

June 17th, 2020

Finger Lakes Vineyard Update

In the Vineyard

We continue to march along into the bloom period. Varieties including Regent (photo), Concord and Chardonnay around Dresden reached bloom in the past couple of days, and we're still at various extents of trace bloom in most of our other varieties like Riesling, Cayuga White, Lemberger and Cabernet Franc. This year's bloom in Chardonnay is about 6 days earlier

than last year, but about 5-6 days later than it was in 2018. Sun and heat for the next several days should result in more of our varieties hitting bloom soon also.

Rainfall totals for the season are running about 40-50% below normal for this time of the season. We're halfway through June and have accumulated about 0.5" at the Teaching Vineyard in Dresden, compared to about 2.2" on average by this point in the month. So in other words – it's dry. This isn't too much of a problem at this point for mature vines on moderate to deep soils. Without some rain soon, however, young vines or

vineyards planted on shallow soils could start to exhibit drought symptoms, if they haven't already. Temperatures in the 90s for the next few days will encourage higher rates of transpiration, pulling even more water from the soil through the plants.

At the same time, these kinds of conditions (sunny and warm) are helpful during bloom, encouraging better fruit set as well as cluster initiation in the latent buds that will become next year's crop. We had pretty similar conditions during this time in 2016, and ended up seeing higher than normal crops in 2017. I'm not saying that we should expect a big crop next year, but just the fact that these conditions tend to encourage



greater fruit development compared to cool and cloudy conditions during bloom.



Recordings of Farm Safety Plan Webinars

For those who missed last week's webinar for fruit and vegetable farms on developing the required Farm Safety Plans as part of the state's reopening process, the slides and recording from the webinar are now available to view. They are both available on Cornell's Ag Workforce Development Program website at https://agworkforce.cals.cornell.edu/ny-forward-business-safety-plan/. Many of the resources discussed in the webinar can also be found on that page.

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IPM

Using best IPM practices is always important, but it is especially critical during bloom regardless of the cultivar. Not only are the young clusters at their most vulnerable stage of development, but all of the major diseases are becoming active by this point in the year and conditions are generally more favorable for pathogens to infect all exposed green tissues.

The dry conditions that the region has been experiencing so far this spring have certainly helped to reduce early pressure from these pathogens. Downy mildew lesions are generally few and far between so far, and even the familiar phomopsis 'halo' symptoms on leaves seem to be harder to find as well.

Given all of this, I thought it might be useful to have a quick review of the conditions that promote the development of three of our major diseases – powdery mildew, downy mildew and black rot (this information comes from the <u>2020 NY/PA Grape IPM Guidelines</u>).



Powdery Mildew

Primary infections (release of the first generation of spores from the overwintering bodies) begin shortly after budbreak and continue through bloom when we get about 0.1" of rain or more. These spores then produce secondary infections throughout the rest of the year. Spores from these secondary infections are spread by wind and can infect tissues when temperatures are above 50°F. Powdery mildew does not require water to

infect new tissue or to spread, unlike downy mildew or phomopsis, but PM infections are promoted when humidity is higher. Optimum temperatures for PM development are in the mid-60s to mid-80s, where new generations of the fungus can develop every 5-7 days (if you held the temperature constant).

Downy Mildew

Unlike PM, downy mildew is an organism that requires water to infect new tissues. After overwintering on the vineyard floor, primary infections can begin about 2-3 weeks before bloom when temperatures are above 52°F with about 0.1" of rain (sound familiar?). These primary infections tend to show up initially on suckers near the ground or other green tissue, and then work their way up into the canopy. Further infections afterwards are the result of new spores that are released from the white fluffy patches on the under-sides of leaves. The spores are only produced at night when



humidity is very high (>95%) and dew forms on the leaves. The spores themselves are spread by wind, but require a few hours of wetness in order to infect the new tissue (thus the inclusion of *time of leaf wetness* in the <u>DMcast model on NEWA</u>). Optimal temperatures for DM development are in the 70s, but can still occur in cooler and warmer conditions, albeit more slowly. The fact that DM requires water in order to infect plant tissue and produce new spores is the reason that dry conditions like these help to suppress DM development, and why humid and rainy conditions can make it so hard to manage.

IPM



Black rot overwinters primarily on mummified berries on the ground or left hanging in the canopy (almost every time I see a bad outbreak of BR in a canopy, there are a whole lot of old mummified clusters left hanging from the previous season). The primary infections generally begin sometime after budbreak and can continue through fruit set, but if dry conditions exist before bloom (like this year), it's possible for more spores to be released well after bloom if wetter conditions exist. Similar to DM, BR secondary infections are caused by spores that need water in order to infect grape tissues. The amount of time required for those wet conditions to result in new infections

Source: http://www.omafra.gov.on.ca/IPM

depends on the temperature (see Table).

