tour through our research blocks. There were 45 in attendance to listen to Dr. Terry Bates and Jennifer Phillips Russo discuss the various projects conducted at CLEREL and learn about the equipment used in precision and digital viticulture. Attendees were given a map of the vineyard blocks with appropriately labeled research trials and inquisitive dialogue continued throughout the morning tour. We even had a special guest attendee, Dr. Tim Martinson, who gave an impromptu presentation of his work in Vignoles to create a loose-cluster Vignoles variety to thwart off rot. Attendees tasted their way through the trials as we discussed Veraison to Harvest monitoring and our variety berry curves. See the photos of the event below.

Visitors learned about CLEREL facility and ag tech innovation, acceleration, and incubation with cutting edge research in Precision Viticulture, Vineyard Mechanization, and Optimized Nutrient Management, and more. Our facilities opened in 2009, CLEREL is an agricultural field station and extension center built to serve the land grant mission of Cornell University. The 50-acre research farm currently grows 11 grape varieties, including juice and wine grapes, hops, willow, and vegetables.

There are approximately 31,500 acres of vineyard in the Lake Erie region of New York and Pennsylvania grown on 582 farms, making this the largest grape growing region east of the Rocky Mountains. Of this acreage, 98.5% consists of Labrusca (American Grape) varieties such as ‘Concord’ and ‘Niagara’ which are used for juice, jam and other fresh or fermented products. The Lake Erie Regional Grape Program consists of Extension Educators and research faculty/ staff from Cornell University and Penn State University that crosses state lines and is bringing local experience and research-based solutions together to provide projects aimed at increasing yields, product quality, diversity and improvement of cultivars, efficiency of production, profitability, and adoption of environmentally sound cultural and pest management strategies. We had a great program that showcased our state-of-the-art facilities that offer access to the world-renowned research and resources of Cornell AgriTech.

Photo 1 Attendees at Cornell Lake Erie Research and Extension Laboratory Research Demonstration Day in Portland, NY in veraison.

