Cornell Cooperative Extension
Finger Lakes Grape Program

July 15th, 2021

Finger Lakes Vineyard Update

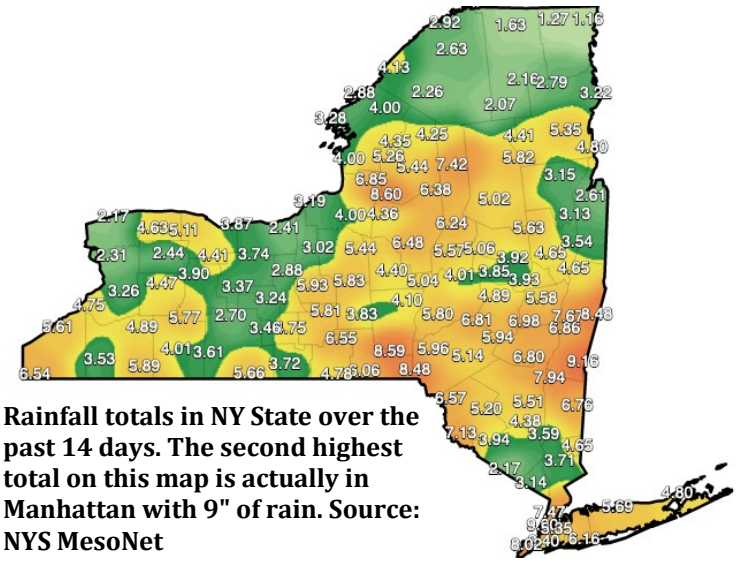
In the Vineyard

In This Issue:

ENOUGH WITH THE RAIN ALREADY! (Now that I've gotten that out of my system…)

Here in the Finger Lakes, and generally the Northeastern US, it's been a very wet couple of weeks. Rainfall totals range anywhere from 2 – 4" for the month of July so far, depending heavily on location. A lot of the rain has come in localized heavy storms, including one last night (Tuesday, July 13) that went through areas like Penn Yan, Dresden and Hector with damaging winds and heavy rain (a gust of 78 mph was recorded at the Penn Yan airport at 8:40 PM Tuesday night). At the Teaching Vineyard, we ended up with a couple of broken posts and fruiting wire staples that got pulled out in our hybrid block thanks to yesterday's wind.

Location	July Rainfall
Branchport	2.11"
Dresden	3.70"
Geneva	3.14"
Interlaken	4.05"
Lodi	3.55"
Romulus	3.37"
Dundee	3.23"
South Bristol	2.41"



Rainfall totals in NY State over the past 14 days. The second highest total on this map is actually in Manhattan with 9" of rain. Source: NYS MesoNet

2021 Crop is Looking Big

As the berries have continued to develop since set, it is becoming more and more apparent that there is a pretty good size crop of grapes out there, across almost every variety. Unfortunately, getting good crop estimates at this time of year for most varieties is hard to do at this point (with the exception of Concord, which is discussed below), as some of the factors that make up the final yield from a vineyard are difficult to collect at this point in the season, like the number of clusters per shoot, which is hard to do when leaves are obscuring clusters or they overlap one another. Many growers will try to "eyeball" their crop estimates, and while that might work in a few cases, often times the guesses are way off (anybody remember 2017?). Until we have better sensors that can measure yield reliably (which we're getting closer to), growers will have to rely on gathering data on these different *components of yield* at a few different points during the year.

In the Vineyard (continued from pg. 1)

1. *Shoots per vine* – This first component is primarily determined when the vines are pruned in the winter, and decisions are made about how many buds to leave on each vine. Other factors like winter injury or spring frosts can influence the actual number of bearing shoots that grow in a given season as well.

2. *Clusters per shoot* – The number of clusters that develop on each shoot is determined to some extent by the genetics of the vine (some varieties are able to develop more clusters per shoot than others) but is also heavily influenced by conditions during the previous season when the new buds were developing. Sunlight and relatively low vine stress will increase the number of cluster primordia that form inside the buds and that will potentially become flower clusters in the following year. This is one of the reasons that the 2017 crop was so large – we had very favorable weather during the period in 2016 when the buds were forming. It is easiest to collect this information early in the season while the flower clusters are still relatively easy to see.

3. *Berries per cluster* – This is what we know as fruit set, and which we're seeing went very well this year. In most years, the majority of the flowers on each cluster do not successfully pollinate and form a grape berry. The conditions of the weather and the vine's nutrient and water status will have a significant influence on how many of those flowers will end up being pollinated and start to form berries. It is entirely possible that one cultivar could set a lot of berries per cluster while another right next to it could have a very poor set, depending on the conditions at the time of pollination, vine health, etc.

