



June 1, 2023

Finger Lakes Vineyard Update

In the Vineyard

I know it's been a couple of weeks since we've put a newsletter out, so I wanted to be sure to get something to everyone this week. All of us with the Grape Program have been pretty busy trying to wrap our arms around the freeze damage that hit much of the region on May 18, and I wanted to try to summarize what we have been seeing and hearing so far.

Just to refresh your memories, temperatures during the evening of May 17 and morning of May 18 dropped below 32°F in many locations in the Finger Lakes for varying amounts of time. The further below 32° and the longer those sub-freezing temperatures were in place are the two primary factors in how much damage any given vineyard received.

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Location	County	Lowest Temp °F	Hours ≤32°F	Avg windspeed when ≤32°F
Aurora (CUAES Musgrave)	Cayuga	30.6	2	6.4
Skaneateles	Onondaga	32.0	2	6.2
Geneva	Ontario	30.9	1	5.8
Lodi (Lamoreaux)	Seneca	32.0	1	7.4
Interlaken (Airy Acres)	Seneca	30.4	4	4.7
Romulus (Buttonwood Grove)	Seneca	30.9	3	4.3
Geneva (3 Brothers Winery)	Seneca	33.3	0	3.6
Hammondsport	Steuben	28.6	8	5.2
Lansing (CUAES: Cornell Orchards)	Tompkins	31.1	2	3.9
Williamson (Mason)	Wayne	29.0	8	4.1
Sodus (Cherry Lawn)	Wayne	30.6	4	2.5
Lakemont	Yates	27.5	8	2.0
Branchport	Yates	28.4	6	4.5
Dundee (Wiemer)	Yates	28.0	7	2.6
Dresden (FLX TDV)	Yates	32.7	0	4.3

Low temperatures, hours at or below 32°F and average windspeed during those hours recorded at NEWA weather stations in the Finger Lakes region on May 18, 2023. Data supplied by Dan Olmstead, NYS IPM Program.

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Winds varied a bit as well, but those areas with the longest stretches of cold tended to have pretty calm winds, which allowed more of the cold air to settle to ground level.

Damage

The levels of primary shoot damage range from almost 0% to 100% depending on where you are. Vineyards that are near one another can have significantly different levels of damage due to factors like topography, elevation, the presence or absence of tree lines or other structures that interfered with cold air movement, etc. I have not noticed any real differences based on cultivar. Once the shoots have emerged, all green tissue is subject to the same risk of injury, whether it's on Baco noir or Pinot noir.

On Seneca Lake (particularly the west side), there appears to be a *general* trend of lower damage overall in the more northern parts of the region, and increasing levels as you move south. Vineyards between Geneva and Dresden on the west side seemed to suffer relatively low amounts of damage, while those closer to Dundee, Himrod and Watkins Glen were worse. On the east side, vineyards with both high and low levels of damage could be found from Ovid and further south - the bigger factor seemed to be which side of Route 414 the vineyards were on. Those on the lake side of 414 look to have fared better overall than those located east of the highway.

Damage on Keuka Lake seems to be more widespread overall, but again, there are areas where most shoots survived and others with a lot of damage. Some blocks on the Bluff had almost 100% damage, while others looked to have come through almost unscathed, but most are somewhere in between those two extremes.

Although there are certainly pockets where damage was more extensive, vineyards on Canandaigua and Cayuga lakes, as well as Wayne County, seem to have come through in pretty good shape overall.

At this point, my current estimate is that somewhere around 40-50% of the acreage in the Finger Lakes had more than 50% damage in their blocks. This is purely based on my observations and discussions with growers to this point. I am very open to the possibility that I'm off on those estimates – hopefully that I'm guessing too high.



Concord block on Keuka Lake with no living shoots. Photo taken May 22, 2023.



Some areas came through the freeze in relatively good shape, like this Riesling block on Canandaigua lake (left) and Cab Franc on Cayuga Lake (right).

What does this mean for yields?

We won't have an idea of how yields will be impacted by this year's freeze until we see how fruitful the secondary and non-count shoots are when they emerge, and how well those clusters set. I have heard from a few colleagues in other regions where better than expected crops ended up being picked from secondary shoots, while others saw very little.

A very general rule of thumb which might be a good starting point is that secondary shoots will carry about 30% of a full crop in *vinifera* cultivars, as well as natives like Concord and Niagara. Hybrid varieties can vary a lot more, and many can be quite fruitful from these "backup" shoots that emerge. So a vineyard that lost 50% of its primary shoots likely will not end up with 50% less crop this year. Growers will need to check the young secondary shoots as they emerge to get a sense of what kind of yield they might expect from them.

Disease Management

Several growers have asked if they should be removing the dead shoots from the vines so that they are not sources for disease development in the canopy. Most of the diseases that we manage each year – phomopsis, powdery mildew, downy mildew, and black rot – all need to feed on living tissue to complete their life cycles and produce a new generation of spores, so they will not be able to infect these dead tissues. Botrytis is capable of infecting dead tissues, but the dry weather we have had so far (and that is forecast for the next several days) won't promote the development of botrytis infections. If conditions become much wetter and there is still a lot of dead tissue in the canopy (it should eventually just fall off), then it might be prudent to start scouting for botrytis during bloom and fruit set.

