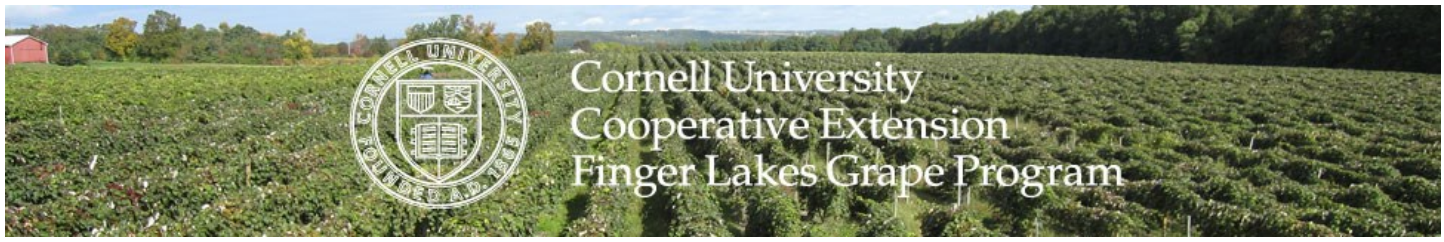
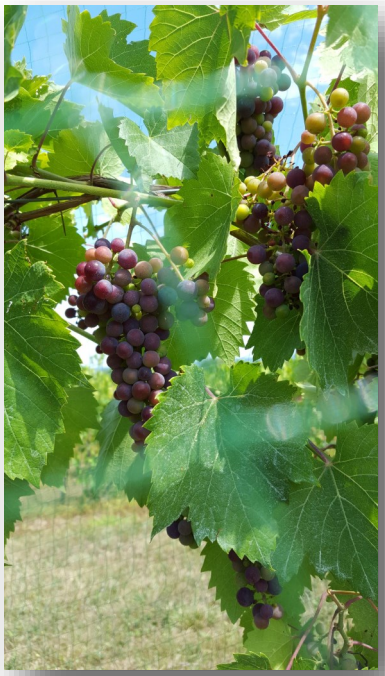


Finger Lakes Vineyard Update

In the Vineyard

Gillian Trimber

Reminder: Hans will be on vacation for the first two weeks of August, but Gillian will be around and available for questions, farm visits, etc. You can reach her at gmt47@cornell.edu or (607) 220-3049.



Veraison is steaming forward in early hybrid varieties this week, with Aurora, Geneva Red (GR7), Frontenac, Canadice, and Leon Millot around Keuka Lake joining our Marquette and Jupiter in Dresden on the color-change train. Early *Vinifera* varieties are likely to follow within the next week or two, and we've already heard rumors of a precocious red or mauve berry popping up here and there in Lemberger and Pinot Gris. As Hans mentioned in the last update, it's time to roll out the bird netting if you have it, and prepare to take petiole samples if you plan to do so. Check out the video regarding how to do so on our youtube channel, https://www.youtube.com/user/cceflgp.

With little rain to report since our last update, and little showing up in the current forecast for most parts of the Finger Lakes, drought is still the biggest worry facing most growers right now. Despite our best efforts, predicting the weather is notoriously tricky, and that can lead to crop estimates becoming nearly as difficult. Low, uneven set combined with smaller-than-usual berries have made using historical cluster weights less accurate; this year's clusters will almost certainly be lighter in many locations. Judging by look can be more challenging this season as well, since a vine may appear to be carrying a great deal of fruit, when in fact the clusters are looser and less full than normal… and even if that's obvious, deciding how much looser is far less clear. Then, of course, there's the question of how weather, particularly rainfall, will change what we're seeing at this point on the vines. On varieties that haven't yet gone through veraison, rain in the next week or two could mean new cell division in the berries, and perhaps new shoot growth on vines that still have green leaves, creating potential for heavier clusters at harvest and a vine that can sustain them. After veraison, all of the vines' resources will be devoted to the fruit, but even with rain the size of the berries will be limited and likely smaller than usual. Some growers may choose to drop clusters to prevent over-cropping vines with reduced photosynthetic capacity, but removing fruit would of course also reduce this year's yield. Though small berries and loose clusters may mean that there will be some fantastic wine coming out of the Finger Lakes this year, all signs point to a smaller crop than many growers had hoped for.

IPM

Gillian Trimber

Vineyards are mostly looking pretty clean. We've seen a few powdery mildew infections here and there, but for the most part diseases have been kept at bay by the dry weather. Though veraison is typically a time when botrytis crosses our radar, most of those infections start around bloom, and the weather didn't favor disease at that point in the year. Loose clusters also favor a low likelihood of botrytis popping up at the moment, though certainly the rain we've all been hoping for could cause whatever latent infections that are resting within the clusters could begin to show up.

