



CROP UPDATE October 26, 2023

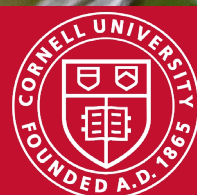
Concords after the Rain-
10/16/2023
Kim Knappenberger

Cornell Cooperative Extension
Lake Erie Regional Grape Program



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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

The weather has been helpful to those of us working in the vineyards this week. The sunshine and warmth helped to dry out some of the vineyard floors and aid in photosynthesis. Concord and other red varieties such as Cabernet Sauvignon and Cabernet Franc are still hanging out in anticipation of schedules and quality standards. With frost in some areas and high tonnage in others, there are some growers who are winterizing equipment and others still plodding along. Best of luck with a strong finish for all.

Table 1 below contains the data from this week's last Veraison to Harvest sample collection for the season with the above mentioned cultivars. Berry weight continues to increase with this collection. ConCORDS increased by 18.58 grams per hundred berries. Cabernet Sauvignon increased by 23.69 grams and Cabernet Franc by 3.55 grams. The one hundred berries are collected randomly from different clusters on both sides of the canopy and from different locations on the cluster to capture variation. The Brix increased for Concord and Cabernet Sauvignon, but dropped for Cab Franc as did the pH and it could be due to the random selection week-to-week. As expected, as sugars increase the acid should drop and that holds true for each with the lower Brix in this week's Cab Franc having a higher acid than last week's sample.



1. Photo of fall in the vineyards taken by Jennifer Phillips Russo

Table 1. This week's Veraison to Harvest data for the three remaining cultivars in the Lake Erie Grape Region. Samples taken in Portland, NY.

	10/23	10/16	10/23	10/16	10/23	10/16	10/23	10/16	10/23	10/9
Variety	Berry Wt	Berry Wt	Brix	Brix	pH	pH	TA	TA	YAN	YAN
Concord	388.25	369.67	17.6	16.8	3.22	3.22	8.98	9.62	307.0	275
Cab Sauvignon	173.04	149.35	19.9	19.5	3.26	3.16	10.78	10.98	156.0	227
Cab Franc	162.61	159.06	16.7	17.4	3.16	3.25	11.11	10.63	106.0	192

Upcoming Programming News from LERGP

We are pleased to announce that we will be holding our 2024 Spray Preparation Program on December 5, 2023, from 9-11:30 AM. This program will be similar to previous years with Penn State University's Bryan Hed will be discussing current research on spray programs and presenting options for next year's growing season for vinifera, juice grapes, and organic systems. It is our

hope that growers will be able to make informed decisions based off of research when purchasing next year's spray products. Penn State University's Megan Luke will also present on the EPA's Endangered Species Act regulation changes her future sprayer calibration work and the importance of regular calibrations, followed by a presentation by Dr. German Vargas, Cornell's New York State Grape Integrated Pest Management Program. We are currently applying for pesticide recertification credits for this program which should contain the elusive CORE credits. Please stay tuned for more information and Save the Date!

Per grower requests, this January 16th, 2024, and February 13th, 2024, will be Technology Tuesdays for training with the free, web-based MyEV digital agriculture tool. Many recognize the power in Precision Viticulture using Digital Ag Software and have asked for courses to learn how to use it. Dr. Tery Bates has agreed to hold workshops on those dates. Save the date and stayed tuned for more information.



Andy Turner named CCE director

Andrew Turner '88, M.P.S. '93, has been appointed director of Cornell Cooperative Extension and associate dean for the College of Agriculture and Life Sciences (CAL S) and the College of Human Ecology (CHE). Currently director of CCE's New York State 4-H program, Turner will begin a five-year term on Dec. 1, 2023.

A third-generation extension professional, Turner has led NYS 4-H since 2014, providing program leadership, professional development and support for one of the largest and most diverse 4-H programs in the nation. Prior to that, he spent two years as CCE assistant director for field operations and communications.

As director, Turner will oversee development and deployment of a diverse portfolio and programs for CCE, which maintains a presence in every county in New York including the five boroughs of New York City. This portfolio includes food systems, natural resources, sustainable energy, 4-H youth development, nutrition, parent education and economic development work. He will also oversee the CCE administrative staff and program leaders at Cornell, reporting directly to the CAL S and CHE deans. Learn more about Turner and his diverse experience with CCE.



