Finger Lakes Vineyard Update

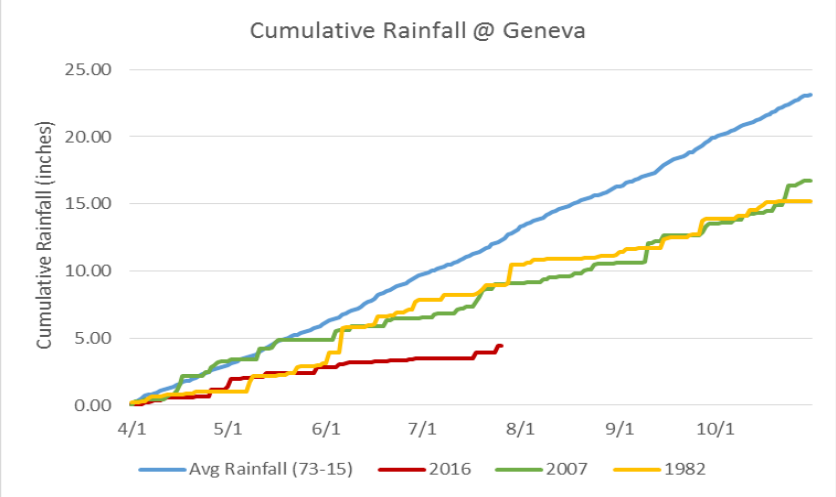
In the Vineyard

Hans Walter Peterson

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.

For the first time in far too many weeks, the entire Finger Lakes region sat under rain clouds for a few hours this past Monday. Most of the NEWA weather stations in the area recorded about 0.5" inches of rain or so, and while it certainly isn't nearly enough to have a major impact on the drought conditions we're still in, it was still a welcome sight.

We are still well below our long-term average rainfall, both for the month of July (71% below) and for the season (64% below). This year's rain is also well below two of our driest seasons - 2007, our most recent dry year, and 1982, which is our driest year in our records from Geneva going back to 1973. At this point, we are about 4.5" below the amount of rain that we had at this same time in both of those years.



As I have mentioned in previous Updates, the impact of water stress on vines before veraison starts is primarily on the growth of all parts of the vine – shoots, leaves, fruit and roots. Over this past week, I have started to notice more vines expressing early symptoms of stress like shoot tips not elongating and tendrils starting to turn brown and being shed from shoots. It's more common now for leaves in native and some hybrid blocks to be altering their orientation to the sun to reduce direct exposure, which makes the vines look more wilted and stressed (which they are). We are also starting to see more situations where basal leaves are turning yellow, which is an indicator of more significant and longer-lasting stress. The primary impact to fruit at this point is reduced berry size, but in more extreme situations, berries or portions of the rachis will start to

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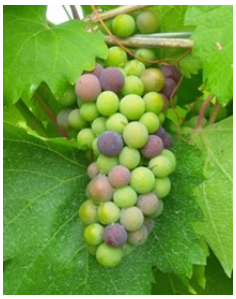
shrivel and slough off altogether.

If water stress continues past veraison, we will start to see more impacts to things going on inside the berries, including reductions in sugar, color and flavor and aroma compounds. In addition, carbohydrates and other compounds that would be stored in the permanent structures of the vine as reserves may instead be used by the vine to try to ripen this year's crop, which potentially impacts the vines' winter hardiness and resources to mobilize to begin growth next spring. Hopefully, we get back to something a little closer to normal in terms of rain before this all starts to happen.

The forecast right now says we could get another shot of rain tomorrow or Friday, and again this weekend – here's hoping that comes to pass.

Veraison in Early Varieties

Ready or not…



We're seeing our earliest varieties at the Teaching Vineyard – Marquette and Jupiter (one of our table grapes) – starting to turn color this week. Despite concerns about drought stress causing veraison to move earlier in the season, these varieties have started veraison right about this time in the past two seasons. I expect that other early varieties like Baco, Foch and Geneva Red will be starting to turn color this week as well, if they haven't already.

The beginning of veraison means a couple of things from a viticulture/vineyard management standpoint:

- Time to begin assembling and deploying bird protection gear. As berries begin to turn color and ripen, they become attractive to one of the more troubling pests that growers have to deal with, birds (and other vertebrate varmints). Most growers know how quickly a flock of birds can appear and make a crop disappear. We're going to be putting our nets out over the Marquette and table grapes in the Teaching Vineyard this week.

- Veraison is also the beginning of the window when growers can take petiole samples to assess the nutrient status of their vines. Nutrient levels are not fluctuating as much at this point in the growing season than they are at bloom, so the standards that we generally use to determine adequate nutrient status are applicable over a longer window. The general timing recommendation is about 70-100 days (2-3 months) after bloom for taking samples. Our YouTube video on petiole sampling provides some more details on how to collect these samples. You can get testing kits and forms from your local Extension office, or directly from a commercial testing lab.

IPM

Hans Walter-Peterson

The warm temperatures over the past couple of weeks have pushed us close to the window for warmer sites in the Finger Lakes to start scouting for the next generation of grape berry moth. Scouting is recommended to start around 1470 GDDs based on the GBM model, which will be coming up in the next couple of days in some locations. If damage from previous generations exceeds 15% of clusters examined, then be prepared to apply something for GBM control. The same considerations of timing based on materials that are used should be used now as for the first spray several weeks ago. If using materials like Altacor and Dipel that have to be ingested by the larvae in order to work, then applications should be made around 1620 GDDs using the model. For more broad-spectrum materials including Sevin, Danitol, Brigade and Leverage, applications should be done closer to 1720 GDDs. Be sure to keep up with the berry moth model based on data from the NEWA station closest to your vineyard at http://newa.cornell.edu/index.php?page=grape-diseases.