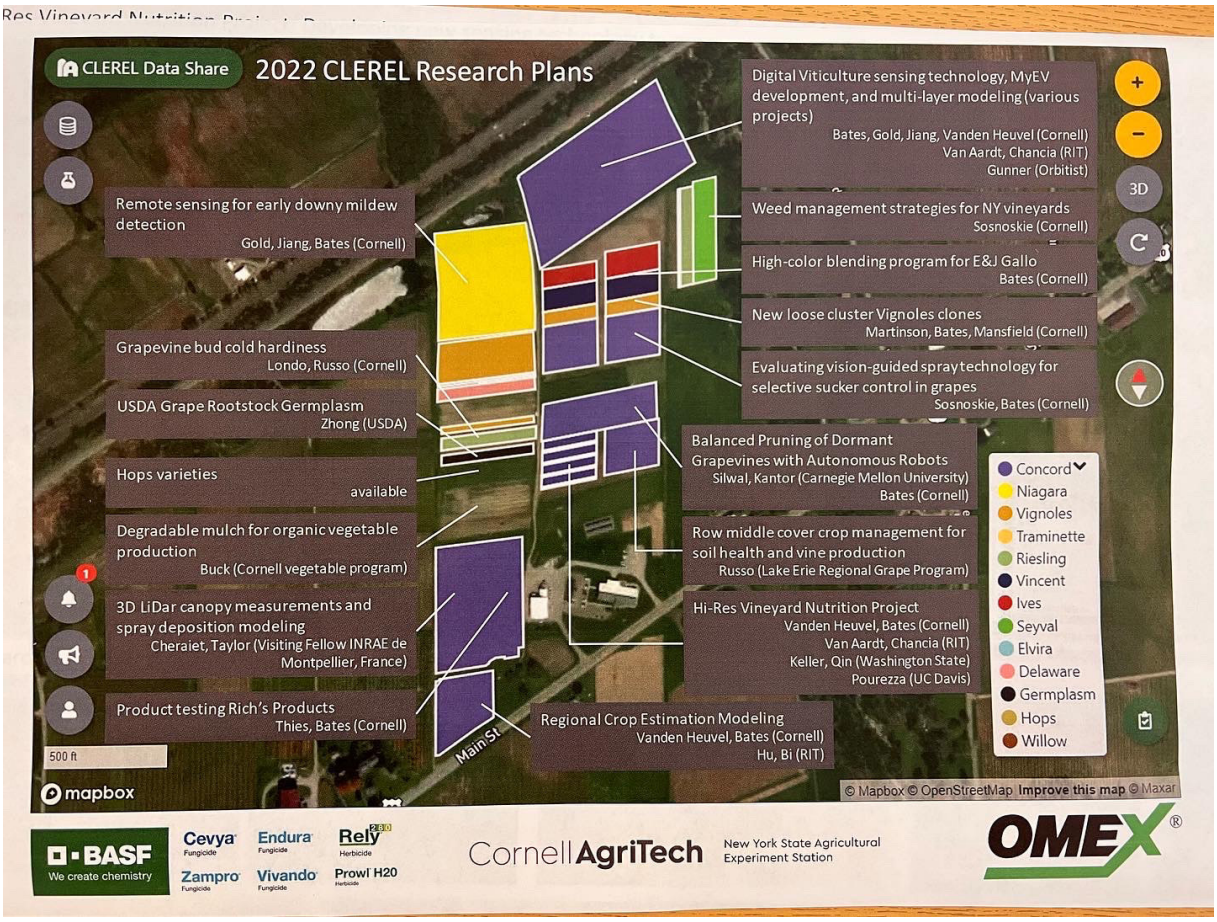


Photo 2. Map of Research blocks at CLEREL

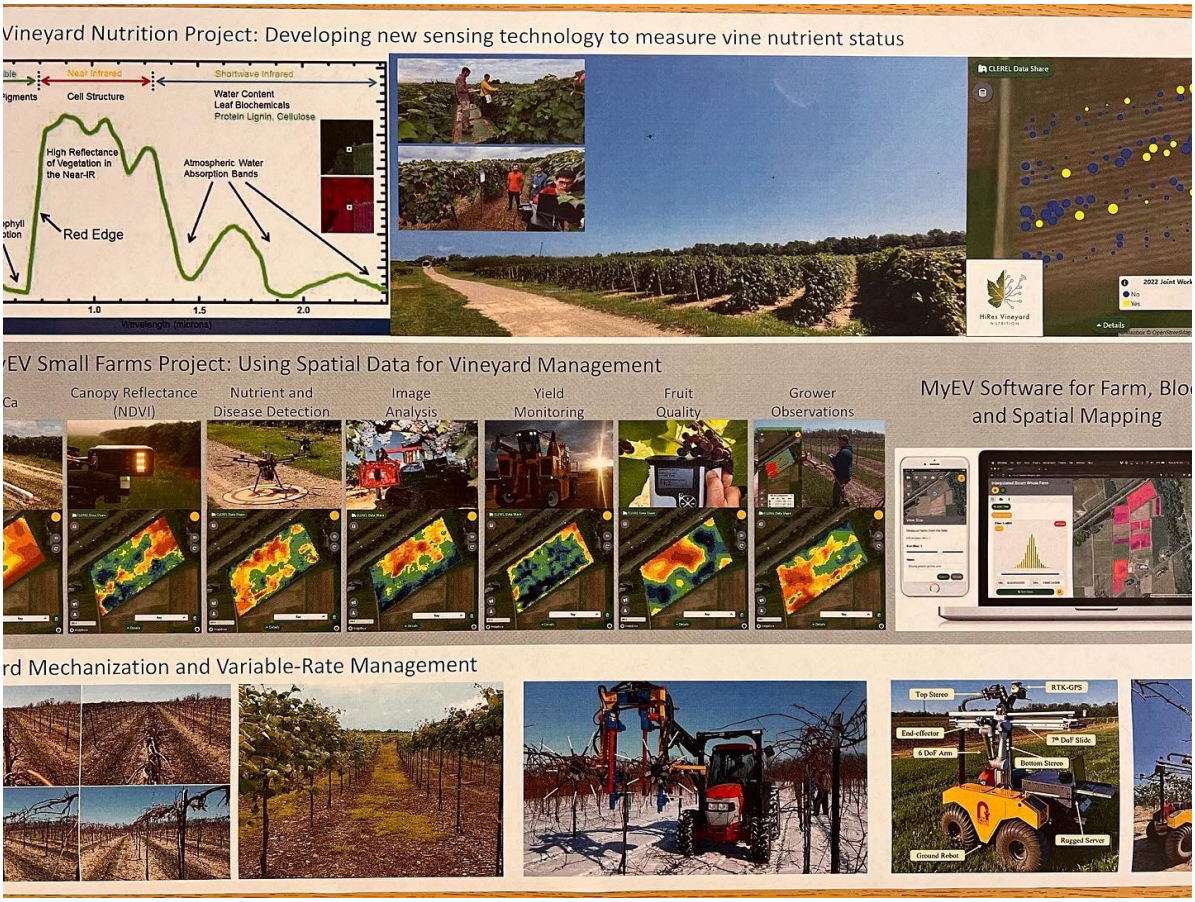


Photo 3. Photos of tools and maps used in precision viticulture at CLEREL in Portland, NY

CLEREL staff monitors berry curves for many of the varieties at our research facility on a weekly basis see Table 1 below. In our Concord phenology block we track minimally pruned vines and vines with 120 buds for the berry curve. The minimally pruned vines average 14.2 Brix and the Concord vines pruned to 120 buds averaged 13.5 Brix at 84 Days After Bloom (DAB). The Delaware and Vignoles are both above 18 Brix on the first day of September and Seyval are close behind. Early ripening varieties are coming off the vine and the air has a faint hint of grapes on the breeze.

Table 1. Cornell Lake Erie Research and Laboratory variety berry curve information for 9/1/2022

Date	Variety	Berries	Gram Wt.	Gram Wt. berry	Brix	DAB
9.1.22	Concord min	100	271.08	2.7	14.1	84
9.1.22	Concord min	102	270.18	2.6	14.4	84
9.1.22	Concord min	106	292.08	2.8	14.1	84
9.1.22	Concord 120	108	294.96	2.7	13.7	84
9.1.22	Concord 120	100	278.74	2.8	13.3	84
9.1.22	Concord 120	99	287.59	2.9	13.6	84
9.1.22	Vignoles	120	187.43	1.56	18.8	
9.1.22	Niagara	80	280.78	3.51	13.2	
9.1.22	Seyval	122	165.92	1.36	17.4	
9.1.22	West Riesling	108	166.94	1.55	14.0	
9.1.22	East Riesling	104	180.71	1.74	13.7	
