



July 10, 2024

## Finger Lakes Vineyard Update

### In the Vineyard

One of the projects that we are working on this year is trying to improve crop estimation in Concord vineyards. We are using NDVI canopy sensors to map the spatial variation in canopy size in several blocks, and then selecting our sampling locations based on that map rather than just choosing random locations which may cause us to miss measuring stronger or weaker parts of the vineyard. At 30 days after bloom (which was this past week), when Concord berries are about 50% of their final weight, we collect samples from 1/100<sup>th</sup> of an acre (about 2 panels), weigh them, and then calculate a crop estimate based on those sample results.



Concord berries removed from 2 panels (6 vines) for crop estimation. This sample weighed 140 lbs, which would be equivalent to about 14 tons on a per acre basis at harvest.

The results from all our sampling this week suggest that each of the blocks we measured will probably exceed 10 tons/acre, if not more. There are still factors that could influence the final yields like excessive drought or rain which could affect berry size, and these estimates don't necessarily account for the number of missing vines, which would bring the actual yield down as well. But even so, the headline message from this testing is that there is a very healthy Concord crop in the Finger Lakes this year. Based on conversations at our Tailgate Meetings and with individual growers, that seems to be the case in many other vineyards and cultivars as well.

Fortunately, we appear to be having the kind of season that would allow growers to ripen a larger than normal crop. We are currently about 2 weeks ahead of our average growing degree day (GDD) accumulation, and bloom was about 7-10 days ahead of normal this season, both of which potentially point to an earlier start to the ripening period. The data gathered by the folks in Lake Erie has shown that, on average, Concord growers can ripen an extra ton of grapes for every three days that bloom is early (in this case, 'ripen' means to reach 16° Brix). Given that bloom was about one week early, that means that growers could ripen an extra 2-3 tons/acre of Concord grapes this year.

Does this apply to other grape varieties? The general idea probably does, but we don't have data for varieties like Riesling or Cabernet Franc or Marquette to know just to what extent, so it's difficult to say how much extra ripening we could get from an extra 7-10 days of growing season. Not to mention the issue of just what we mean by 'ripening' if we're talking about things beyond sugar accumulation...

### Should I be cluster thinning this year?

I've discussed this idea with a few growers this season given the healthy crop that we appear to have in many vineyards. Unfortunately, there is no easy formula for making that decision, but the following points can be considered when making the decision about whether to thin or not.

### *Dropping clusters alters the leaf area/fruit weight ratio, but...*

When we drop clusters from the vines, we are reducing the amount of fruit that the vine is trying to ripen. In other words, we are increasing the leaf area that is available to help ripen a given amount of fruit (usually expressed in cm<sup>2</sup>/g of fruit or m<sup>2</sup>/kg of fruit). That sounds like a good thing – more leaves, better ripening. Doing this, however, assumes that the vine didn't have enough leaf area to ripen the crop before thinning. Looking at our canopies, however, I think that very few growers would say that their canopies (on healthy vines) are too small. Thanks to our heat and rainfall this season,

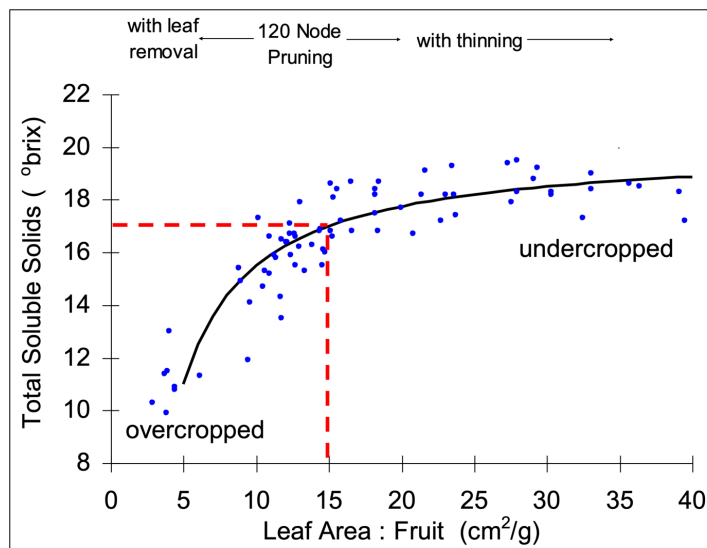
### In This Issue:

In the Vineyard	pg. 1
Equipment Rodeo	pg. 3
Events	<a href="#">pg. 4</a>
GDDs	<a href="#">pg. 5</a>

### In the Vineyard (continue from pg. 2)

the vines are growing pretty aggressively, and I don't see too many places where growth seems to be suffering because of a large crop.

