Finger Lakes Vineyard Update

In the Vineyard

Hans Walter-Peterson

Photo: Nadine Bocek

Wild grapes started blooming in much of the Finger Lakes this past weekend, which is fairly typical timing for the region. Early commercial varieties like Marquette and some of the table grapes will likely be following suit in the next few days. Varieties like Concord and Chardonnay usually begin bloom about 6-7 days after wild grapes, so we should be seeing more of our vineyards showing signs of it beginning at the end of this week. While this doesn't have direct implications for vineyard practices, other than knowing that bloom is coming soon, wild grape bloom has some important implications for pest management, especially with regard to grape berry moth, and nutrient management (bloom petiole sampling).

The relatively cool and wet weather pattern over the past few weeks seems to be holding growth back in some places, while in others shoot growth is about where we would expect it to be near bloom (6-8 leaves exposed and shoots 12+" long). In other words, growth rates seem to be somewhat inconsistent depending on where you look. Under these kinds of conditions, we sometimes see the bloom period get extended out over a week or longer for some varieties. Optimal conditions during bloom and fruit set are warm and dry – let's keep our finger crossed.

Tissue testing at bloom

Bloom is one of the two times during the season when petiole samples can be collected in order to determine the nutrient status of vines. Unlike soil samples, petiole samples provide an indication of what's actually in the vine. Soil samples give an indication as to the level of nutrients that are available for the vines to take up if conditions are right (adequate oxygen and moisture in the root zone). Having both sets of tests provides the best information we can get on nutrient status and supply in a vineyard.

Soil tests can be collected anytime during the growing season because the factors we are concerned about in a soil test - nutrient levels, soil pH, cation exchange capacity, etc. – do not change rapidly over the course of a season. Within the plant, however, nutrient levels vary significantly depending on the time of year. Because of this, viticulturists have established standards that we use to determine if a vineyard is sufficient in nutrients at two different times of the year, bloom and 70-80 days after bloom (which is usually at veraison). So while timing isn't as critical for soil sampling, it is moreso for collecting petioles for tissue tests.

For more information on how to petiole sampling, you can watch our video on YouTube at https://www.youtube.com/watch?v=IrvpQWUEQKw. You can get forms and supplies for tissue tests at your county Extension office, or most commercial labs that do nutrient analysis will have a submission form that you can download directly from their website. If you have any questions about petiole sampling, don't hesitate to call or email us.