4. *Berry weight* – This is the final yield component that will be determined each year and can be the hardest to nail down in some years because of weather. More rain towards the end of the season can cause berries to swell with more water, or dry weather will prevent them from expanding as much as expected. But this factor tends to have less influence on the final estimate that the other three mentioned above.

5. *Crop Estimation in Concord*

6. Our colleagues out in the Lake Erie region have been working on crop estimation methods for Concord growers for many years, and have developed a method to do so that is probably as accurate as any method (or moreso) that we have right now. The method is based on the notion that Concord berries are about 50% of their final berry weight (~3 grams) at 30 days after bloom. The grower clean picks 1/100 of an acre, which is about 48' of row at 9' row spacing, and weighs the fruit. The grower then consults a simple table developed by Terry Bates and others which uses that weight, plus the approximate percentage of final berry weight, to come up with an estimate of their crop. So for example, if the grower picks 80 pounds of fruit from 1/100 of an acre at 30 days after bloom, the table says that the final crop estimate is 8 tons/acre. Based on that information, the grower can then decide whether or not there is too much crop and if some should be thinned off using a harvester.

In the Vineyard (continued from pg. 2)

This technique has shown to be pretty accurate for growers in western New York, and more of them are using it in recent years. The word from western New York and Pennsylvania is that the Concord crop out there looks pretty big as well – some growers are getting estimates of more 12-13 tons/acre or more. We have not done any formal estimates in Concord here, but I suspect that we are in a similar boat in the Finger Lakes based on my observations in several Concord blocks.

The Lake Erie team has more detailed information about crop estimation for Concord growers:

Concord Crop Estimation Table: https://lergp.com/crop-estimation-table

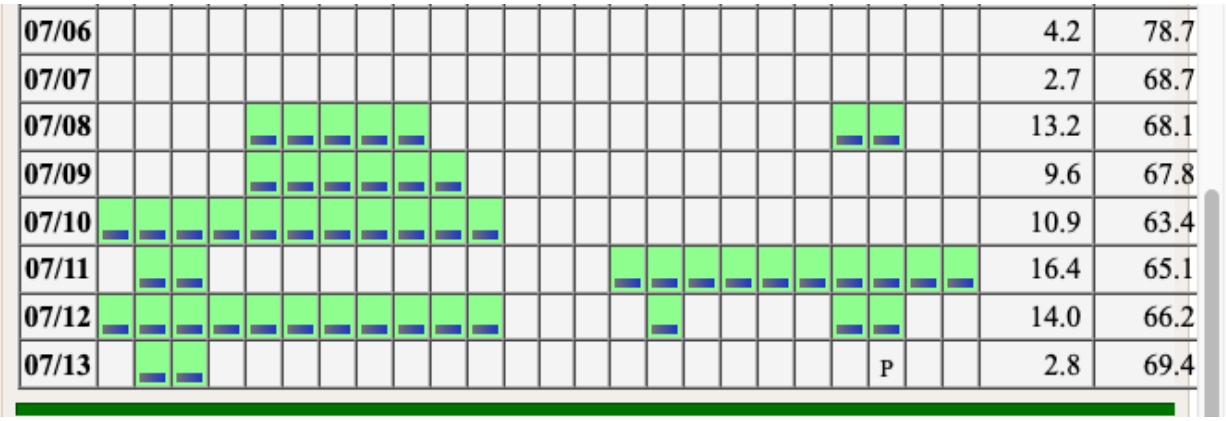
Using the Concord Crop Estimation Chart: https://lergp.com/using-the-concord-estimation-chart

Between the Vines podcast - To Thin or Not to Thin the 2021 Crop: https://youtu.be/OVkBHdgs0ZE

IPM

As you would suspect, the weather over this past week has been almost picture perfect for downy mildew. The output from the DMCast model on NEWA (below) shows that there have been multiple infection periods for DM over the past six days. This just reinforces the need for growers to be sure that they are using materials that have post-infection activity to keep any new infections that might have gotten established in check.

In the visits that I've made over the past several days, though, I continue to see good control of DM overall, especially given the conditions we have been facing. It's not hard to find lesions here and there, certainly, but in many cases those infections have completed their cycles and were not actively sporulating.



Output from DMCast model for the FLGP Vineyard. Green boxes indicate hours when conditions were met for DM infections to occur.

GBM Model Results – July 14, 2021

Location	GDDs (base 47.14°F)	Biofix Date	Pest Status	Management Recom-mendation
Dresden	1083	5/30/2021	*	#
Lodi	1067	5/26/2021	*	#
Romulus	1016	6/1/2021	*	#
Hammondsport	935	6/3/2021	*	#
South Bristol	941	6/3/2021	*	#
Williamson	909	6/5/2021	*	#

* Second generation larvae are protected within berries and completing their development.

