Finger Lakes Vineyard Update

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IPM

Hans Walter-Peterson

The GBM model on NEWA is indicating that warmer sites in the Finger Lakes are nearing the end of the egg-laying period for the second generation. These sites are at the point where contact insecticides like pyrethroids and carbamates can be used, but that window is closing quickly. In cooler areas like Branchport and the Bluff, Geneva or up around Sodus in Wayne County, growers should be scouting their vineyards for GBM injury from the first generation between 750-800 GDDs, and preparing to spray if damage is greater than about 6% of clusters.

I continue to see significant feeding symptoms from potato leafhopper (PL) in many vineyards this year. Growers who need to spray for both GBM and PL should look for materials like Danitol, Sevin, Brigade, Baythroid or Imidan that are effective against both insects. Consult Table 4.2.1. (page 51) in the 2015 Grape IPM Guidelines for other options of materials.

- **FLGP Tailgate Meeting** *July 14, 2015*
- **40th Annual American Society for Enology and Viticulture Eastern Section Conference** *July 23-25, 2015*

IPM (continued from page 1)

NEWA Grape Forecast Models

Select a disease or insect: Grape Berry Moth

Weather Station: Dresden (FLGP/FLCC)

Date of Interest: 7/9/2015

Calculate

Map | Results | More info

Grape Berry Moth Results for Dresden (FLGP/FLCC)

Wild Grape Bloom: 5/26/2015

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 7/9/2015: 886 (0 days missing)

Daily Degree Days for Dresden (FLGP/FLCC)

Base Temp	Past Jul 7	Past Jul 8	Current Jul 9	5-Day Forecast Jul 10	Jul 11	Jul 12	Jul 13	Jul 14
47.14F - GBM	29	18	18	21	24	26	26	25
Accumulation	857	875	893	914	938	964	990	1016

Forecast Details

NA - not available

Download Time: 7/9/2015 15:00

Pest Status	Pest Management
Egg-laying continues.	For materials that are contact insecticides, e.g. pyrethroids and carbamates, apply between 811 and 900 DD.

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.*

NEWA

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In The Vineyard

Hans Walter-Peterson

Canopy Management

With soil profiles full of water and some sun and heat, the vines have all that they need to push shoot growth. Several vineyards have already made their first hedging pass on VSP-trained vines, and many vineyard blocks on top-wire systems have vines "shaking hands" between the vine rows. All of those shoots and all of those leaves can lead to a lot of shading of the fruit and the buds that will produce next year's shoots.

Hedging on VSP systems is necessary when shoots get so tall that they start to bend over and shade the fruit zone and the renewal zone where next year's shoots are developing. However, we know that cutting off long portions of shoots will cause laterals to push further down the shoot, and potentially in the fruit zone itself, which will also cause shading of the clusters and developing buds. A combination of removing laterals and some of the leaves in the fruiting zone, whether by hand or mechanically, will help to improve sun exposure and air movement around the fruit which can improve both disease control and fruit quality. Leaf pulling later in the season has been shown to make the fruit more vulnerable to sunburn, so practices that improve sun exposure should be done fairly soon after fruit set (i.e., about now). Growers should target about 50% cluster exposure when pulling leaves and laterals from the fruit zone – it is not necessary to remove every single leaf. While we want the fruit to have good exposure, we also don't want to remove leaves unnecessarily.

While these practices are most often employed in *vinifera* blocks, there is also the potential for benefits to hybrid varieties as well. Tim Martinson and Justine Vanden Heuvel published an article describing how canopy management practices can be employed in hybrid vineyards on high-wire training systems. There is a link to their article at the end of this section of the Update.

Justine Vanden Heuvel is starting to research a technique called 'pallisage' that used in some areas of Europe, which could potentially be used as an alternative to hedging. Instead of cutting off long shoots when they grow beyond the top of the trellis, they are trained along the top catch wire, keeping the primary shoot tip in tact and thus avoiding the lateral growth that comes with hedging. Justine recently published an article in *Wines and Vines* on the practice (the link to the article is provided below), which includes a discussion of a couple of experiences with the practice here in the U.S., including Thomas Bechtold at King Ferry Winery on Cayuga Lake.

