Finger Lakes Vineyard Update

Links To

In the Vineyard

Hans Walter-Peterson

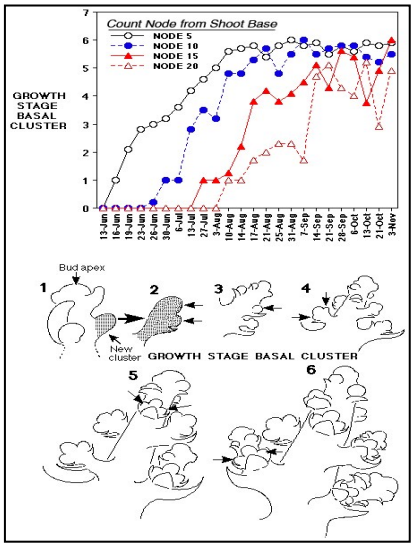
Marechal Foch clusters in veraison on west side of Seneca Lake.

The region is running headlong into the ripening season now, as a number of varieties have arrived at the veraison stage of development when fruit starts to change color and soften, including Foch, Marquette, Aurore, Pinot gris and Pinot noir, Chardonnay, Cayuga White, and Gewürtztraminer. Clusters in the Concord vineyard that we stopped in yesterday had not started to turn color yet, but it wouldn't surprise me if a few berries here and there have started to change. Looking back to 2012, most of these varieties had entered into veraison about 2 weeks earlier than this year - about the same amount of time between the date of bloom last year and bloom this year.

After sending out last week's Update, I received an email from Dr. Martin Goffinet, our retired-but-still-active grape anatomist extraordinaire, with some more information about how the timing of crop thinning influences bud development for the following season. I appreciate him letting me reproduce it here:

I read your opening article in the latest vineyard update on thinning fruit before veraison, in order to take advantage of crop ripening and good fruit quality. The post-thinning period could then take advantage of shunting more carbohydrate (CHO) into fewer fruit, while fruit is finishing berry sizing. Hopefully, this also puts more reserve CHO into perennial vine organs.

My reason for writing is to take into account the opportunity to enhance bud development before leaf fall with earlier fruit thinning. You did not mention "bud potential" for next season. All my work on bud development shows the primary buds in the basal 15-20 nodes of shoots have completed the initiation, growth, and sizing of their internal organs by mid August. This implies that crop thinning earlier than veraison can improve not only current-season fruit size/quality and the movement of leaf-derived CHO back into perennial organs, but also allows improved entry of CHO and nutrients into the pre-veraison development of



Stage of development of the most basal cluster primordium within shoot nodes 5-to-20 for balance-pruned Concord in summer-fall of 1992.
Source: M. Goffinet

Upcoming Events: ***more details in Upcoming Events on page 6***

- CULTIVAR X REGION: An NE 1020 Variety Trial Tasting — August 15, 2013
- Vineyard Tailgate Meeting — August 20, 2013
- New Grower/New Winery Workshop — August 22-23, 2013

In The Vineyard (cont. from page 1)

Hans Walter-Peterson

higher-quality buds for next season. Thinning crop in August or even in the later half of July would likely impact "bud fruitfulness" very little, at least in the nodes to be retained after winter pruning.

For your information I am attaching a plot of the developmental stages of primary buds in the shoots of Concord in 1992, which was a cool, overcast year with huge crops coming in after a very warm, bright 1991, when crop size was fairly low due to poorer 1990 conditions. Under such conditions as 1992, and likely this year, you can see that the primary buds of count nodes 5 through 15 were pretty much finished with cluster development for the year by mid August. This is why I thought crop thinning too late in the season would be too late to impact the development of fruitful buds at these lower bud positions. This was for Concord, but I think the idea is appropriate for hybrids and V. vinifera as well. Regardless of impact on already-finished buds, I am sure the vines would still appreciate the added reserves that crop removal would provide the vine.

The take home message of this is that waiting to thin fruit later in the period between bloom and veraison can have a negative impact on bud fruitfulness the following year. This may or may not be an issue in hybrid and vinifera vineyards this year, but based on the crop estimates I have heard this year in some Concord, Catawba and Niagara vineyards and that were thinned late or not at all, there is the potential for smaller than normal crops in these blocks next year.

IPM

Hans Walter-Peterson

Disease

We have been saying for a number of weeks now that, given the conditions that we have been experiencing this year, the vineyards have stayed remarkably clean for the most part. And while I would say that is still true overall, we have been starting to see some more signs of powdery and downy mildew infections on leaves over the past week. The cool nighttime temperatures we have been having over the past couple of weeks have pushed the humidity levels up over 90%, which is needed for new spores to be produced. Those spores are then windblown to other tissues, and if they're wet for just a few hours, new infections get started. Unfortunately, the DMCast downy mildew model hasn't been working this year, but you can use humidity and leaf wetness data from almost any weather station on NEWA (http://newa.cornell.edu) to see if infection periods have occurred recently.