Management Recommendation

The most effective time for treatment of second generation grape berry moth is over. Prepare to scout all vineyard blocks for grape berry moth damage when DD accumulation reaches 1470-1620 DD. During scouting, determine if the number of damaged clusters from previous generation exceeds the treatment threshold of 15%. If above threshold,

Upcoming

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.

FLGP Virtual Tailgate Meeting

Tuesday, July 20 *4:30 – 6:00 PM*

Via Zoom

Registration link: https://cornell.zoom.us/meeting/register/tJwrceqprzksHNXJTbu-5ViDvfB9E0hcUObf

Our next virtual Tailgate Meetings will be held on Tuesday, July 20. As always, the agenda for these meetings is very loose, so please come with your questions, observations, opinions about what's going on in the vineyard.

Participants will need to register before attending their first virtual meeting in order to receive the Zoom link. Registration for the online Tailgate Meetings is only required once – the link you receive when you register will work for all four online meetings this year.

The virtual and in-person Tailgate Meetings have been approved for 0.75 pesticide recertification credits. We will also need to receive an image or photocopy of your pesticide license before the first meeting that you attend. These images/copies can be sent to Brittany Griffin at bg393@cornell.edu. More information will be included in your confirmation email.

Upcoming Events (continued from page 5)

DEC Webinars

The New York State DEC is hosting the following two virtual workshops later this month. They might be useful courses for those looking to become certified pesticide applicators. These courses are free (I'm pretty sure, at least).

How to Become a Pesticide Applicator

July 23, 2021 6:00 p.m.

A walk through the process of becoming a certified pesticide applicator. Whether you want to do landscaping, structural pest control, or agriculture, learn how to qualify for the exam and start your new career.

Register now

New York State Pesticide Use and Regulations

July 28, 2021 6:00 p.m.

DEC Staff will explain the differences between minimum risk, general, and restricted use pesticides, how to avoid common violations in the field, and how to become certified applicators and register a pest control business.

Register now

FLGP In-Person Tailgate Meeting

Tuesday, August 3 4:30 – 6:00 PM

Kashong Glen Vineyards

1107 Earls Hill Road

Penn Yan, NY

Our next in-person Tailgate Meeting will be held on Tuesday, August 3. These meetings are primarily intended for those who are not able to or prefer not to participate in our virtual Tailgate meetings, but are open to anybody. The agenda for these meetings is very loose, so please come with your questions, observations, opinions about what's going on in the vineyard. The DEC has approved the meeting for 0.75 pesticide recertification credits (Categories 1a, 10, 22).

There is no limit on the number of people who can attend these outdoor meetings, and therefore we are not requiring any pre-registration for them. Those who are fully vaccinated for COVID-19 are not required to wear masks or remain 6' apart during the meeting. Those who are not vaccinated will need to wear a mask and keep physically distant from others.

2021 GDD & Precipitation

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	**Hi Temp (F)**	**Lo Temp (F)**	**Rain (inches)**	**Daily GDDs**	**Total GDDs**
7/7/21	81.0	63.5	0.02	22.3	1155.2
7/8/21	78.3	63.7	0.13	21.0	1176.2
7/9/21	79.3	64.9	1.41	22.1	1198.3
7/10/21	75.6	62.4	0.01	19.0	1217.3
7/11/21	73.6	61.2	0.60	17.4	1234.7
7/12/21	76.1	63.1	0.25	19.6	1254.3
7/13/21	87.8	68.4	0.54	28.1	1282.4
Weekly Total			**2.96”**	**149.5**	
Season Total			**11.36”**	**1282.4**	

GDDs as of July 13, 2020: 1218.0

Rainfall as of July 13, 2020: 9.32”

Seasonal Comparisons (at Geneva)

Growing Degree Days

	2021 GDD [1]	Long-term Avg GDD [2]	Cumulative days ahead (+)/behind (-) [3]
April	72.0	62.7	+2
May	256.6	254.6	+1
June	608.9	481.5	+7
July	252.2	646.4	+6
August		593.2	
September		358.7	
October		109.9	
TOTAL	1189.7	2507.1	

[1] Accumulated GDDs for each month.

[2] The long-term average (1973-2019) 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

Precipitation

	2021 Rain [4]	Long-term Avg Rain [5]	Monthly deviation from avg [6]
April	2.34”	2.83”	-0.49”
May	1.86”	3.12”	-1.26”
June	2.23”	3.55”	-1.32”
July	2.99”	3.43”	
August		3.20”	
September		3.49”	
October		3.40”	
TOTAL	9.42”	22.89”	

[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)

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!

Cornell Cooperative Extension
Finger Lakes Grape Program

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.

Hans Walter-Peterson—Team Leader
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