Ripening

This is probably the biggest unknown in all of this. A lot will depend on how quickly the clusters on secondary shoots reach bloom after those on the primary shoots, as well as our weather conditions during the ripening period. In general, the number of growing degree days between bloom and veraison does not have a major influence on how long that period lasts. Conditions before bloom and after veraison can be major factors in how synchronous (or not) this year's crop ripens. The closer that bloom is for clusters on primary and secondary shoots, the more synchronous they will develop during the season. And with good warm weather during ripening, the fruit on secondaries could catch up and have similar ripeness as that from the primaries.

We will be doing some monitoring of that this summer and fall, but growers could do this for their own vineyards as well, and I encourage them to do so. Just mark out some vines where most of the primary shoots were killed (much easier to do now while you can still see the damage), and then some where most of the primary shoots survived, and sample the fruit from those two sets to see how similar or different they are.

What should I be doing now?

If you haven't done so already, get in touch with your crop insurance agent and your [local FSA office](#) in order to document the damage in your vineyards. While we won't know about actual yield losses after harvest, it's important to provide them with your best estimates of damage and what that might mean for losses later on. If any vineyard in a particular county is likely to have a 30% yield loss (and I know several in each of county in the Finger Lakes), then that county is eligible to have a disaster declaration approved by the USDA, which opens up the ability for growers to get emergency low-interest loans.

Beyond that, there isn't a lot more to do beyond what you would normally be doing in the vineyard. The main question that each grower will need to answer for each block is:

“Am I farming this vineyard for 2023 or 2024?”

If you're farming for 2023, meaning there's enough crop to justify the expense of harvest, then you need to mostly farm in the same way you were planning to before the freeze, meaning your pest and vineyard management practices are geared towards ripening the crop that is present so you can get paid after harvest.

If you're farming for 2024, you're adjusting your practices to the extent that you're not worrying about what crop might be present, but rather doing enough to maintain a healthy canopy so that the vines are ready to produce a full crop next year. Managing for powdery and downy mildew will continue to be important, but phomopsis, black rot and botrytis maybe less so because they are primarily diseases associated with fruit quality.

The ultimate answer to that question will need to be informed by what the vines tell us next as far as growth, yield potential, and how closely the primary and secondary shoots develop. We will be doing our best to keep an eye on this, but we would appreciate hearing what growers are seeing in their own vineyards as well.



A lone surviving shoot on a Riesling vine (above). Lateral buds starting to swell on a live shoot where the shoot tip was injured by freeze damage (right).



IPM

Wild grapes in bloom

Wild grapes in tree lines along the edges of multiple vineyards are well into bloom this week. This stage is notable for IPM programs because it is when the Grape Berry Moth model begins to track growing degree days to determine optimal timing for GBM sprays later in the summer.



The GBM model is included in the NEWA website, and can be found at <https://newa.cornell.edu/grape-berry-moth>. Once there, select the weather station to be used for the model and look at the date for wild grape bloom in the center of the page. If that date is wrong, you can adjust it accordingly. Scroll down a bit and you will see the current GDD accumulation as well as the forecast for the next several days. Below that are brief descriptions of the current stage in the GBM life cycle and management suggestions based on the results of the model.

For vineyards that anticipate very little crop this year due to freeze damage, this might be one area where some savings in management costs might be possible.

Disease Management

Dry conditions have dominated the region for most of May. As a result, there is very little in the way of pressure for phomopsis and downy mildew development, both of which require water as part of their lifecycle – whether to be splashed to a new location (phomopsis) or to begin to infect the tissue that it lands on (downy mildew).

Primary infections of downy mildew usually begin near the ground, as the overwintering structures will be on old leaves or other debris at the base of the vine. The next time we get rain, keep an eye on suckers or rootstock shoots for early symptoms of infection. As mentioned earlier, growers should be continuing their management of downy mildew this year even if they don't anticipate much in the way of a crop. Getting an early and effective jump on the disease can help to reduce its footprint in the vineyard.

Insect Management Update

We have just received Greg Loeb's annual newsletter on management of vineyard insect pests. We will send it out to everyone tomorrow.

Spotted Lanternfly Past, Present and Future: Impacts and Management

Webinar, presented by Penn State University

Tuesday, June 13, 2023 12:00 – 1:00 PM

[Click Here to Register](#)

Registration is required to receive the link to access the webinar.

Registrants will also receive access to the webinar recording.

During this webinar, Julie Urban will provide an overview of the invasion history of the Spotted Lanternfly in the United States and discuss the known and anticipated impacts on agritourism and the grape and wine industry. She will also provide an overview of ongoing research to improve this pest's management, focusing on mitigating its impact on the grape industry.

Who is this for?

- Vineyard managers
- Winery managers
- General public
- Members of the agritourism industry

Members of crop industries impacted by the spotted lanternfly

What will you learn?

- Overview of the invasion history of the spotted lanternfly
- Known and anticipated impacts on agritourism and the grape and wine industry

Overview of ongoing research to improve this pest's management

This event is free of charge to participants.

