Cornell Cooperative Extension
Finger Lakes Grape Program

June 30, 2021

Hans and Brittany are out of the office this week, but will return after the holiday weekend on Tuesday, July 6. Any questions that need an answer before then can go to Don Caldwell (dc886@cornell.edu or 315-759-1069). Otherwise, leave a message at our office (315-536-5134) and we'll respond when we return next week.

Evapotranspiration

Donald Caldwell, Finger Lakes Grape Program

At the Teaching Vineyard in Dresden, we received 1.65 inches in 35 minutes on Tuesday night, June 29. Before then we actually had more rain in 2020 (6.54") than 2021 (6.13"). The difference has been the timeliness of the rains this year, the water table being restored before the vines are stressed. One tool to help understand water usage by grapevines is to examine the evapotranspiration rate. To find this number we calculate the *reference evapotranspiration* (ET_o), which uses a complex equation called the Penman-Monteith equation to estimate of the amount of water removed from the soil due to evaporation from the soil surface plus that water lost through transpiration from a "reference" crop (in this case an irrigated annual grass). Because grapevines aren't an annual grass, that reference ET needs be multiplied it by a crop coefficient (K_c), which is basically an estimate of what percentage of that reference ET value was lost from evapotranspiration in the vineyard. The K_c value is primarily based on how much active leaf area there is in the canopy, and therefore changes throughout the growing season. Multiplying these two values together (ET_o x K_c) gives us the crop evapotranspiration (ET_c), which would represent the amount of water the vine used over a given period of time. At the Teaching Vineyard, the ET_o value for the week of June 22-28 is 1.38" of water (this is calculated based on data from our weather station). If the K_c value for that point in time was 0.50, we would estimate that the grapevines used about 0.69" of water (1.38" x 0.50). If there was less than that much rain during that period of time, then there was a net loss of water from the soil. If that trend continued, you should start scouting for vine water stress (see memories from 2016).

Unfortunately, we currently don't have well-established K_c values that are appropriate for grapes in New York. However, there are new tools available, such as sensors that can monitor sap flow through grapevines, that will help us to measure vine water use and water stress and therefore enable growers to make better decisions about the potential need for irrigation. We are planning on starting to use some of these tools to better gauge vine water status and water use in vineyards, which will likely become a more critical issue as the climate continues to change.

Crop Estimation

Determining your expected yields is often seen as a dark art. People like Terry Bates are trying to shed light on the alchemy with yield monitors, revenue maps, and vineyard imaging systems. But for the rest of us, there's counting and invisible juggling (do it and you'll know what I mean). At the Teaching Vineyard we've been counting clusters pre-bloom as it's quicker and still accurate (as long as you have enough leaves to say if a third

cluster will emerge). With as hot and dry as 2020 was, we'd expect to see high fruitfulness from this year's buds. For the most part, my numbers don't bear out that expectation. My eyes tell me another story. So what gives? One possible explanation is that while cluster numbers may not be high, fruit set certainly looks good for most varieties. At the TDV our numbers are based on the same panels each year, so it's possible those panels are no longer representative. If your counts don't match your gut, pick a particularly fruitful looking panel and see how much variation you find. Cluster counts are just one part of the equation - if our timely rains keep up, higher cluster weights can make up for lower or average cluster counts. Most important, it seems, is to understand the variation in your vineyard blocks. Perhaps a tool like the MyEV (Efficient Vineyard) app could help (you know where to mail the check, Terry).

	2016	2017	2018	2019	2020	2021
Variety	Cluster#	Cluster #	Cluster #	Cluster #	Cluster #	Cluster #
Riesling 239- 3309	82	64	74	67	61	41
Cab Franc 3309	64	65	40	55	39	43
Cayuga	112	69	43	69	28	58
Vidal	117	108	59	63	43	74

Number of clusters per vine in phenology panels at the FLX Teaching & Demonstration Vineyard.

IPM

We're seeing the first Japanese Beetles of the season here in Dresden. The little guy below decided to try out my camp chair. Just a reminder that vines can withstand significant feeding before being affected depending on the timing (as high as 30% in one study). There is some evidence to suggest that later blooming varieties could be more affected by leaf loss. The life cycle of the Japanese beetles means there's a 4 - 6 week window between when you first see them and they disappear,so weigh that into your decision on treatment.

GBM Model Results (June 30, 2021)

Location	GDDs (base 47.14°F)	Biofix Date	Pest Status	Management Recommendation
Dresden	705	5/30/2021	**	##
Lodi	645	5/26/2021	**	##
Romulus	679	6/1/2021	**	##
Hammondsport	620	6/3/2021	*	#
South Bristol	631	6/3/2021	*	#
Williamson	606	6/5/2021	*	#

Pest Status

* Feeding by first generation will cease and pupation will begin when approximately 500 DD have accumulated after wild grape bloom.

** Start of flight of first generation grape berry moth adults is expected at this time.

Management Recommendation

The time for treatment of first generation grape berry moth is over.

Prepare to scout low and intermediate risk vineyards for grape berry moth damage when DD accumulation after wild grape bloom reaches 750-800 DD. During scouting, determine if damage from first generation larvae.