A graph of the relationship between the leaf area/fruit (LAF) ratio and sugar accumulation (as an indicator of ripening) is



not a straight line, but rather reaches a plateau at some point (see below). The practice of thinning assumes that the vines are overcropped (left side of the curve) and that reducing the crop will increase the LAF ratio, moving to the right on the curve, and therefore improve ripening. If the vines already have adequate leaf area to ripen the crop (starting in the middle of the curve), moving to the right on the graph by removing fruit doesn't really improve ripening.

*Take the current season, the health of the vineyard, and the vineyard's production history into account*

We already touched on the first point about the conditions of the season being favorable to the potential to ripen a larger than normal crop so far. The health of the vines should also be considered, as issues like nutrient deficiencies, virus infection, etc. can hamper ripening. Having a sense of the production history of a vineyard can also give some guidance as to the need to thin or not. How did the vineyard fare in seasons with larger crops before, like in 2021? Looking back

at information like this can be helpful in determining whether the vines are carrying more fruit that they should.

#### *Thinning can reduce potential for cluster rots in certain cases*

In many of our cane-pruned vineyards, clusters tend to, uh – cluster, in certain areas where a lot of buds occupy a relatively small space. This is especially true at the heads of the vines and on the ends of canes if those from adjacent vines are overlapping. This can create a giant bundle of fruit that can get all clumped together and let bunch rots run wild. Thinning some clusters out from areas like these can help to improve air movement and spray penetration, similar to the effects of leaf pulling.

#### When should I do fruit thinning?

Clusters can be removed from the vines anytime during the growing season, but the impacts to the remaining fruit and the vine will vary depending on when it is done. Most fruit thinning is done between fruit set and near the end of veraison. One potential impact of thinning closer to fruit set is that the vine will compensate for the removed crop by producing larger berries on the remaining clusters. By removing competing sinks from the vine, more energy is directed to the growing berries that are undergoing cell division, which will create larger berries. Waiting to thin until lag phase or the ripening phase of berry development generally will not result in larger berries. This is not always the case, however. If vines are vigorous and the rate of cell division is not limited by the larger crop already, cluster thinning would not impact final berry size and weight.

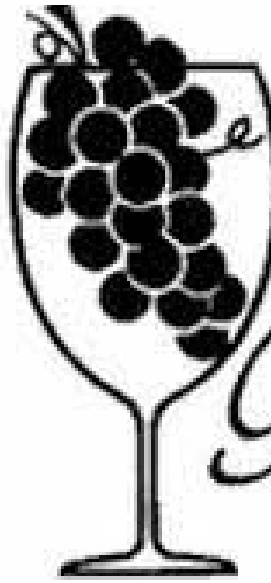
Another question that gets asked in relation to timing is how long to let "extra" fruit hang on the vine if it is being used to slow down shoot growth. To answer this, we go back to the concept of competing sinks for nutrients and photosynthates. During the vegetative stage of development (before veraison), shoot tips and clusters compete for the vine's resources. Reducing the strength of the sink that competes with shoot growth, by removing clusters, will enable more resources to be devoted to shoot development. In other words, the longer that fruit hangs on the vine, the longer it competes with the shoots as a sink for resources from the vine. In this case, fruit should be removed once the vines reach veraison.

Thinning fruit after veraison is a game of diminishing returns as it gets later in the season. Both average temperature and day length are declining at this point in the season, so thinning later means that there is less opportunity for the vine to take advantage of the reduced crop load. To maximize the potential impact to ripening, fruit should be thinned at or prior to veraison.

Wednesday,  
August 14, 2024  
11am - 4pm



Wagner Vineyards,  
9322 Route 414,  
Lodi, NY



New York State

*Wine Grape  
GROWERS*

# EQUIPMENT RODEO 2024



Wagner Vineyards



## LARGEST VINEYARD EQUIPMENT SHOW ON THE EAST COAST

- ✓ Over 20 vineyard equipment dealers
- ✓ Numerous harvesters and sprayers on display
- ✓ Nickel's Pit BBQ food truck on site
- ✓ Free admission

### Upcoming Events

Don't forget to check out the calendar on our website (<https://blogs.cornell.edu/flxgrapes/events/>) for more information about these and other events relevant to the Finger Lakes grape industry.



### Tailgate Meeting

*Tuesday, July 23                      4:30 – 6:00 PM*  
*Knapp Vineyard, 2770 Ernsberger Road, Romulus, NY*

Our next Tailgate Meeting will be on Tuesday, July 23 at Knapp Vineyards located in Romulus, NY. These meetings are a time for growers and the FLGP staff to discuss what's going on in the vineyards, ask questions, and learn from each other. There is no set agenda for the most part, so bring questions, observations, thoughts, etc. and let's talk about them. Each meeting has been approved for 1.5 pesticide recertification credits by DEC.