This material is based upon work supported by USDA/NIFA under Award Number 2021-70027-34693.

Upcoming Events

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



Tailgate Meeting

June 13, 2023 4:30 – 6:00 PM

Glenora Farms

340 Dundee-Glenora Road, Dundee NY

Our next Tailgate Meeting will be on Tuesday, June 13 at Glenora Farms in Dundee. 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 1.25 pesticide recertification credits by DEC.

Here is the schedule for Tailgate Meetings for the rest of 2023:

- June 27, 2023: Keuka Lake Vineyards
- 8882 County Road 76, Hammondsport, NY
- July 11, 2023: Young Sommer Winery
- 4287 Jersey Rd, Williamson, NY
- July 25, 2023: Gage Vineyards
- 6104 Hicks Road, Naples NY
- August 8, 2023: Tango Oaks Vineyard
- 5557 NY Route 414, Hector, NY
- August 22, 2023: Fox Run Vineyards
- 670 Route 14, Penn Yan, NY

Crop Loss, Now What? How a Crop Insurance Policy Reacts After a Loss

Wednesday, June 7, 2023 9:00 – 10:00 AM

Presented by the NY Wine & Grape Foundation

The NY Wine & Grape Foundation is presenting a webinar on how crop insurance policies respond to losses and what steps farmers need to take in the event of a loss. The webinar will be led by representatives from Crop Growers LLP.

Registration is open to all New York State wineries and grape growers. You can register by following this link.

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GiESCO Conference Professional Day

Thursday, July 20

Cornell University

The [GiESCO](#) conference is one of the most important viticulture meetings in the world. Scientists from all over the globe attend this meeting. In July, many of the world's experts in viticulture and related fields will be coming to Cornell for this important gathering.

While much of the week is devoted to scientific talks and tours, the final day of the conference is devoted to information that is geared towards more practical use by the industry, especially the local growers and winemakers, and this year THAT IS YOU!!

On Thursday, July 20, the *Professional Day* will feature industry relevant, applied viticulture topics presented by international speakers.

Keynote speakers (and topics) are:

- Dr. Nick Dokoozlian, E&J Gallo (The vineyard of the future)
- Dr. Kaitlin Gold, Cornell University (Remote sensing for disease detection)
- Dr. Michela Centinari, The Pennsylvania State University (The threat of the invasive insect spotted lanternfly).

Other topics will include:

- Managing grapevine diseases with UV radiation
- New fumigation alternatives
- Vineyard nutrient budget and sampling protocols
- Response of vineyard soils to biochar
- and other timely topics that address grower challenges.

I encourage all of you to consider attending this one-day workshop that is devoted to the local industry. The Professional Day can be attended in person on the Cornell Campus (\$150) or virtually via Zoom (\$75).

Here is the link to register:

<https://app.certain.com/profile/form/index.cfm?PKformID=0x33447239940&&varPage=register>

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2023 GDD & Precipitation

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	Hi Temp (F)	Lo Temp (F)	Rain (inches)	Daily GDDs	Total GDDs
5/24/23	70.9	46.6	0.01	8.8	301.4
5/25/23	56.7	39.6	0.00	0.0	301.4
5/26/23	67.1	38.8	0.00	3.0	304.4
5/27/23	75.9	41.9	0.00	8.9	313.3
5/28/23	81.0	49.8	0.00	15.4	328.7
5/29/23	82.9	51.8	0.00	17.4	346.0
5/30/23	85.1	56.3	0.00	20.7	366.7
Weekly Total			0.01"	74.1	
Season Total			7.00"	366.7	

GDDs as of May 30, 2022: 412.2

Rainfall as of May 30, 2022: 5.29"

Seasonal Comparisons (at Geneva)



Growing Degree Days

	2022 GDD ¹	Long-term Avg GDD ²	Cumulative days ahead (+)/behind (-) ³
April	135.9	62.8	+13
May	195.3	256.3	+2
June		484.6	
July		646.1	
August		597.4	
September		360.2	
October		112.5	
TOTAL	331.2	2519.8	

¹ Accumulated GDDs for each month.

² The long-term average (1973-2022) GDD accumulation for that month.

³ 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.

2023 GDD & Precipitation

Precipitation

	2023 Rain ⁴	Long-term Avg Rain ⁵	Monthly deviation from avg ⁶
April	5.73"	2.80"	+2.97"
May	1.90"	3.07"	
June		3.56"	
July		3.43"	
August		3.21"	
September		3.47"	
October		3.41"	
TOTAL	7.63"	23.02"	

⁴ Monthly rainfall totals up to current date

⁵ Long-term average rainfall for the month (total)

⁶ Monthly deviation from average (calculated at the end of the month)

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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

Gregg McConnell- Farm Credit East

Matt Doyle- Doyle Vineyard Management

Eileen Farnan- Barrington Cellars

Chris Gerling- Cornell University Extension

Mike Colizzi- E & J Gallo

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T.J. Brahm – Randall Standish Vineyards

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Cornell Cooperative Extension Finger Lakes Grape Program

Hans Walter-Peterson—Team Leader

Donald Caldwell—Viticulture Technician

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.

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