IPM

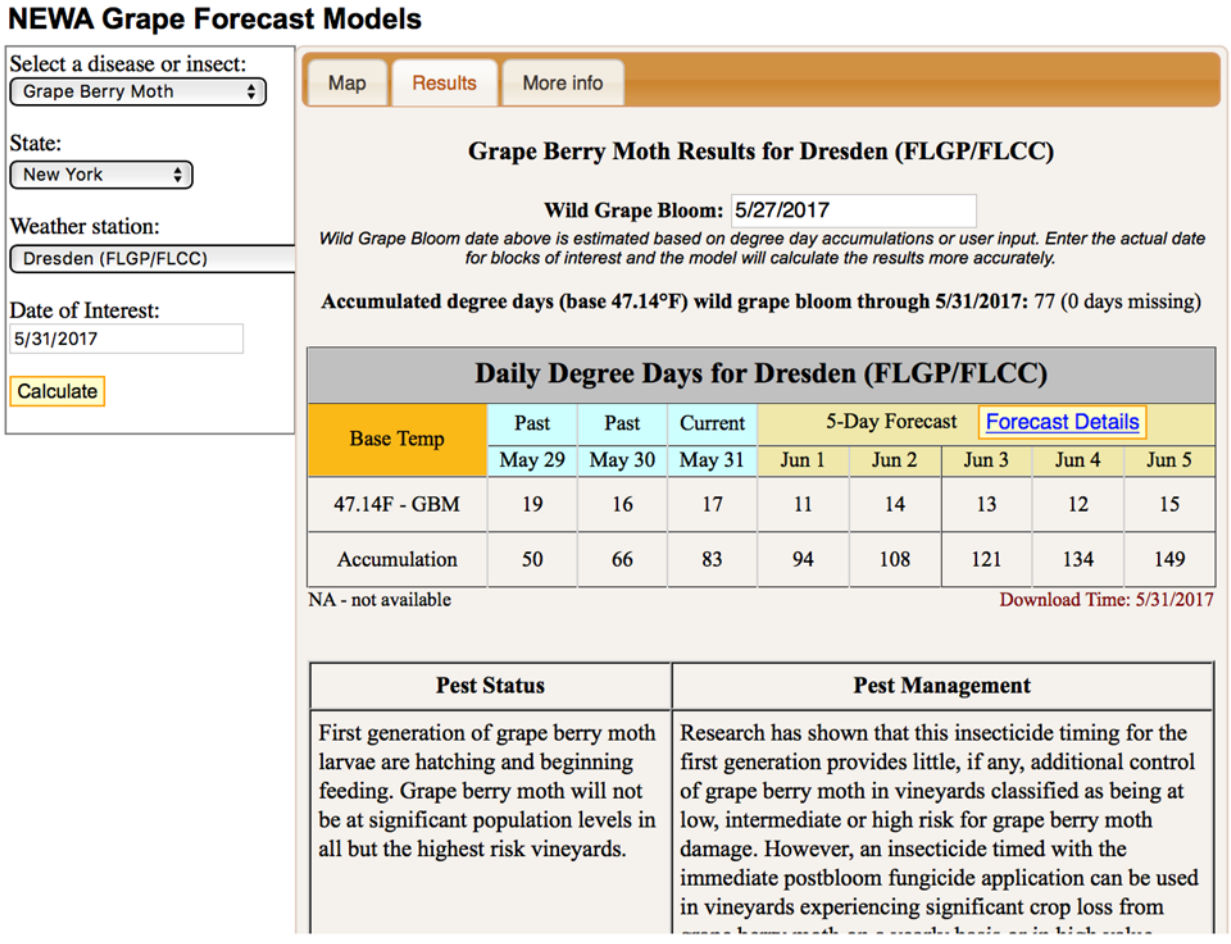
Hans Walter-Peterson

As mentioned earlier, wild grapes are in bloom around most of the Finger Lakes. This stage of development starts the clock for the **grape berry moth (GBM) model** used to time sprays for management of GBM. The model can be found on the NEWA website (http://newa.cornell.edu/index.php?page=grape-diseases), along with that for downy mildew.

For each weather station, the model automatically selects a date for wild grape bloom based on growing degree day (GDD) accumulation. Users can enter a different date if they have direct observations of wild grape bloom at their own vineyard if they prefer. The model uses that date as the first day to begin counting GDDs (using a base temperature of 47.14°F). In addition to calculating the accumulated GDDs since the biofix date, the model also predicts future GDD accumulation, based on weather forecasts, to help growers make better decisions about timing upcoming sprays.

Downy Mildew
In the DMCast model, the initiation of primary infections of downy mildew generally occurs when shoots have 5-6 leaves unfurled and the flower clusters fully exposed, which has happened over the past 7-10 days or so, depending on variety and location. Once the primary infection takes place (which comes only from fungal organisms within the vineyard), the subsequent generations of spores can be generated in as little as 4-5 days at optimum temperatures (mid to upper 70s) and conditions (>95% humidity).

Fortunately, the very dry growing season last year meant that there was less disease development in most Finger Lakes vineyards. This should result in a lower initial load of inoculum to establish primary infections this year, so hopefully that helps to keep diseases from establishing large populations early in the season.



NEWA Grape Forecast Models

Select a disease or insect: Grape Berry Moth

State: New York

Weather station: Dresden (FLGP/FLCC)

Date of Interest: 5/31/2017

Calculate

Map | Results | More info

Grape Berry Moth Results for Dresden (FLGP/FLCC)

Wild Grape Bloom: 5/27/2017

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 5/31/2017: 77 (0 days missing)

Daily Degree Days for Dresden (FLGP/FLCC)

Base Temp	Past	Past	Current	5-Day Forecast				Forecast Details
	May 29	May 30	May 31	Jun 1	Jun 2	Jun 3	Jun 4	Jun 5
47.14F - GBM	19	16	17	11	14	13	12	15
Accumulation	50	66	83	94	108	121	134	149

NA - not available

Download Time: 5/31/2017

Pest Status	Pest Management
First generation of grape berry moth larvae are hatching and beginning feeding. Grape berry moth will not be at significant population levels in all but the highest risk vineyards.	Research has shown that this insecticide timing for the first generation provides little, if any, additional control of grape berry moth in vineyards classified as being at low, intermediate or high risk for grape berry moth damage. However, an insecticide timed with the immediate postbloom fungicide application can be used in vineyards experiencing significant crop loss from

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Under-Vine Cover Crop Germinates in Teaching and Demonstration Vineyard

Gillian Trimber

One good thing about the rain: it can certainly help to get seeds germinating. This season, we're working on controlling the vigor in some of our rambunctious Corot Noir and grafted Marquette vines at the Teaching and Demonstration Vineyard by planting a dwarf variety of chicory directly under the trellis. Actually, we tried last year too, but made two mistakes: planting late, and planting in the middle of the driest season our region has seen in a long time. Oops. This year, we're off to a much better start. Just a week after putting down the seed, we've got a carpet of little plants coming up, which will hopefully grow quickly and compete with both weeds and the vines themselves.

Chicory seedlings under Marquette one week after planting (left side of vine) and four days after planting (right side of vine).

Our decision to use chicory as a vigor control method was based on ongoing work by Justine Vanden Heuvel and her lab, which you can learn more about in this *Appellation Cornell* article. The Finger Lakes Grape Program is currently collaborating with our colleagues on Long island and elsewhere to identify and develop efficient ways to mechanically seed several different types of cover crops, including fescue and buckwheat, under the rows. However, this chicory planting was put in using a garden hoe and rake, as the demonstration area is relatively small.

Dwarf chicory cover crop on May 31, 2017, one week after planting.