9.1.22	Vincent	118	221.09	1.87	15.2	
9.1.22	Ives	94	223.04	2.37	14.3	
9.1.22	Delaware	102	171.80	1.68	18.2	

Table 2 below are the results from the Veraison to Harvest Sampling that encompasses more varieties located in the Lake Erie Region and more detail.

Variety	Region	Date	Descript	Berry Weight	Brix	pH	TA	AMM	PAN	YAN
Concord	Lake Erie	9/29/22	Portland	338.38	12.8	2.94	13.03	53.9	132.0	176
Niagara	Lake Erie	9/29/22	Portland	363.93	12.9	2.98	9.46	35.4	86.4	116
Noiret	Lake Erie	9/29/22	Sheridan							
Seyval blanc	Lake Erie	9/29/22	Portland	137.6	16	2.90	11.33	17.2	64.0	78
Marquette	Lake Erie	9/29/22	Fredonia	153.59	21.1	3.07	14.67	94.3	435.0	513
Riesling	Lake Erie	9/29/22	Portland	154.13	13.4	2.87	15.16	138.0	67.7	181
Frontenac	Lake Erie	9/29/22	Sheridan	116.61	17.4	2.94	21.58	69.0	298.0	355
Vignoles	Lake Erie	9/29/22	Portland	177.81	14.8	2.86	20.66	74.5	243.0	304
Cabernet Franc	Lake Erie	9/29/22	Portland							
Traminette	Lake Erie	9/29/22	Portland	152.44	12.7	2.70	18.39	24.2	86.5	106
Gewurtztraminer	Lake Erie	9/29/22	Portland	177.84	17.9	3.16	9.45	134.0	104.0	214
Pinot Noir	Lake Erie	9/29/22	Niagara	133.16	17.6	3.09	9.55	37.3	96.4	127
Chardonnay	Lake Erie	9/29/22	Niagara	143.55	15.4	3.00	11.86	35.2	73.4	102
Merlot	Lake Erie	9/29/22	Niagara	143.37	17.9	3.05	10.57	7.74	41.3	48
Cabernet Franc	Lake Erie	9/29/22	Niagara	109.87	15.2	2.94	13.04	16.9	39.1	53

