





CROP UPDATE September 2, 2021

Concords on August 30-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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Jennifer Russo, Viticulture Extension Specialist, LERGP

Around the Belt

When walking through vineyards in the belt this week, the smell of grapes began to fill the air. I was interested to check periderm progression knowing that there are some large crops hanging on the vines and plant resources are allocated to ripening the fruit. Periderm, or mature wood, occurs in late summer and fall when the green stem tissue becomes "woody". Per Martin Goffinet's, *Anatomy of Grapevine Winter Injury and Recovery 2004,* "the periderm actually arises as a thin layer of cambium-like cells in the outermost phloem and it divides to produce rows of cork cells that provide a waterproof barrier that seals off all living tissues inside of it." Thus, what growers call "wood maturation" is really a browning of the outer internode tissues. True "wood" is the hard ring of xylem tissue to the inside of the vascular cambium". The woody tissue helps to protect the vine from cold injury during dormancy.

I was interested in one Concord vineyard that was machine-pruned with hand follow-up located directly next to another that was machined-pruned without hand follow-up. Besides the difference in pruning, all other management decisions were the same throughout the growing season. Photo 1 is the Concord vineyard that was machine-pruned with hand follow-up which balanced out the vine, and Photo 2 is without hand follow-up. Visual observations of the clusters show more color developed in the clusters in Photo 1 (less fruit) when compared to no hand follow-up in Photo 2. The periderm formation is developing on both vines, however, the balanced vines appeared to be further along with deep mahogany hues and thicker diameters. That is not to say that the vines carrying more crop will not catchup, but I am following the block's progression throughout the season for cold hardiness.



Photo 1. Concord vine that was machine-pruned with hand follow-up



Photo 2. Concord vine that was machine-pruned with no hand follow-up

middle, and bottom). There may be slight differences from week to week *Table 1. Lake Erie Veraison to Harvest Data Week 1 and 2* non-biased. One hundred berries are collected from a row, randomly and throughout the entire cluster (top, middle, and bottom) and canopy (top, The Table below is the latest Veraison to Harvest data that was collected on Monday, August 30, 2021. The sampling protocol is meant to be

		_							
Veraison to H	larvest								
8/23/2001			100 Count						
Variety	Grower	Region	Berry Weight	Brix	рH	TA			
Cab Franc	Portland	Lake Erie	125.83	6.9	2.6	28.94			
Concord	Portland	Lake Erie	296.73	8.2	2.73	21.03			
Frontenac	Sheridan	Lake Erie	104.77	13.5	2.97	21.74			
Marquette	Fredonia	Lake Erie	156.93	17.4	2.95	15.27			
Niagara	Portland	Lake Erie	389.91	10.2	2.93	13.19			
Noiret	Sheridan	Lake Erie	147.34	11.4	2.89	18.01			
Riesling	Portland	Lake Erie	160.55	12.4	2.93	17.37			
Seyval blanc	Portland	Lake Erie	164.35	13.3	2.98	10.98			
Traminette	Portland	Lake Erie	125.38	9.3	2.69	21.96			
Vignoles	Portland	Lake Erie	141.3	13.3	2.87	21			
8/30/2021			Berry Weight	Brix	pН	TA	AMM	PAN	YAN
Cab Franc	Portland	Lake Erie	355.6	10.6	2.98	14.38	109.6	106.0	198
Concord	Portland	Lake Erie	409.12	12.9	3.05	8.11	45.6	94.4	133
Frontenac	Sheridan	Lake Erie	157.94	11.7	3.03	15.75	127.8	163.2	271
Marquette	Fredonia	Lake Erie	172.8	15.2	3.02	9.13	26.4	155.0	177
Niagara	Portland	Lake Erie	167.78	20	3.11	12.61	98.3	350.5	433
Noiret	Sheridan	Lake Erie	166.71	14.9	2.93	13.25	96.7	50.9	132
Riesling	Portland	Lake Erie	114.52	16.1	3.06	18.67	119.0	353.8	454
Seyval blanc	Portland	Lake Erie	166.35	15.9	2.97	17.95	105.5	340.2	429
Traminette	Portland	Lake Erie	128.64	10.9	2.81	19.23	83.0	34.8	105
Vignoles	Portland	Lake Erie	136.48	10.5	2.79	16.18	25.7	43.6	65

PA Update

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

Weather: Here by the lake in North East, August finished up with 3.47 inches of precipitation (just a hair above average) and about 758 growing degree days (gdds), waaaay above average!. Our May through August gdd accumulation (growing season) is about 220 gdds ahead of our 20-year average. Gdds since April 1 total 2420 (also ahead of average). The weekend forecast calls for sunny weather on Friday, with 60% of rain Saturday night into Sunday morning. There is a 40% chance for showers on Labor Day. Temperatures will see a cooler trend over the next few days, with high temperatures around the low 70s and lows in the low 60s.