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IPM

German Vargas, NYSIPM Grape IPM Coordinator

I am very glad and excited to finally join the team at the NYS IPM program in this task of promoting an effective and sustainable pest management of diseases and pest insects in vineyards in the state. While I am located at the beautiful Cornell Lake Erie Research and Extension Laboratory (CLEREL) in Portland, NY, my responsibilities extend statewide ensuring that we meet challenges consistently across the different regions. To that end, I have already had the privilege of visiting colleagues in the Finger Lakes and Long Island. A visit to the folks in the Hudson Valley is scheduled for mid-November.

As I become more acquainted with the industry and its stakeholders, I am gaining a deeper understanding of the challenges grape growers face, both longstanding and emerging. I believe that by fostering cooperation among all those people involved in addressing these issues, we can effectively meet the challenges that lie ahead.

I am particularly interested in supporting the already undergoing exploration of bioinsecticides to reduce our reliance on highly toxic chemicals, while also extending the lifetime of very effective pesticides by reducing the expression of resistance. Additionally, I am eager to investigate the potential of biological control methods for our primary and recurring pest problems. In preparation for the impending threat of the invasive Spotted Lanternfly, we are already in the process of organizing and ensuring that our NY growers are well-informed, prepared, and equipped to combat its infestations.

I am more than happy to continue getting to know all of you and to engage in meaningful discussion about our shared path into the future. Please do not hesitate to reach out, whether it's just to say hello or if you'd like to meet and have a conversation. You can contact me via email at gav33@cornell.edu

Best,
German Vargas



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In these uncertain times, safeguarding valuable farm assets has become paramount to ensure our farming communities' continued success and sustainability.

Nicole Tommell and Steve Hadcock will be the presenters for Farm Asset Protection Strategies: Safeguarding Agricultural Legacies for Future Generations. Nicole is a Farm Business Management Specialist with the Central New York Dairy, Livestock, and Field Crops Team. Steve Hadcock is a Beginning Farmer Specialist with the Capital Area Agricultural and Horticultural Program. Nicole and Steve have many years of experience working with farm families on farm management and estate planning topics.

Topics included are:

How can I use my current records to gauge how well my business is doing? Various suggestions will assist you in looking at your records differently.

What can I do to retain employees? Ideas will be shared on how to get new employees off to a good start. Also, ideas on how to help retain employees as well.

Am I ready to consider diversifying my business? Thoughts on how to approach evaluating the diversification of your farm business will be shared.

When and how do I start the succession process? It is never too early to begin discussing farm succession/transfer. Topics will be covered to help you feel confident to begin the process for your business. Shared topics may help you with your process if you have already started.

Locations and registration links include:

Tuesday, November 14: CCE Essex County, Essex - <https://essex.cce.cornell.edu/events/2023/11/14/farm-asset-protection-strategies-safeguarding-agricultural-legacies-for-future-generations>

Friday, November 17: CCE Orange County, Middletown - <https://interland3.donorperfect.net/weblink/weblink.aspx?name=E190538&id=787>

Monday, November 20: CCE Schoharie County, Cobleskill - <https://cnydfc.cce.cornell.edu/event.php?id=2244>

Tuesday, November 21: CCE Saratoga County, Ballston Spa - <https://caahp.ccext.net/civicrm/event/info?reset=1&id=180>

Wednesday, November 29: CCE Oneida County, Oriskany - https://pub.cce.cornell.edu/event_registration/main/events_landing.cfm?event=FarmAssetProtection_230

Thursday, November 30: CCE Genesee County, Batavia - <https://nwnyteam.cce.cornell.edu/event.php?id=2248>

Friday, December 1: TASTE NY Building, Binghamton - https://pub.cce.cornell.edu/event_registration/main/events_landing.cfm?event=farmassetprotectionstrategies_203

Each participant will receive written materials and a flash drive containing various resources. Morning refreshments and lunch will be provided. For more information, contact Nicole Tommell at nt375@cornell.edu and 315-867-6001 or Steve Hadcock at seh11@cornell.edu or 518-380-1497.

For registration help, call CCE Herkimer County at 315-866-7920.