MyEV for Beginners

The Efficient Vineyard Project puts our research in your hands with a suite of easy-to-use, online GIS tools that help you collect, organize, map, and analyze your vineyard data. We will be including information for those of you looking to learn more and use this tool in your operation. There are great tutorials available (Click Here for Tutorials) to help guide you through and this one will help get you started:

Create an Interactive Map of Your Farm

Nov 2

Written By Nicholas Gunner

This post is part of a series of tutorials designed to help growers adopt my.efficientvineyard.com (myEV)

In this post, you'll learn how to create a simple interactive map of blocks on your farm.

Step #1

To start with, head over to my.efficientvineyard.com, create an account if you don't have one already, and set up your farm:

click to watch Nick walk you through this

Step #2

Next, draw the blocks on your farm and label them:

Click to watch NIck walk you through how to draw your blocks

Step #3

Add myEV to your mobile device:

Click here to watch NIck explain how to install Efficient Vineyard Tool on your mobile device.

Complete!

Now you have a basic interactive map of your farm that will work on any device!

MyEV can do much more than map out blocks so feel free to explore the platform! In future posts we'll discuss collecting spatial data with your phone, uploading data from advanced sensors, collaborating on farm maps, and much more.

Top of Form

Don't miss future updates

Sign up with your email address to receive news and updates from Efficient Vineyard.

News from Dr. Lynn Sosnoskie:

With the recent documentation of evolved herbicide resistance in New York, including Palmer amaranth (glyphosate, ALS-inhibitors), waterhemp (glyphosate, ALS-inhibitors), horseweed (glyphosate, ALS-inhibitors, paraquat), lambsquarters (bentazon), Cornell is looking to get a

better feel for the current “state of the state” with respect to herbicide performance and failure. Specifically, we want to survey growers/land managers/crop consultants/extension specialists/ industry personnel, etc…, across cropped (e.g. agronomic, vegetable, fruit), ornamental/horticultural (e.g. Christmas tree farms, golf courses), and non-cropped (e.g. industrial, roadsides) systems in NY. This survey is very short and should be QUICK to answer. It is also completely ANONYMOUS. Answers will help Cornell weed scientists plan future research and extension projects. Please access the survey using the link below.

https://cornell.ca1.qualtrics.com/jfe/form/SV_a2F9urYcHjpl5Ay

Lynn M Sosnoskie, PhD

Assistant Professor

Weed Ecology and Management for Specialty Crops

NEWA Location	Wild grape bloom date*	DD total on Sept 1	Forecasted GBM GDD for Sept 6
Brant	May 27	2239	2352
Versailles	May 30	2110	2225
Hanover	May 30	2174	2290
Sheridan	May 28	2302	2419
Silver Creek (Route 5)	May 31	2244	2361
Silver Creek (Double A)	May 28	2304	2420
Dunkirk Airport	May 29	2316	2432
Forestville	May 29	2210	2328
East Fredonia	May 31	2114	2231
Fredonia	May 31	2131	2249
Brocton Escarpment	May 30	2155	2270
Portland	May 30	2201	2320
Portland (LERGP West)	May 29	2304	2424
East Westfield	May 31	2124	2242
Westfield	May 31	2170	2290
Ripley	May 30	2248	2370
Ripley Escarpment	May 30	2180	2300
Ripley State Line	May 30	2234	2355
North East State Line	May 31	2123	2238
North East Escarpment	May 29	2220	2333
North East Sidehill	May 30	2165	2278
North East Lab	May 30	2286	2410
Harborcreek	May 30	2214	2335
Harborcreek Escarpment	May 31	2062	2180
Lake City	May 31	2223	2341
Ransomville	May 30	2293	2410
Burt	June 7	1931	2045
Corwin	June 1	2111	2223
*Estimated date provided by NEWA website			
*** Not on forecast yet			

Table 2. Lake Erie Region Grape Berry Moth Growing Degree Days as of August 25, 2022

HOW TO PARTICIPATE

1 PRE-REGISTRATION IS REQUIRED to participate in CleanSweepNY. Obtain a registration form from NYSDEC by telephone at **518-225-8146** or by e-mail at: cleansweep@dec.ny.gov

2 RETURN COMPLETED REGISTRATION FORM TO NYSDEC BY THE DEADLINE OF
September 19, 2022

Participants will be sent CleanSweepNY information which will include your drop-off date, drop-off time and location.