Table 3.1.2 Hours of leaf wetness required for black rot infection to occur, at various temperatures following a rain			
Temp (°F)	Hours ^a		
50	24		
55	12		
60	9		
65	8		
70	7		
75	7		
80	6		

a. Hours of continual wetness from rain

9

12

85

90

Finger Lakes Vineyard Update

Finger Lakes Grape Program

Upcoming Events

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

FLGP Virtual Tailgate MeetingJune 23, 20204:30 - 6:00 PM

Join FLGP viticulturist Hans Walter-Peterson (and the occasional guest speaker) for any or all of this year's Tailgate Meetings, held every other Tuesday afternoon during the 2020 growing season. These meetings feature a free-flow discussion of what's been happening in vineyards, timely reminders about important practices, and updates on some of the applied research being done in grapes this year. Tail-gate Meetings have been approved for 0.75 NY pesticide recertification credits.

Register for this year's online Tailgate Meetings at

https://cornell.zoom.us/meeting/register/tJwvc-6qpjoiHtS5I2AQssfPXzXe_iKnx4f7

Tuesday Timely Topics

June 30, 2020 4:30 – 5:30 PM Speakers: Jim Meyers - Viticulture Extension Specialist, Eastern NY Commercial Horticulture Program Steve Lerch - Viticulture Technician, Cornell AgriTech

Eastern New York has seen significant plantings of new grapes outside of traditional grape-growing areas. Join us for a discussion about establishing a vineyard and care of young, non-bearing grapevines in the East.

Register at: https://cornell.zoom.us/meeting/register/tJAuf--tpjgiGdQdY3QLFP1g2FHWDfxCbkkp



June 17th, 2020

2020 GDD & Precipitation

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	Hi Temp (F)	Lo Temp (F)	Rain (inches)	Daily GDDs	Total GDDs
6/10/2020	88.8	66.4	0.00	27.6	485.2
6/11/2020	78.7	62.6	0.00	20.7	505.8
6/12/2020	71.5	51.6	0.00	11.6	517.4
6/13/2020	58.4	44.0	0.00	1.2	518.6
6/14/2020	67.7	40.0	0.00	3.9	522.4
6/15/2020	72.0	42.0	0.00	7.0	529.4
6/16/2020	79.7	48.0	0.00	13.9	543.3
Weekly Total			0.00"	85.7	
Season Total			5.57"	543.3	

GDDs as of June 16, 2019:

485.0

Rainfall as of June 16, 2019:





Seasonal Comparisons (at Geneva)

Growing Degree Days

	2020 GDD ¹	Long-term Avg GDD ²	Cumulative days ahead (+)/behind (-) ³
April	12	63.8	-23
Мау	261.5	254.4	-3
June	235.8	480.2	-2
July		643.6	
August		592.2	
September		358.3	
October		110.0	
TOTAL	509.3	2502.6	

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

	2020 Rain ⁴	Long-term Avg Rain ⁵	Monthly deviation from avg ⁶
April	2.54"	2.83	-0.29"
May	1.30"	3.16	-1.86"
June	.26"	3.60	
July		3.42	
August		3.23	
September		3.53	
October		3.42	
TOTAL	4.10"	23.19	

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)

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)

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 <u>NY Grape & Wine</u> <u>Classifieds website today!</u>

Finger Lakes Grape Program Advisory Committee

Eric Amberg- Grafted Grapevine Nursery Bill Dalrymple- Dalrymple Farm Matt Doyle- Doyle Vineyard Management Eileen Farnan- Barrington Cellars Chris Gerling- Cornell University Extension Luke Haggerty- Constellation Brands Tina Hazlitt- Sawmill Creek Vineyards Cameron Hosmer- Hosmer Winery T.J. Brahm – Randall Standish Vineyards

Harry Humphreys- Overlook Farms Gregg McConnell- Farm Credit East Herm Young– Young Sommer Winery John Santos- Hazlitt 1852 Vineyards Steve Sklenar– Sklenar Vineyards Justine Vanden Heuvel- Cornell University Peter Weis – Weis Vineyards Kim Marconi – Three Brothers Wineries & Estates

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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 Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extension Associations in Ontario, Seneca, Schuyler, Steuben, Wayne and Yates Counties.

flgp.cce.cornell.edu



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