If you've been seeing grape berry moth damage (bruised or punctured berries with brown granular fras and maybe some larvae inside), now is the time to apply materials that need to be ingested, such as Altracor and Dipel. Broad spectrum materials should be applied closer to 1720 degree days, which, at least in Dresden, we'll be reaching early next week. Check the NEWA model for your site at http://newa.cornell.edu/index.php?page=grapediseases.

NEWA Grape Forecast Models

Select a disease or insect: Grape Berry Moth

State: New York

Weather station: Dresden (FLGP/FLCC)

Date of Interest: 8/3/2016

Calculate

Map | Results | More info

Grape Berry Moth Results for Dresden (FLGP/FLCC)

Wild Grape Bloom: 5/30/2016

Wild Grape Bloom date above is estimated based on degree day accumulations or user input. Enter the actual date for blocks of interest and the model will calculate the results more accurately.

Accumulated degree days (base 47.14°F) wild grape bloom through 8/3/2016: 1593 (0 days missing)

Daily Degree Days for Dresden (FLGP/FLCC)

Base Temp	Past	Past	Current	5-Day Forecast			Forecast Details	
	Aug 1	Aug 2	Aug 3	Aug 4	Aug 5	Aug 6	Aug 7	Aug 8
47.14F - GBM	26	27	28	28	30	27	23	23
Accumulation	1547	1574	1602	1630	1660	1687	1710	1733

NA - not available

Download Time: 8/3/2016 16:00

Pest Status	Pest Management
Females are active and egg-laying is at its peak.	Control measures should be timed to coincide with 1620 DD in high risk vineyards. For materials that must be ingested, e.g. Intrepid, Altacor, it is important to get insecticides on as close to 1620 DD as possible.

Disclaimer: ***These are theoretical predictions and forecasts.*** *The theoretical models predicting pest development or disease risk use the weather data collected (or forecasted) from the weather station location. These results should not be substituted for actual observations of plant growth stage, pest presence, and disease occurrence determined through scouting or insect pheromone traps.*

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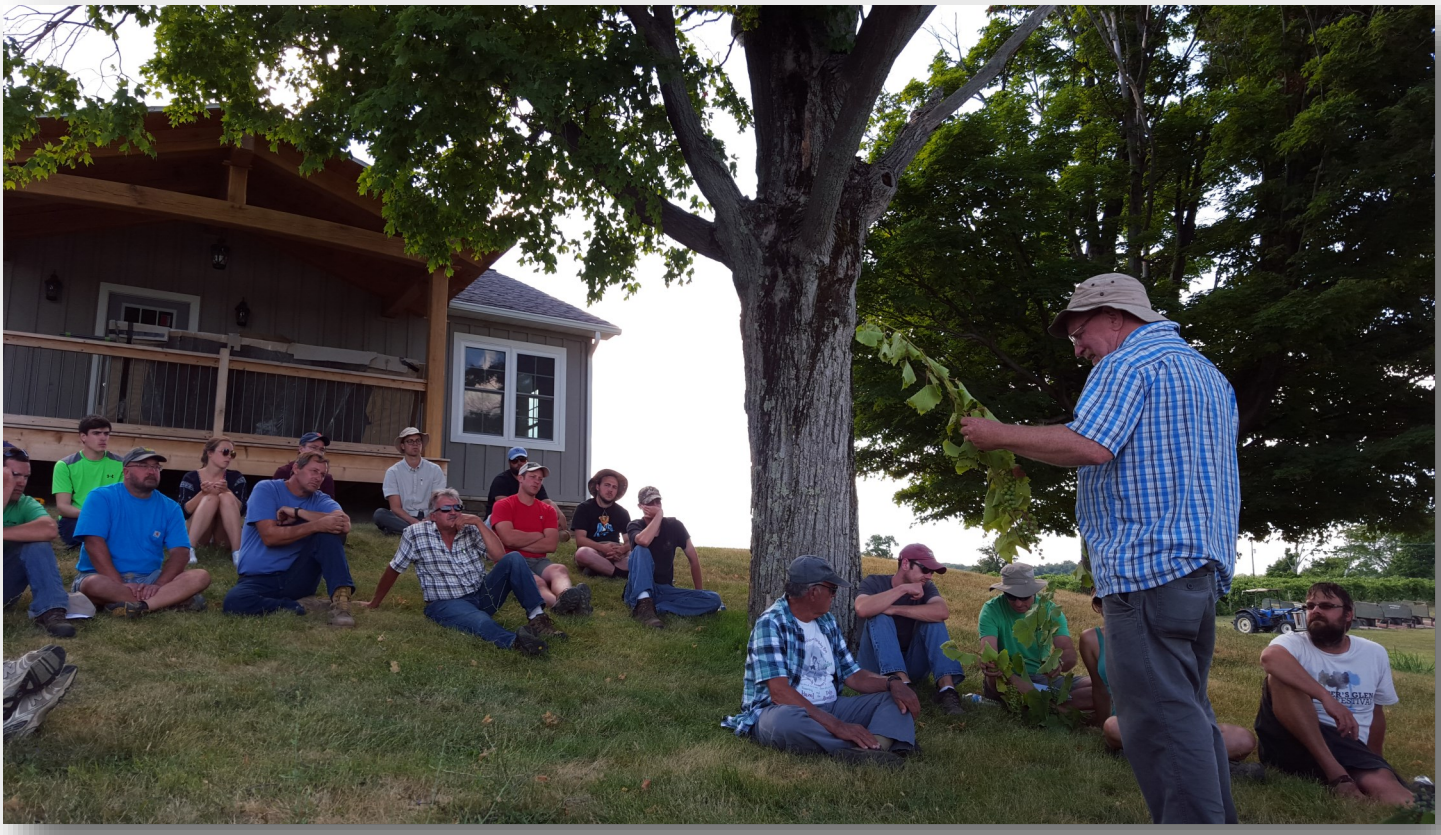
Tailgate Recap– August 2, 2016