3 Safely transport your items to the assigned collection site.

The CleanSweepNY Program will host locations in the following locations:
Falconer (Sept. 27, 2022)
Hornell (Sept. 28, 2022)
Watkins Glen (Sept. 29, 2022)
Castle Creek (Sept. 30, 2022)

Be a Part of CleanSweepNY!

Help manage unwanted or unusable pesticides, fertilizers, paints and other chemicals

Disposal is free to farmers, owners of former farms and certified applicators/technicians!

Homeowners/households are not eligible for CleanSweepNY disposal

CLEAN SWEEP NY

Fall 2022 Program
NY Southern Tier

NEW YORK STATE | Department of Environmental Conservation

PA Update

Bryan Hed, Research Technologist, Lake Erie Grape Research and Extension Center

Weather: Its already Sep 1 and it'll all be over soon. Here by the lake in North East, August finished up with 3.88 inches of precipitation (above average) and about 705 growing degree days (gdds), (also above average!). Our May through August gdd accumulation (growing season) is about 190 gdds ahead of our long term average. Gdds since April 1 total 2341.5 (also ahead of average). The short term forecast predicts the continuation of above average temperatures with highs in low 80s-upper 70s and lows in the mid to upper 60s. Chance of precipitation is 20-30% on Saturday and 40% on Sunday.

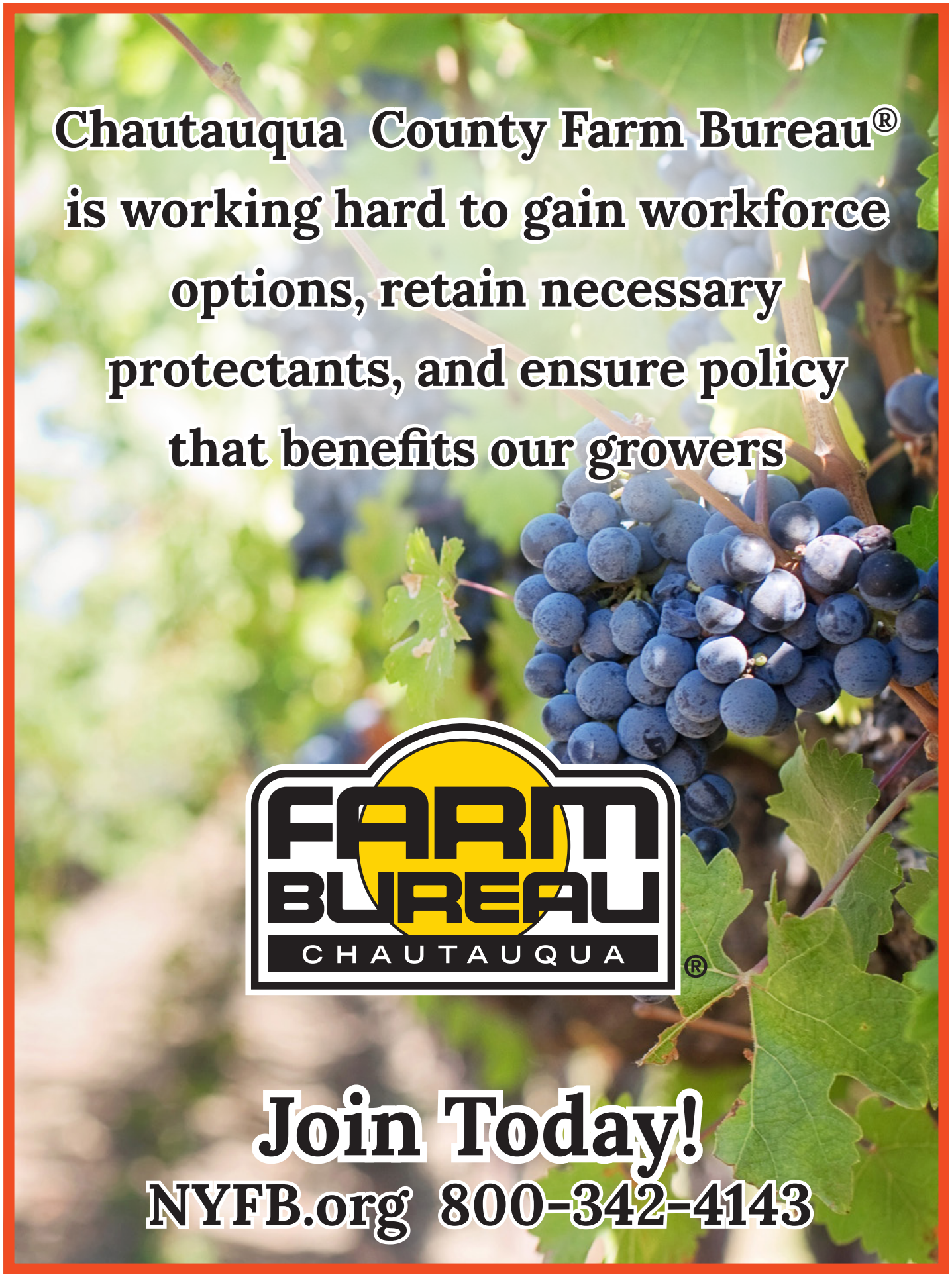
Phenology: The weather thus far during the ripening period has been mostly sunny and warm and conducive to sugar accumulation. Concord brix on our farm is at 12.2 and for Niagara, 13.1