Fortunately, I haven't much in the way of GBM damage this year, even in blocks where it is relatively easy to find at least some in most years, so it may be possible to save a spray this summer for GBM. The only way to be sure, of course, is to actually go out and look before making that decision.

NEWA Grape Forecast Models

Select a disease or insect: Grape Berry Moth

State: New York

Weather station: Dresden (FLGP/FLCC)

Date of Interest: 7/27/2016

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 7/27/2016: 1401 (0 days missing)

Daily Degree Days for Dresden (FLGP/FLCC)

Base Temp	Past	Past	Current	5-Day Forecast			Forecast Details	
	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30	Jul 31	Aug 1
47.14F - GBM	27	28	30	30	27	26	26	25
Accumulation	1361	1389	1418	1449	1476	1502	1527	1552

NA - not available

Download Time: 7/27/2016 12:00

Pest Status	Pest Management
Second generation larvae are protected within berries and completing their development.	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, control measures should be applied starting at 1620 DD.

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Hans Walter-Peterson

Red-Headed Flea Beetle

Red-headed flea beetle.
Source: plant-pest-advisory.rutgers.edu

We've gotten a few calls about flea beetles chewing on leaves recently, and also noticed them ourselves in one or two vineyards as well. It seemed quite late to be finding grape flea beetle in vineyards, but when we took a closer look at these insects, we noticed that they were a bit bigger than grape flea beetles and didn't quite look the same. Growers who called us about these said the same thing. After a little bit of digging, we were able to identify the critters that we were finding, which were red-headed flea beetles (Systena frontalis). While they are also classified as flea beetles because of their jumping ability, they are a different genus and species from the grape flea beetle, or steely beetle, (Altica chalybea) than we usually find here and there in vineyards each spring.

The red-headed flea beetle adults are generally about ¼" long or less, with a reddish-brown head and relatively long antennae. They generally are more of a pest of ornamental crops, but are perfectly capable of feeding on a wide range of plants, including grapes apparently. We don't really know why they might be more visible this year, but they are not a new invasive pest in New York. I actually found an old "Cornell Bulletin for Homemakers" written in 1919 that mentions the pest as well, suggesting to control it with copper and lime.

If they are present, consideration on whether to spray for them or not should be similar to what you would do for Japanese beetles, as they will both feed on leaf tissues. If a spray is needed, materials that are effective against grape flea beetles should also work with this insect as well. Be sure to check the label to make sure a material can be used for control of more than just grape flea beetles before using it.

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 #8

Tuesday, August 2 4:30 – 6:00 PM
Doyle Vineyard Management
10223 Middle Road
Hammondsport, NY 14840 (click here for a map)

Our eighth Tailgate Meeting of the year will be held at Doyle Vineyard Management's farm in Hammondsport on Tuesday, August 2.

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

Winery Quality Control Workshop
Tuesday, August 2, 2016 9:00 AM - 4:00 PM
Cornell Lake Erie Research & Extension Laboratory
6592 West Main Rd
Portland, NY 14769

The use of sulfur dioxide and filtration to ensure bottle stability is a common practice within the wine industry. However, many producers also use potassium sorbate additions to inhibit re-fermentation of sweetened wines despite sulfur dioxide additions and utilization of sterile filtration. Enology experts from both Cornell and Penn State Universities will review how to best accomplish wine stability in the winery so that producers can improve production decisions. Attendees will walk away with a better understanding of how sulfur dioxide and potassium sorbate work in wine, what filtration accomplishes for wine stability, and how to implement quality control practices to ensure that wines are of minimal spoilage risk post-bottling. This workshop will also include a wine tasting to emphasize identification of the flavor associated with potassium sorbate additions and how it affects wine quality. ***The $50 registration fee includes all workshop materials and lunch. This workshop is focused for winemakers, cellar staff, and enologists as it contains a production focus.***

To register, go to https://lergp.cce.cornell.edu/event_preregistration.php?event=267

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**
7/20/16	80.4	54.4	0.00	17.4	1358.8
7/21/16	91.3	58.1	0.00	24.7	1383.5
7/22/16	89.9	73.3	0.00	31.6	1415.1
7/23/16	88.2	70.6	0.00	29.4	1444.5
7/24/16	88.0	64.4	0.00	26.2	1470.7
7/25/16	83.1	70.0	0.54	26.6	1497.2
7/26/16	82.4	68.3	0.00	25.4	1522.6
Weekly Total			**0.54”**	**181.2**	
Season Total			**6.31”**	**1522.6**	

GDDs as of July 19, 2015: 1521.4

Rainfall as of July 19, 2015: 16.08”

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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	588.1	639.8	+3
August		588.2	
September		351.0	
October		105.2	
TOTAL	1383.3	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	0.99"	3.42"	
August		3.15"	
September		3.64	
October		3.22	
TOTAL	4.47"	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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FINGER LAKES VINEYARD UPDATE
Is published by
Cornell Cooperative Extension
Finger Lakes Grape Program
Ontario, Schuyler, Seneca, Steuben, Wayne and Yates Counties
417 Liberty Street, Penn Yan, NY 14527
315.536.5134