Gillian Trimber

This week's tailgate meeting at Doyle Vineyard Management in Pulteney broke from routine a little bit—though we still discussed pest management, drought, vine development, and all of the questions that rise up and nag at us as we bounce along on the tractor seat—this week we traded the sagely wisdom of Hans for that of Tim Martinson, statewide Senior Extension Associate. Chatting with growers both at the meeting and at nearby vineyards earlier in the afternoon was particularly fun, as Tim was once based out of the Yates County extension office with the Finger Lakes Grape Program as we are, and knows the area well. In response to many questions about drought stress voiced at the meeting, Tim sent some thoughts, and maybe even some answers, my way. They're included as their own article below, to be followed by a great write-up by Alan Lakso on judging drought stress that we'll be sending out next week. This week as definitely made me grateful to have such knowledgeable people as resources and collaborators!

Our next Tailgate meeting will be held at Ventosa Vineyards in Geneva, NY from 4:30-6:00 PM on August 16th. Thanks again to Matt Doyle at Doyle Vineyard Management for hosting us on Tuesday, and to Tim Martinson, Alex Koeberle, and Corrigan Herbert for helping to make the meeting happen.



Drought Stress Fodder

Tim Martinson

Drought stress: what are the impacts? Should I drop fruit?
At the Hammondsport tailgate meeting yesterday, much of the discussion centered around the drought and its impact in the Finger Lakes. Basically, many vineyards are showing signs of moderate water stress: shoot growth has stopped, leaves facing away from the sun instead of tracking the sun, some tendrils are drying up and in a few cases we are seeing signs of more severe water stress (yellow and browning of basal leaves). Things are not in bad shape for the most part yet, but for historically droughty years (eg. 2007, 2001, 2003) these early symptoms often start in mid-August, not late July. So if present trends continue, we could see some serious impacts by mid-August.

Physiological impacts: Without soil moisture, uptake of nutrients from the soil will be lower. We may see more K and Mg deficiency symptoms. In parts of vineyards with cover crops – and particularly under-vine vegetation – Leaves are looking yellowish and probably are low in N. But now with moderate water stress: You can be sure that leaf stomates are remaining closed during the hot part of the day. This conserves water and turgor, but also means that photosynthesis slows and stops, because of the lack of gas exchange (vines take up carbon from the air through stomates). You may find that sun-exposed leaves become notably warm to the touch.

Consequences: If drought continues and intensifies, vines with less leaf area and lower gas exchange will produce less photosynthate, and the post-veraison sugar accumulation process will slow down. In a 2001 -2003 study we did, we found significantly lower brix (2-4 points, if I remember right) in the drought-stressed non-irrigated vines. And as long as the fruit is on the vine, the photosynthate will be directed more at the fruit than at replenishing vine carbohydrate reserves. This could affect fruitfulness and early season shoot growth next spring.

Management: Short of irrigation, most know that the name of the game in dry years is water conservation – and this means mostly floor management: contact herbicides to kill back the row-middle vegetation, mulch (conserves moisture, keeps soil cool), and tillage (bare ground).

Should I drop fruit? I asked around and the consensus seems to be that at this point of the season, on mature vines, normally cropped, cluster-thinning for the purpose of saving your vines or better ripening the rest of the crop will probably have at best a marginal effect. And what if you do it and then it rains for two weeks? The bottom line is that most sites are going to see small berries and probably a smaller-than-average crop simply due to smaller berry size.