Diseases: We have had up to 11 infection periods for **downy mildew** within the last month, so keep scouting for this disease in your susceptible blocks. Knowing where you stand in relation to this disease is critical to controlling it on your leaves during this last phase of the season. Let it get out of hand and you could lose your leaves AND your crop, for this season AND the next. Lesion development generally takes 5-7 days from the last infection period, which likely occurred on August 30. Take the time to scout your blocks of susceptible varieties, particularly those that will be hanging for a while, as this disease can do a tremendous amount of damage in a very short period of time on highly susceptible wine varieties (I'm not concerned about Concords). Apply a fungicide if you find the disease 'chewing' on your leaves. Copper fungicides are highly effective against downy mildew but can cause problems with fermentation later if fungicide residues are high enough at harvest (which will depend to some extent on how much rain we receive between now and harvest and the rates and formulation of material you use) even though you're observing proper pre-harvest intervals. Phosphorous acids may be among your 'go to' materials on wine grapes that will be harvested within the next few weeks.

Powdery mildew pressure has been relatively light this year, at least at our site by the lake. Recent ratings in our Concord trials bear this out, as even some of the untreated check vines look pretty clean still. Although there is little that needs to be done for powdery mildew on juice grape canopies at this point, protection of leaves from this disease may still be important on susceptible wine grapes, especially *vinifera*. Surface eradicants like Nutrol (with a surfactant), Armicarb/Kaligreen, etc, can be used for powdery mildew to keep leaves clean. Research has also shown that the application of foliar fertilizers, like Harvestmore, will impact the fungus in much the same way. Sulfur applications should probably be avoided at this point, especially for early to mid-season reds fermented on the skins; excessive sulfur residues in fermentations can generate off-aromas (hydrogen sulfide) during fermentation. As a rule, avoid sulfur applications within 5 weeks of harvest. Keeping vinifera leaves healthy as long as is practical is not only important for proper ripening of fruit and wood, but also for maximizing winter cold hardiness and avoiding the kind of trunk damage that incites crown gall and expensive trunk renewal the following spring.

In wine varieties, a **Botrytis** specific fungicide spray about 2-3 weeks after your veraison spray can help manage bunch rots. This is especially important if you're growing varieties that produce tight bunches. We can also expect to see sour rot caused by non-Botrytis microbes - that *cannot* be controlled with Botrytis specific fungicides, particularly in warm, wet harvest seasons. Sour rot generally starts to show up at about 15 brix. Scout your wine vineyard to assess your sour rot

situation. To control sour rot, you need to control fruit flies (insecticides). Applying sterilants or antimicrobials like Oxidate or Fracture can improve control above insecticides alone, but most of the sour rot control is going to come from the fruit fly control. And lastly, always rotate insecticide chemical classes when spraying for fruit fly/sour rot control.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