Phenology: The weather thus far during the ripening period has been mostly sunny and warm and conducive to sugar accumulation; all good. Concord brix on our farm varies from about 11-13, depending on crop load.

Diseases: According to DMCast, a downy mildew infection period occurred on August 30. Lesion development generally takes 5-7 days, so symptoms on leaves from that wetting period (white, downy sporulation on the underside of the leaf) should be visible by early next week. Take the time to scout your blocks of susceptible varieties, particularly those that will be hanging for a while, as this disease is not ready to quit just yet this season. 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), so stay on top of your downy situation and 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. Phosphorous acids may be among your 'go to' materials on wine grapes that will be harvested within the next few weeks.

Powdery mildew: Extremely humid conditions from about August 17 to the 23rd, that followed a week or more of wet weather, greatly favored the development of powdery mildew disease on grape leaves, and powdery mildew pressure appears to be heavier than its been for at least the past couple of seasons. Recent ratings in our Concord trials bear out that powdery mildew severity on leaves jumped quite a bit over the past two weeks and is about equivalent to levels we experienced in 2018. Although there is probably 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 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...unless your crystal ball tells you to expect lots of rain between now and 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 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 sour rot control.





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Updates and Information

Kimberly Knappenberger, Viticulture Assistant, LERGP

One of the big burdens for some landowners applying for the Vineyard Improvement Program with an abandoned vineyard is finding proof that it is/was a Concord vineyard. All of us in grape country know that distinctive smell in the air when the Concords are ripening, and don't even get us started on the delicious taste! Because they are so distinctive, this time of year we are able to come to prospective VIP vineyards and help prove that it was a Concord vineyard. If you are interested in getting financial assistance to help remove an abandoned vineyard please don't delay! This window of opportunity only exists for a few weeks and then the grapes are gone again.

Cornell Cooperative Extension Chautauqua County's Lake Erie Regional Grape Program is heading into the fourth of five years of the Vineyard Improvement Program. If you have been thinking that this program could help you but keep putting it off, now is the time to check it out. Go to <u>lergp.com</u> and click on the big purple Vineyard Improvement Program button. Applicants need not be grape growers, in fact many of the abandoned Concord vineyards around have probably been willed to family who has no interest in growing grapes, or the vineyards just were no longer profitable and fell into disrepair. These landowners are welcome and encouraged to apply. Proof of Concord will be required (which can be done now with the sniff and taste test) and the land **must** be replanted to an agricultural commodity. Replants have included field crops, cover crops, hay fields, vegetable plots, orchards, and vineyards – even Concord vineyards.

This is a reimbursement program that will issue one check at the completion of the project. Applicants can be reimbursed 50% of their costs up to \$1,500 per acre for Concord vineyard removal, and 25% of their costs up to \$1,500 per acre for replant. Eligible costs include labor, equipment use, custom hire, land clearing, trellis, plant material, tiling if needed. (Seed crops are not eligible for reimbursement.)

This program is provided by New York Ag and Markets and is funded by the Southern Tier Agricultural Industry Enhancement Program. It is available to the Southern Tier of New York which for this program includes the following counties: Chautauqua, Erie (NY), Niagara, Allegany, Broome, Cattaraugus, Chemung, Chenango, Delaware, Steuben, Schuyler, Tompkins, and Tioga.

If you have questions please contact Kim Knappenberger (<u>ksk76@cornell.edu</u>), Kevin Martin (<u>kmm52@psu.edu</u>) or Jennifer Phillips Russo (jjr268@cornell.edu).



Photo Caption: Vine in abandoned Concord vineyard just starting veraison (ripening of the berries and color change)





Other links of interest:

LERGP Web-site:

Cornell Cooperative Extension website:

Cornell CALS Veraison to Harvest Newsletter:

Efficient Vineyard:



Appellation Cornell Newsletter:

COVID-19 resources:

Need information? View the following Cornell CALS and CCE Resource Pages Updated Regularly

General Questions & Links:

https://eden.cce.cornell.edu/

Food Production, Processing & Safety Questions:

https://instituteforfoodsafety.cornell.edu/coronavirus-covid-19/

Employment & Agricultural Workforce Questions:

http://agworkforce.cals.cornell.edu/

Cornell Small Farms Resiliency Resources:

https://smallfarms.cornell.edu/resources/farm-resilience/

Financial & Mental Health Resources for Farmers:

https://www.nyfarmnet.org/

Cornell Farmworker Program

www.farmworkers.cornell.edu

www.trabajadores.cornell.edu (en espanol)