Here is the remaining schedule for Tailgate Meetings this year:

- August 13, 2024                      Randall Standish Vineyards, 5506 NY-21, Canandaigua, NY
- August 20, 2024                      Miles Wine Cellars, 168 Randall Crossing Rd, Himrod, NY

### Equipment Rodeo 2024

*Wednesday, August 14              11:00 – 4:00 PM*  
*Wagner Vineyards*  
*9322 State Route 414, Lodi NY*

The NY State Wine Grape Growers are organizing and sponsoring the 2024 Equipment Rodeo this summer, where growers will get to see a wide range of vineyard equipment including sprayers, tractors, implements, and many others. Admission is free, and a food truck will be onsite. More details are on the event flyer included in this week's Vineyard Update.

### 2024 GDD & Precipitation

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	Hi Temp (F)	Lo Temp (F)	Rain (inches)	Daily GDDs	Total GDDs
7/3/24	86.9	67.5	0.00	27.2	1145.8
7/4/24	87.3	70.5	0.00	28.9	1174.7
7/5/24	86.4	71.2	0.05	28.8	1203.5
7/6/24	87.4	69.3	0.00	28.4	1231.9
7/7/24	82.9	65.3	0.00	24.1	1256.0
7/8/24	86.9	66.6	0.00	26.8	1282.7
7/9/24	89.1	68.4	0.00	28.8	1311.5
Weekly Total			<b>0.05"</b>	<b>174.1</b>	
Season Total			<b>12.34"</b>	<b>1311.5</b>	

GDDs as of July 9, 2023: 1111.3

Rainfall as of July 9, 2023: 13.67"



### Seasonal Comparisons (at Geneva)

#### Growing Degree Days

	2024 GDD <sup>1</sup>	Long-term Avg GDD <sup>2</sup>	Cumulative days ahead (+)/behind (-) <sup>3</sup>
April	69.9	64.2	+1
May	393.5	255.5	+11
June	589.0	484.3	+13
July	215.5	647.2	+14
August		596.8	
September		361.1	
October		113.9	
TOTAL	1267.9	2522.9	

<sup>1</sup> Accumulated GDDs for each month.

<sup>2</sup> The long-term average (1973-2023) GDD accumulation for that month.

<sup>3</sup> Numbers at the end of each month represent where this year's GDD accumulation stands relative to the long-term average. The most recent number represents the current status.

### Precipitation

	2024 Rain <sup>4</sup>	Long-term Avg Rain <sup>5</sup>	Monthly deviation from avg <sup>6</sup>
April	4.73"	2.86"	+1.87"
May	2.75"	3.04"	-0.29"
June	3.75"	3.58"	+0.17"
July	0.13"	3.48"	
August		3.19"	
September		3.43"	
October		3.39"	
TOTAL	11.36"	22.97"	

<sup>4</sup> Monthly rainfall totals up to current date

<sup>5</sup> Long-term average rainfall for the month (total)

<sup>6</sup> Monthly deviation from average (calculated at the end of the month)

### Additional Information

Become a fan of the [Finger Lakes Grape Program on Facebook](#), or follow us on [Twitter \(@cceflgp\)](#) as well as YouTube. Also check out our website at <http://flgp.cce.cornell.edu>.

Got some grapes to sell? Looking to buy some equipment or bulk wine? List your ad on the [NY Grape & Wine Classifieds website](#) today!

#### Finger Lakes Grape Program Advisory Committee

**Eric Amberg**- Grafted Grapevine Nursery

**Dave Orzel**– Nutrien Ag

**Matt Doyle**- Doyle Vineyard Management

**Tara Farnan**- Barrington Cellars

**Chris Gerling**- Cornell University Extension

**Mike Colizzi**- E & J Gallo

**Tina Hazlitt**- Sawmill Creek Vineyards

**Cameron Hosmer**- Hosmer Winery

**Herm Young**– Young Sommer Winery

**John Santos**- Hazlitt 1852 Vineyards

**Steve Sklenar**– Sklenar Vineyard

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**Adam Folts**—Vineyard View Winery

**Ian Wagner**—Wagner Vineyards

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## Cornell Cooperative Extension Finger Lakes Grape Program

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<https://blogs.cornell.edu/flxgrapes/>

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The Finger Lakes Grape Program is a partnership between Cornell University and the Cornell Cooperative Extension Associations in Ontario, Seneca, Schuyler, Steuben, Wayne and Yates Counties.