The main disease story this year, though, continues to be the presence of botrytis infections prior to veraison, primarily in vinifera varieties. This was a major topic of conversation at yesterday's tailgate meeting, and is an ongoing frustration for many growers who have sprayed at appropriate times using proper materials and rates. The biggest problems appear in varieties where you would most suspect it – Pinot gris (photo), Pinot noir, Vignoles, Chardonnay, and some Riesling blocks.

It might be a good idea to take another look at our May newsletter with Wayne Wilcox's 2013 disease management update, which is on our website (http://flgp.cce.cornell.edu/newsletter.php - you'll need to log in to the site using the site password). The Botrytis section starts on page 17, and has a lot of good information, both new and worthy reminders, about controlling this disease. In addition, Alice Wise put together a great summary of the materials available to growers to control Botrytis in the August 1 issue of the Long Island Fruit & Vegetable Update, which I have included here.

IPM (cont. from page 2)

Hans Walter-Peterson

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1) Switch. Most of the international viticultural world has been using Switch, a mixture of cyprodinil (=Vangard) + a second active ingredient called fludioxanil, which has a wide spectrum of activity that includes Botrytis and a number of other fungi. This gives Switch some ability to reduce sour rot, an increasingly uncontrollable disease complex in wet years.

2) Rovral. We all remember the resistance issues in years past. Bottom line is that Rovral should not be the workhorse of your program. However, if you've been giving it a rest, it may be a useful tool in a rotational program when used on a limited basis. Rovral is one material where the use of an adjuvant improves control. Stylet Oil (assuming proximity to sulfur sprays is not an issue) is a good choice.

3) Vangard. A consistent performer in Wilcox's trials, Vangard is absorbed into the berries, so it's rainfast and has limited postinfection activity. There doesn't seem to be any data showing improved performance by adding an adjuvant. Vangard is highly prone to resistance development, so its use should be strictly minimized. The label allows a maximum of two applications per season, but keep it to a single spray each year unless you really get into a bind.

4) Scala. Same chemistry and mode of action as Vangard, the two have performed similarly in a limited number of head-to-head tests. Same resistance concerns, consequently, there is no benefit in "rotating" between the two in terms of resistance management.

5) Elevate. Unrelated to any other on the market. Wilcox's results with it have been good to very good. Elevate is retained within the waxy cuticle of the berries, so it is rainfast within a few hours after its application (lab studies show 50% retention within 3 hr and 75% retention within 24 hr). Long sold as strictly a protectant fungicide, it does appear to reduce infection within the berries – see Wilcox's write up for details. There is a resistance risk, not as significant as that for Vangard. The label allows a maximum of three applications per season, but European guidelines recommend just one, in rotation with unrelated materials.

6) Flint. Provides very good to excellent control at 3 oz/A, versus 1.5 to 2 oz for PM. Limit strobie use to a maximum of two applications per season, so if you're already there, this is not an option.

7) Pristine. Has provided good control at a rate of 12.5 oz/A in limited testing, and excellent control at 19 oz/A. Both the strobie and non-strobie component of this "combination product" have activity against Botrytis, so there is some resistance-management benefit to using it. Still not a preferred option if you've already used it or another strobie product twice earlier in the season.

8) **Oxidate**. Oxidate is formulated to stay on the outside of the waxy cuticle covering leaves and berries rather than enter them. In '06 trials on Chardonnay at LIHREC, it did indeed burn out Botrytis sporulation. However, since the fungus extends into the flesh of the berry, new sporulation reappeared within a week or so and infections progressed (this was in the absence of botrycides). The temporary reduction in sporulation may inhibit the spread of spores, particularly if repeat applications are used. This is purely a guess; however, given the last two seasons of difficult-to-control cluster rot, it may be worth a shot. Use of Oxidate in combination with or in addition to botrycides may be a better strategy but it is still unclear if the addition of Oxidate will enhance control. If possible, leave treated and untreated to gauge efficacy.

Final word: Cultural practices (canopy management, leaf pulling, thinning out clumps of clusters, moderate use of nitrogen) are critical components of Botrytis control programs. Botrycides will be minimally effective if cultural practices are not timely and well executed.

Go to Top

IPM (cont. from page 3)

Hans Walter-Peterson

Insects

The degree day model for grape berry moth (GBM) indicates that we are at the stage where control measures should be applied in vineyards near the FLGP's Dresden weather station within the next day or so. Vineyards near Branchport are still a few days away from reaching the 1620 GDD (from wild grape bloom) threshold, and vineyards around Lodi are just at or past the threshold. Materials that rely on contact with the insects (e.g., carbamates and pyrethroids like Baythroid, benfenthrin products including Sniper and Brigade, Danitol and Sevin) can be applied between 1620-1710 GDDs and still be effective at controlling GBM.