Early Harvest? One practice that might help is early harvest. If you have a contract for green Concord or Catawba, great. If you have a block of wine grapes you can harvest early for sparkling wine, great. Given the limited leaf area and function – and the likelihood that moisture will return sometime in the fall – early harvest will help the vines direct the photosynthate towards replenishing root and cane reserves. The longer that you have active leaves after harvest, the better.

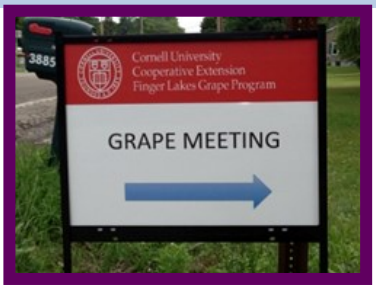
Drought Stress Fodder (continued from page 4)

Tim Martinson

Non-bearing vines: Young vines without a deep, established root system are at greatest risk for setbacks and drought stress. If I had a young vineyard, I'd definitely be defruiting the vines, and looking at ways to get some water to each vine on a regular basis. These are vines with a heavy investment and a (hopefully) long productive life – and delaying their development now will have a big financial and productive impact next year and beyond. Growers with whom I've talked, are using tanks and hand guns to apply 1-2 gal. per vine weekly. Is that the appropriate amount and timing? Your guess is as good as mine.

Drip Irrigation: This season points to the value vs the relative cost of drip irrigation. My feeling is that if you have soils or blocks with limited to moderate water holding capacity, and a drought year such as this every 4-5 years on average, that drip irrigation would be a good investment and good insurance. Drought years tend to have impacts over at least a couple of seasons, and even if it's only turned on a few times over several years, the losses it prevents are likely to pay for the investment. Just an opinion at this point!

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 #9
Tuesday, August 16 *4:30 – 6:00 PM*
Ventosa Vineyards
3440 Route 96A
Geneva, NY 14456

These meetings are held every other week at various grape farms around the Finger Lakes, and are intended to be informal, small-group meetings where FLGP staff and growers can ask questions and discuss issues about vineyard management, IPM strategies or other topics appropriate for that point in the growing season.

Dates and locations for the rest of this year's Tailgate Meetings can be found under the 'Events' section of our website.

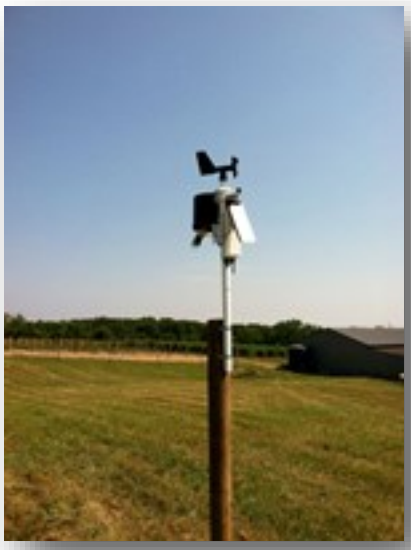
Tailgate Meeting #10
Tuesday, August 30 *4:30-6:00pm*
Fulkerson Winery
5576 Route 14
Dundee, NY 14837

2016 Growing Degree Days and Rainfall

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	**Hi Temp (F)**	**Lo Temp (F)**	**Rain (inches)**	**Daily GDDs**	**Total GDDs**
7/27/2016	89.3	62.1	0.00	25.7	1548.3
7/28/2016	83.1	66.2	0.00	24.7	1572.9
7/29/2016	83.4	67.8	0.00	25.6	1598.5
7/30/2016	72.1	64.8	0.11	18.5	1617.0
7/31/2016	80.2	67.9	0.01	24.1	1641.0
8/1/2016	79.7	66.4	0.01	23.1	1664.1
8/2/2016	86.3	66.6	0.00	26.5	1690.5
Weekly Total			**0.14”**	**168.0**	
Season Total			**6.44”**	**1690.5**	

GDDs as of July 19, 2015: 1694.6

Rainfall as of July 19, 2015: 16.73



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Seasonal Comparisons (at Geneva)

Growing Degree Days

	2016 GDD [1]	Long-term Avg GDD [2]	Cumulative days ahead (+)/behind (-) [3]
April	36.1	65.2	-9
May	270.1	252.3	0
June	489.1	480.6	0
July	695.9	639.8	+3
August		588.2	
September		351.0	
October		105.2	
TOTAL	1537.5	2481.8	

1 Accumulated GDD's for the Month

2 The long-term average (1973-2015) 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

	2016 Rain [4]	Long-term Avg Rain [5]	Monthly deviation from avg [6]
April	1.17"	2.89"	-1.72"
May	1.66"	3.11"	-1.45"
June	0.65"	3.68"	-3.03"
July	1.01"	3.42"	-2.41"
August		3.15"	
September		3.64	
October		3.22	
TOTAL	3.91"	23.12"	

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!

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