Cornell AgriTech
New York State Agricultural Experiment Station
VIRGINIA TECH
PennState Extension

Eastern Viticulture and Enology Forum

Grower and Winemaker Town Hall: Questions From the Field and Cellar

In collaboration with viticulture and enology extension programs at: Ohio State University, University of Maryland, Rutgers University, North Carolina State University, University of Georgia, University of Tennessee, Mississippi State University, Texas Tech, Texas A&M, Colorado State University, New Mexico State University, University of Nebraska, Iowa State University, Purdue University, University of Minnesota, Michigan State University, and University of Wisconsin

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Regional viticulture and enology specialists will present a Grower and Winemaker Town Hall virtual meeting series to give seasonal updates and answer pre-submitted and live questions from grape and wine industry stakeholders.

The structure of these meetings depends on pre-submitted questions. **Use this link to pre-submit questions for viticulture and enology specialists to answer live during the meeting.** ***Please feel free to submit questions related to any topic by July 6th.*** But please see below for the topic area suggestions for the July 13th meeting.

Viticulture focus area: ***post-fruit set to veraison*** (crop load management, canopy management, pest management, nutrient management, mechanization of vineyard operations)

Enology focus area: ***primary fermentation*** (harvest decisions, fruit chemistry analysis, and fermentation options, e.g. non-Saccharomyces yeast, strain selection, ambient ferments)

There will be a total of four town hall meetings throughout the growing season. Meetings will be held from 3PM to 5PM on the following Tuesdays: July 13th, August 10th, and September 7th. The first two meetings will be hosted by Cornell University and the second two meetings will be hosted by Penn State Extension.

Register using this link and choose your breakout room (viticulture or enology) for the July 13th meeting. After registering, you will receive a confirmation email containing information about joining the meeting.

-Cain Hickey, Beth Chang, and Tim Martinson
Eastern Viticulture and Enology Forum Hosts

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.

FLGP In-Person Tailgate Meeting
Tuesday, July 6 4:30 – 6:00 PM
Boundary Breaks Vineyards
1428 Porter Covert Road
Lodi NY 14521

Our next in-person Tailgate Meeting will be held on Tuesday, July 6. 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 longer a 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 still need to wear a mask and keep physically distant from others.

Eastern Viticulture & Enology Forum: Grower & Winemaker Town Hall
July 13, 2021 3:00 – 5:00 PM

See announcement in this week's Vineyard Update

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.

EnoCert Classes for 2021
The EnoCert program is offered by Cornell's Enology Extension Laboratory. It is intended for current winery employees who would like to expand their practical knowledge of winery operations, or for motivated amateurs. All courses will be offered in one or two-day mix and match modules. Our goal is to provide a recognizable standard of training for participants who earn EnoCertification.

For more information, visit https://grapesandwine.cals.cornell.edu/extension/enocert/ or email Cortni Stahl at ckm53@cornell.edu.

ENOCERT 202 Certification Course: Tasting Room Sales Strategies
NEW Online format! Synchronous sessions approx. 8:30 am – 12:00 pm
August 2, 2021
Overview: Most consumers' first contact with the New York wine industry is in a tasting room, so understanding their interests, motivations, and educational needs is key to promoting the industry as a whole and increasing individual sales. In this course, participants will learn how to engage guests to create a fun and profitable tasting room experience.

ENOCERT 101 Certification Course: Basic Viticulture & Enology (Formerly New Grower/New Winery Workshop)
NEW Online format! Synchronous sessions approx. 8:30 am – 12:00 pm
August 3-4, 2021
Overview: This course will cover the basics of grape growing from the ground up. Through live interactive lectures, participants will understand how vineyard site, climate, and trellising systems impact grape production and quality. Participants will also expand their understanding of production steps for specific wine types. Upon completing this course, attendees will learn how different wine types (white, red, rosé, sparkling) are produced, and the key decisions that need to be made to influence wine style.

2021 GDD & Precipitation

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	**Hi Temp (F)**	**Lo Temp (F)**	**Rain (inches)**	**Daily GDDs**	**Total GDDs**
6/23/21	72.7	49.8	0.00	11.3	813.9
6/24/21	79.7	54.9	0.00	17.3	831.2
6/25/21	83.8	60.4	0.00	22.1	853.3
6/26/21	89.4	68.4	0.00	28.9	882.2
6/27/21	93.4	72.0	0.00	32.7	914.9
6/28/21	94.5	75.7	0.00	35.1	950.0
6/29/21	93.2	70.9	1.63	32.1	982.1
Weekly Total			**1.63”**	**179.4**	
Season Total			**7.76”**	**982.1**	

GDDs as of June 29, 2020: 845.0

Rainfall as of June 29, 2020: 6.54”

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	582.2	481.5	+7
July		646.4	
August		593.2	
September		358.7	
October		109.9	
TOTAL	910.8	2507.1	

[1] Accumulated GDDs for each month.

[2] The long-term average (1973-2020) 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	2.08”	3.55”	
July		3.43”	
August		3.20”	
September		3.49”	
October		3.40”	
TOTAL	6.28”	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)

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
Donald Caldwell—Viticulture Technician

flgp.cce.cornell.edu

YouTube

“Cornell Cooperative Extension is an equal opportunity, affirmative action educator and employer”