Dr. Terry Bates

Sr. Research Associate, CALS, CLEREL Director

2023 Concord Foliar Nutrient Observations: Am I Seeing Potassium or Magnesium Deficiency?

Many growers have observed late season foliar nutrient deficiencies in Concord vineyards while harvesting and there have been questions concerning diagnosis and management for next season. Knowing your vineyard system combined with visual observations can give clues to the mineral nutrient in question but only a tissue nutrient analysis can tell you for sure the nutrient status of your grapevines.

Currently, we have standard target tissue values for petioles collected at bloom and/or veraison and these standards are published in the Winegrape Production Guide for Eastern North America by Tony Wolf. One of the outcome goals of the Hi-Res Vineyard Nutrition project is to expand standard target tissue values for leaf blades, as well. Obviously, we are well past veraison in Concord vineyards so the published standard values will not be very much help in diagnosis if you collect tissue at this time. However, if you have healthy areas and nutrient deficient areas in your vineyard, you can always collect tissue from these separate regions, keep the tissue samples separate, and do a comparative analysis. Once you have your tissue results, we can assist with the interpretation.

Many vineyards are showing signs of either Magnesium (Mg) deficiency or Potassium (K) deficiency. Sometimes it can be difficult, especially in early stages, to tell the difference between Mg or K or even other nutrient deficiencies, like N, because many nutrient deficiencies cause some type of interveinal chlorosis (yellowing between leaf veins). Again, this speaks to the importance of a tissue test for a true diagnosis. Magnesium and Potassium have an antagonistic relationship in grapevine nutrition; therefore, it is important to know which one is deficient to take the right corrective action. For example, if you have Mg deficiency and you think it is K deficiency so you add more potassium fertilizer (potash), you will most likely make the Mg deficiency worse, not better.

This is what typical Magnesium Deficiency looks like in Concord.



Magnesium deficiency causes interveinal chlorosis and then eventually leaf scorching starting around the leaf margins. Symptoms tend to start on mid-shoot leaves but can be somewhat random and give the

canopy a tiger stripe appearance. Look for Magnesium deficiency where the vineyard has low soil pH, cool/wet conditions, or excessive potassium fertilizer applications. Nine times out of ten in Lake Erie Concord vineyards, Mg deficiency is solved by fixing the soil pH issue with lime applications. See: <https://www.efficientvineyard.com/blog/blog-post-title-one-bfj39>

This is what typical Potassium deficiency looks like in Concord vineyards.



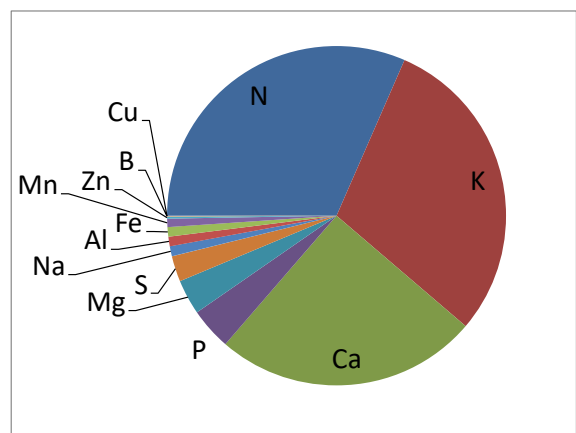
Late season potassium deficiency is commonly associated with high crop load in Concord. Remember, crop load is a function of both yield and vine size (the Y:PW ratio...not just yield alone). Concord fruit has a high potassium demand, especially from veraison to harvest. If the crop size is too large for the given vine size (i.e. root size and ability to get K from the soil), then the fruit will steal the K from the leaves and cause leaf deficiency symptoms. K deficiency will also start as interveinal chlorosis (and can look like Mg deficiency) but usually turns more black than yellow. Also, K is considered a mobile element in the plant and will move to the fruit and growing shoot tip when in short supply. Therefore, K deficiency is almost always observed first on the older basal leaves of the shoot. To correct potassium deficiency for next year, add potassium fertilizer (potassium chloride, KCl, aka potash) and, more importantly, measure, understand, and manage for proper crop load balance through any combination of pruning level, early-season shoot thinning, and mid-season fruit thinning.