NEWA Grape Forecast Models

Select a disease or insect: Grape Berry Moth

Weather Station: Dresden (FLGP/FLCC)

Date of Interest: 8/7/2013

Calculate

Map | Results | More info

Grape Berry Moth Results for Dresden (FLGP/FLCC)

Wild Grape Bloom: 5/29/2013

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 8/7/2013: 1586 (1 days missing)

Daily Degree Days for Dresden (FLGP/FLCC)

Base Temp	Past	Past	Current	5-Day Forecast				Forecast Details
	Aug 5	Aug 6	Aug 7	Aug 8	Aug 9	Aug 10	Aug 11	Aug 12
47.14F - GBM	17	21	24	25	24	23	20	20
Accumulation	1554	1574	1599	1623	1647	1670	1690	1710

NA - not available Download Time: 8/7/2013 13:00

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*

Foliar Phylloxera

Another topic that was discussed at the tailgate meeting last night was the level of foliar phylloxera galls that some growers are seeing in their vineyards this year. The foliar form of this insect is another form of the same species that feeds on grapevine roots, but reproduces primarily above ground rather than in the soil. The female enters the leaf on the upper surface and forms the gall where she will lay her eggs. When the eggs hatch, the nymphs or "crawlers" will emerge onto the shoot and move to the young leaves where they will feed and form more galls. Some varieties are more susceptible to damage from foliar phylloxera than others, with some hybrids like Foch, Baco noir, Seyval, Aurore and others being especially susceptible, while it is uncommon (but not unheard of) to find galls on most native and vinifera varieties. Leaves that have many galls on them can look pretty gnarly, but the insect is most often not a problem if most of the older and "middle aged" leaves are relatively free of galls.

A single grape phylloxera leaf gall, with the side of the gall opened to show adult female and many yellowish eggs.

Photo by J. Ogrodnick

The optimum time to control the insect is to apply an insecticide around bloom and 10-14 days later. Materials that are labeled in New York to control phylloxera include Movento, Danitol, Admire Pro and Assail (Assail and Danitol are restricted-use materials). If you feel like phylloxera populations are building up in some blocks this year, it probably doesn't make sense to apply anything at this point in the season, but rather wait until bloom next year and use one of the materials listed above to knock back the populations.

Go to Top

Tailgate Summary

Mike Colizzi

Well it's hard to believe, but harvest is just a few weeks away for some varieties. We held our second to last tailgate at Hermann J. Wiemer Vineyard on Seneca Lake last night. It was another beautiful summer day and we were once again reminded how lucky we are to live in the Finger Lakes!

The theme of last nights meeting seemed to be disease. For the past couple meetings we had been reporting that things look fairly clean. Given the amount of rain we had been receiving that seemed a little surprising. Well now it seems like that good luck has come to and end. We are seeing an increasing number of downy, powdery and botrytis infections. One grower remarked that it is the amount and type of botrytis you expect to see in September. Many of the botrytis infects we were seeing appear to be hidden in the cluster, or are at the point where two clusters have stacked on top of each other.

Figure 1 : Botrytis on a Pinot Gris cluster taken 8/6/13

We were also seeing some more leafhopper damage than we expect this time of year. I guess a good thing would be that we appear to be seeing fewer Grape Berry Moth than in recent years. We passed 1620 DD yesterday so that means females are active and egg-laying is at its peak. Now is the time to apply products that must be ingested by the insect. These include such things as Intrepid and Altacor.

Most varieties are approaching veraison, for growers interested in taking petiole samples now is a great time to do so. Veraison and bloom are the only points during the growing season that we have accurate standards to compare samples to.

Petiole tests are available through Dairy One Laboratory in Ithaca, New York at a cost of $24 per sample.

For a copy of the sampling form for grapes please click this link.

We have one tailgate meeting remaining this year. On August 20th we will be at Goose Watch Winery. If you have not attended one yet they are a great opportunity to network with other growers and hear what is going on in vineyards around the Finger Lakes. We always bring topics to talk about based on our findings from vineyard visits earlier in the day. We offer .75 DEC credits at every meeting. If you would like credits please arrive a few minutes before 5:00pm to sign in.

We would like to thank everyone at Hermann J. Wiemer Vineyard for hosting last nights meeting including Fred, Tim and Sandy Merwarth.

New Grower/New Winery Workshop

Hans Walter-Peterson

I know that many of you in the industry get approached by people who want to start a new vineyard and/or winery. If you know of anyone who is thinking about entering "the business", whether here or anywhere in the Northeast, please let them know about this two-day workshop that we will be holding in a few weeks at the Ag Experiment Station in Geneva. Please feel free to distribute this announcement however you would like as well.