Further Reading:

Tim Martinson and Justine Vanden Heuvel. Canopy Management for Hybrids: Hudson River Umbrella, Umbrella Kniffen. Posted September 25, 2012. http://www.extension.org/pages/69916/canopy-management-for-hybrids:-hudson-river-umbrella-umbrella-kniffen

Justine Vanden Heuvel. Palissage: An Alternative to Mechanical Hedging. *Wines & Vines*, March 2015. http://www.winesandvines.com/template.cfm?section=features&content=147183&ftitle=Palissage:%20An%20Alternative%20to%20Mechanical%20Hedging

In The Vineyard (continued from page 3)

Crop Estimation

We are approaching the period where crop estimates can be made as well. Concord growers can use the technique (and handy estimation chart) developed by Terry Bates, along with Bob Pool and others over the years, to estimate and thin their crop mechanically at 30 days after bloom (which we will arrive at in a few days here in the Finger Lakes). While the technique is most often used only in years when exceedingly large crops are hanging, it is a good practice to collect crop estimates every year, regardless of the season. These estimates can be used to help develop strategies at harvest and to alert buyers and processors as to anticipated tonnage.

I won't reproduce the entire technique here. You can read more details about the practice and why it works in the July 2013 issue of the Lake Erie Vineyard Notes. The LERGP also produced a short video describing the crop estimation and thinning technique, which can be viewed on their YouTube channel at https://www.youtube.com/watch?v=UZAtNY7R-Vs.

For most other grape varieties, there is a bit more of a challenge to this inexact science. Unlike Concord, we still don't have berry development curves for other major New York varieties based on multiple years of data, although the Finger Lakes and Lake Erie Grape Programs are currently working on a project with to do so. In the meantime, however, there are a couple other ways that growers can estimate their crop.

Historical Cluster Weights - Cluster weights are primarily influenced by the number of berries on each cluster and how much each of those berries weighs. Each of these factors can vary depending on the growing season, resulting in fluctuating cluster weights each year. Some growers have collected cluster weights at harvest over multiple years and calculated an average weight for different varieties, and sometimes different clones within varieties. If you have this data, the calculation is fairly straightforward:

Yield = (# of bearing vines/acre) x (clusters/vine) x (final cluster weight in lbs.) / 2000

The obvious challenge with this method is that most growers don't collect cluster weight data. The following are some estimates of final cluster weight (in pounds) for a few varieties that are grown in the Finger Lakes, based on data from Ohio and Michigan*:

Chardonnay: 0.23	Traminette: 0.24
Riesling: 0.18	Vidal: 0.34
Cabernet Franc: 0.23	Seyval: 0.43
Lemberger: 0.30	Niagara: 0.35

*Data from "Crop Estimation of Grapes", by Imed Dami & Paolo Sabatini (2011).
http://ohioline.osu.edu/hyg-fact/1000/pdf/1434.pdf

In The Vineyard (continued from page 4)

Using Growing Degree Days - This model is similar in some ways to that used for estimating crop in Concord, in that it assumes that final berry weight is approximately 50% of its final value at a certain point in the growing season, defined by a particular number of growing degree days. In the Finger Lakes, we have most often focused on the 1200 GDD threshold as the point where berries are 50% of their final weight. But as you can guess, this is likely somewhat dependent on variety.

To use this method, you need to do what we call "destructive sampling," meaning you need to harvest some clusters - I would suggest at least 40-50 clusters from 25-30 vines - and weigh them in order to determine an average cluster weight. Once you have the average cluster weight, double that number (assuming you're close to the number of GDDs cited above) and that is your estimated final cluster weight. Then use the formula up above to calculate your crop estimate.

Berry growth continues beyond 1200 GDDs obviously, so estimates that are taken after this point will need to adjust the factor used to multiply the current cluster weight to calculate the estimated final weight. One factor to consider is that at around 40 days after bloom (give or take depending on variety) berry growth enters the lag phase of development, when changes in berry weight slow down before resuming at or just after veraison. Growers who are estimating from now through the beginning of veraison may want to try using a factor of 1.7 or 1.8 when multiplying the current cluster weight, instead of doubling that number.