Mineral Nutrients Needed by Mature Concord Grapevines

Nutrients needed on an annual cycle
Balanced vines (i.e. not trying to build vine size)
8-10 tons/acre



Nutrient	total (g/vine)	annual cycle (g/vine)	total (#/acre)	annual cycle (#/acre)
N	80.00	40.00	106.72	53.36
K	50.69	37.65	67.62	50.23
Ca	56.74	31.85	75.70	42.48
P	8.33	5.08	11.11	6.77
Mg	8.51	4.25	11.35	5.66
S	6.51	3.10	8.68	4.13
Na	1.97	1.21	2.63	1.61
Al	1.81	1.16	2.41	1.55
Fe	1.88	1.14	2.51	1.52
Mn	1.80	1.01	2.41	1.35
Zn	0.91	0.25	1.22	0.33
B	0.11	0.06	0.14	0.08
Cu	0.09	0.04	0.11	0.06



Calculated Mineral Nutrients Removed from the Vineyard By the Fruit at Different Yield Levels

Estimated nutrients removed (pounds/acre) at different Concord fruit yields (tons/acre). Data from the 2003 Concord vine excavation study in Fredonia, NY. (T. Bates)

Nutrient (pounds/acre)	Yield (tons/acre)											
	1	2	3	4	5	6	7	8	9	10	11	12
K	3.01	6.03	9.04	12.05	15.07	18.08	21.09	24.10	27.12	30.13	33.14	36.16
N	0.63	1.26	1.90	2.53	3.16	3.79	4.43	5.06	5.69	6.32	6.96	7.59
Ca	0.42	0.83	1.25	1.67	2.09	2.50	2.92	3.34	3.75	4.17	4.59	5.00
P	0.25	0.50	0.74	0.99	1.24	1.49	1.74	1.98	2.23	2.48	2.73	2.98
Mg	0.17	0.34	0.50	0.67	0.84	1.01	1.18	1.35	1.51	1.68	1.85	2.02
S	0.15	0.30	0.45	0.59	0.74	0.89	1.04	1.19	1.34	1.48	1.63	1.78
Na	0.046	0.093	0.139	0.186	0.232	0.278	0.325	0.371	0.418	0.464	0.510	0.557
Fe	0.012	0.025	0.037	0.050	0.062	0.074	0.087	0.099	0.112	0.124	0.136	0.149
Mn	0.012	0.025	0.037	0.049	0.062	0.074	0.086	0.098	0.111	0.123	0.135	0.148
Al	0.009	0.019	0.028	0.037	0.047	0.056	0.065	0.074	0.084	0.093	0.102	0.112
B	0.004	0.008	0.011	0.015	0.019	0.023	0.027	0.030	0.034	0.038	0.042	0.046
Zn	0.002	0.003	0.005	0.006	0.008	0.010	0.011	0.013	0.014	0.016	0.018	0.019
Cu	0.001	0.002	0.004	0.005	0.006	0.007	0.008	0.010	0.011	0.012	0.013	0.014

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USDA's Discrimination Financial Assistance Program (DFAP):

In extreme brief, \$2.2 billion is to be distributed to qualifying farmers and ranchers that experienced discrimination through the USDA's Farm Loan Programs prior to January 2021. The deadline for applications is January 13, 2024.

In addition to an in-person office in Liberty, NY, and access to [weekly virtual assistance meetings \(program overviews and application help\)](#) available in multiple languages, AGM is directly supporting the federal contractor (Windsor Group) overseeing sharing this information so all eligible are aware and have support to apply.

...the primary source of information (at no cost) has provided their direct contact information and is eager to coordinate any meetings, attend events, or make site visits that support this outreach in a timely manner. This may also be a good opportunity to schedule a collective call for Q&A specific to New York concerns related to this program.

Please directly contact:

Alan Blankstein

Project Coordinator

Email- ablankstein@hopefoundation.org

Phone- (812)320-4710

Sarah Blankstein

Technical Assistant

Email – Sarah.blankstein@windsorgroup-llc.com

Phone- (607)309-3401

Alan Blankstein is the NYS Project Coordinator for this federal program. Please feel free to contact him, and share this information with your networks so interested people have time to review the application and ask questions.

Veraison to Harvest

Podcast and newsletter links

[2023 Veraison to Harvest #6](#)

Around New York (Gerling, Walter-Peterson, Bates, Wise, Schuster)
Fruit Composition Report (Gerling, CCBAL, Phillips-Russo, Walter-Peterson, Wise,
Schuster)
Lake Erie Concord Berry Curve (Bates)

All previous issues available online at:

<https://cals.cornell.edu/viticulture-enology/research-extension/veraison-harvest>



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