Under-Vine Cover Crop Germinates in Teaching and Demonstration Vineyard (continued from page 3)

Gillian Trimber

Planting chicory to compete with the vines for water is one of two strategies we're employing to reduce vigor; we've also trained some of the vines in the two demonstration rows to Top Wire Cordon rather than Umbrella Kniffen, and have left approximately 50% more buds on the Top Wire Cordon vines. A portion of the vines in the demonstration plot are both pruned to Top Wire Cordon and have the chicory cover crop, while the majority have one treatment or the other. A neighboring row of Corot Noir, though just as vigorous as the other, has been left unchanged for comparison. Though this is by no means a controlled experiment, we hope that it will show off the potential differences between these management strategies. Come by the Teaching and Demonstration Vineyard at Anthony Road if you're interested!

On left: Half of the Marquette row (recently hilled-down) was pruned to Top Wire Cordon and the ground under the vine left bare, while half was seeded to chicory and pruned to Umbrella Kniffen.
On right: The entire Corot Noir row was pruned to Top Wire Cordon, and half of the row was seeded to chicory while the other half had herbicide spray applied.

Ten Years has Flown By

Hans Walter-Peterson

This Wednesday, June 1, will mark my ten year anniversary of being the extension viticulturist in the Finger Lakes. How that is even possible is beyond me.

I just wanted to insert a quick note into this week's Update to thank all of you who have worked with and supported me and the Finger Lakes Grape Program over these past ten years. While I knew that this job would present me with lots of intellectual challenges and opportunities, I didn't quite realize what a special community of people that I would joining as well. I have had the privilege to work with fantastic people – growers, winemakers, faculty, researchers, technicians and other extension staff – and made many friends. For all of that, I am extremely grateful.

So thank you all once again – it's been a great ride so far, and I have no desire to get off it anytime soon. Here's to another ten years.

Cheers,
Hans

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
Wednesday, June 7 4:30 – 6:00 PM
(Note the date change for this meeting)
Fox Run Vineyards
670 NY Route 14
Penn Yan, NY

Our third Tailgate Meeting of the year will be held at Fox Run Vineyards on **Wednesday, June 7**.

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. 0.75 DEC recertification credits will be available.

ASEV –Eastern Section Annual Conference
July 10-12, 2017
Charlottesville, VA

Join us for the 42nd American Society of Enology and Viticulture-Eastern Section (ASEV-ES) Conference in Charlottesville, VA on July 10-12, 2017.

On Monday, July 10 there will be a **preconference tour** of Virginia vineyards and wineries. The **conference** will begin with technical/research presentations on Tuesday and Wednesday, July 11-12 and include Tuesday's Oenolympics with Wines of the East Reception and Wednesday's Sparkling Wine Reception and Grand Awards Banquet.

New this Year: Industry Workshop on Wednesday, July 12 to feature invited speakers to discuss "**Pioneering Wine Grape Varieties Adapted to the Challenges of the East".**

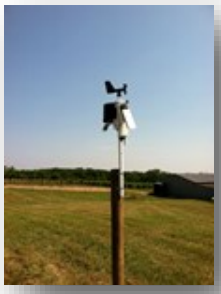
Further information is available at the ASEV-Eastern Section website. Information on the program and registration costs is available in the conference registration packet, or register for the meeting online at http://www.asev-es.org/regform1.php.

2017 Growing Degree Days and Rain Fall

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	**Hi Temp (F)**	**Lo Temp (F)**	**Rain (inches)**	**Daily GDDs**	**Total GDDs**
5/24/17	76.6	52.8	0.00	14.7	325.9
5/25/17	64.1	55.1	0.71	9.6	335.5
5/26/17	62.6	54.3	0.15	8.5	343.9
5/27/17	66.1	55.9	0.02	11.0	354.9
5/28/17	77.3	51.5	0.00	14.4	369.3
5/29/17	77.3	59.1	0.37	18.2	387.5
5/30/17	71.5	57.9	0.14	14.7	402.2
Weekly Total			**1.39”**	**91.0**	
Season Total			**8.77”**	**402.2**	

GDDs as of May 30, 2016: 322.2

Rainfall as of May 30, 2016: 4.07”



Seasonal Comparisons (at Geneva)

Growing Degree Day

	2017 GDD [1]	Long-term Avg GDD [2]	Cumulative days ahead (+)/behind (-) [3]
April	125.8	64.0	+12
May	204.4	252.7	+2
June		480.8	
July		641.1	
August		591.7	
September		353.5	
October		106.4	
TOTAL	330.2	2490.3	

[1] Accumulated GDDs for each month.
[2] The long-term average (1973-2016) 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.

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2017 Growing Degree Days and Rain Fall

Precipitation

	2017 Rain [4]	Long-term Avg Rain [5]	Monthly deviation from avg [6]
April	3.42”	2.85	+0.57”
May	5.32”	3.08	
June		3.61	
July		3.36	
August		3.13	
September		3.64	
October		3.22	
TOTAL	8.74”	22.95”	

[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!

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