Remember that crop estimation is not an exact science. Things can happen towards the end of the year that can result in some significant differences from your earlier estimate, e.g., changes in berry size due to weather, insect or disease problems, etc., along with the simple fact that it is an estimate. If you manage to be within 15% or so of your original estimate come harvest time, especially in the first few years of trying this, consider yourself successful.

Upcoming Events

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 Tailgate Meetings

Next Meeting: Tuesday, July 14 5:00 – 6:30 PM

Wagner Vineyards

9322 Route 414, Lodi NY 14860

Our annual series of tailgate meetings continues on Tuesday, July 14, at Wagner Vineyards in Lodi.

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. The DEC has approved 1.0 pesticide recertification credits for each Tailgate Meeting this year.

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

Note: The following Tailgate Meeting, originally scheduled for August 4 at Leidenfrost Vineyards, has been moved up a week to July 28.

40th Annual American Society for Enology and Viticulture – Eastern Section Conference

July 23-25, 2015

Clarion Hotel & Conference Center

30 Lake Shore Drive E

Dunkirk, NY 14048

AMERICAN SOCIETY FOR ENOLOGY AND VITICULTURE
Eastern Section

Join us for the 40th American Society of Enology and Viticulture – Eastern Section (ASEV-ES) conference in Dunkirk, NY on July 23-25, 2015. The host hotel for the ASEV-ES Conference will be the Clarion Hotel Marina and Conference Center in Dunkirk, NY. On Thursday, July 23 there will be a **pre-conference tour** of New York vineyards and wineries. The **conference** will begin with technical presentations on Friday and Saturday, July 24-25 and include Friday's Oenolympics & Grazing Dinner with Wines of the East and Saturday's Sparkling Wine Reception and Grand Awards Banquet.

For further registration, housing and program information, please visit http://www.asev-es.org/.

2015 GDD & Precipitation

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	**Hi Temp (F)**	**Lo Temp (F)**	**Rain (inches)**	**Daily GDDs**	**Total GDDs**
7/1/15	73.8	64.4	0.02	19.1	1025.7
7/2/15	69.0	54.7	0.00	11.9	1037.5
7/3/15	76.2	52.0	0.00	14.1	1051.6
7/4/15	78.9	62.5	0.06	20.7	1072.3
7/5/15	80.7	57.6	0.01	19.2	1091.5
7/6/15	81.8	61.6	0.00	21.7	1113.2
7/7/15	86.9	69.7	0.04	28.3	1141.5
7/8/15	69.9	60.5	0.03	15.2	1156.7
Weekly Total			**0.16”**	**150.1**	
Season Total			**13.96”**	**1156.7**	

GDDs as of July 8, 2014: 1141.9

Rainfall as of July 8, 2014: 13.9”

Seasonal Comparisons (at Geneva)

Growing Degree Days

	2015 GDD [1]	Long-term Avg GDD [2]	Cumulative days ahead (+)/behind (-) [3]
April	40.8	65.2	-7
May	408.4	248.6	+8
June	444.9	481.5	+5
July	138.4	640.6	+4
August		588.6	
September		347.6	
October		105.5	
TOTAL		2477.6	

[1] Accumulated GDDs for the month.

[2] The long-term average (1973-2014) 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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2015 GDD & Precipitation (continued from page 7)

Precipitation

	2015 Rain [4]	Long-term Avg Rain [5]	Monthly deviation from avg [6]
April	2.54”	2.90	-0.31”
May	2.97”	3.11	-0.14”
June	7.28”	3.60	+3.68”
July	0.86”	3.42	
August		3.17	
September		3.63	
October		3.25	
TOTAL		23.08”	

[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

Got some grapes to sell? Looking to buy some equipment or bulk wine? List your ad on the NY Grape & Wine Classifieds website today!

Become a fan of the Finger Lakes Grape Program on Facebook, or follow us on Twitter (@cceflgp). Also check out our website, "The Grape Lakes – Viticulture in the Finger Lakes" at http://flg.cce.cornell.edu.

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