More information about the workshop, including program and registration information, can be found in the announcement below and at http://nysaes-bookstore.myshopify.com/collections/nysaes-meetings/products/new-grower-winery-workshop.

Thanks for spreading the word!

New Grower/New Winery Workshop

August 22-23, 2013

NY State Agricultural Experiment Station

630 W North Street, Geneva NY

This workshop is an opportunity to learn about key aspects grape growing and winemaking for those interested in starting a new vineyard or winery business. Attendees will learn about the decisions that need to be made in preparation for planning or starting a winery, and also once production has begun. The workshops will include a tour of a vineyard and winery.

The first day will focus on developing a new vineyard. **Hans Walter-Peterson** and **Mike Colizzi** of the Finger Lakes Grape Program, **Andrew Landers** from Cornell University, and **Tim Weigle** with the New York Integrated Pest Management Program, will cover topics including site selection and preparation, appropriate varieties to plant, essential equipment for new vineyards, and pest and weed management.

The winery workshop on the second day will look at winemaking, analysis, equipment and more. **Anna Katharine Mansfield** and **Chris Gerling** of Cornell's extension enology lab will be joined by enology lecturer **Patricia Howe** to cover the wine topics. **Sam Filler** from the Empire State Development agency's "one stop shop" for wine beer and spirits will also be giving a presentation and answering questions related to licensing and other legal aspects of starting a winery.

Registration for either day is $150, or $250 for both days, and includes all materials and lunch. Registration for the workshop is available online. Please direct any questions to Gemma Osborne, gro2@cornell.edu or 315-787-2248.

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.

CULTIVAR X REGION: An NE 1020 Variety Trial Tasting

Thursday, August 15 2013 8:30 AM – 5:00 PM

Ramada Geneva Lakefront, 41 Lakefront Drive (http://www.genevaramada.com/)

A small block of rooms has been reserved at a discounted rate under the name "Cornell." Reservations must be made by August 1st.

Curious about new cultivars? Interested in the effects of terroir on varietal character? Then join us for a cross-regional tasting of varietal trial wines!

The multistate NE 1020 project was designed to test the performance of interesting grape cultivars, both new and existing, at

Upcoming Events (cont. from page 6)

various sites across the US. Over the past two years, collaborative work between Cornell, Penn State, and the Connecticut Agricultural Experiment Station have resulted in a collection of wines produced from NE 1020 sites spanning the region. Join us for a guided sensory evaluation of these wines, which represent a range of cool-climate varieties, both hybrid and *V. vinifera.* Your participation and feedback will help guide future variety trial activities, and provide you with first-hand experience of varietal and regional expression in these cultivars. This day-long program is free, and will include short presentations by project scientists, a tour of Cornell's vineyard blocks, and lunch.

This event is free, but space is limited and registration is required! To reserve your seat, please contact Sarah Lincoln at sjl38@cornell.edu or 315.787.2255 and provide the following information:

Name:

Affiliation:

Address:

Phone number:

E-mail address:

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Vineyard Tailgate Meeting

Tuesday, August 20, 2013 5:00 – 6:30 PM

Goose Watch Winery

5480 Route 89, Romulus NY (click here for map)

Final Tailgate Meeting of the season!

These are a series of informal meetings held with growers in different locations around the Finger Lakes during the growing season. Meetings are held every other Tuesday afternoon, starting at 5:00 PM and usually ending around 6:30 PM. During the day of each meeting, Mike and I visit a few growers and vineyards near the meeting location to get a sense of what has been happening in the area, and give us some ideas about some potential topics for the meeting later that day. There will also be ample time to discuss any questions or issues that others want to bring up as well. There is no need to register ahead of time – just show up when you can, and leave when you have to.

There will be 0.75 pesticide recertification credits available for each meeting. As with other events where credits are available, you need to be present at the beginning of the meeting to sign the meeting roster – make sure to have your card with you - and stay until the end to receive your certificate.

Many growers have told us that they get a lot out of these meetings, and that they have brought back something they heard about and implemented on their own farm. This is the final Tailgate Meeting of the season, so if you haven't had the chance to attend one, why not come by and see what these meetings are all about.

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New Grower/New Winery Workshop

August 22-23, 2013

NY State Agricultural Experiment Station

630 W North Street, Geneva NY

See the announcement above.

2013 GDD Accumulation

We are tracking growing degree day (GDD) and precipitation accumulation again this year, but we will be reporting data from our weather station located at the teaching & demonstration vineyard in Dresden, at Anthony Road Wine Company, instead of using the station at Geneva. We will continue to monitor GDD accumulation at Geneva in order to see how our new location compares with it, and to provide context of where we are with regard to heat accumulation compared to our long-term average.

FL Teaching & Demonstration Vineyard – Dresden, NY					
Date	**Hi Temp (F)**	**Lo Temp (F)**	**Rain (inches)**	**Daily GDDs**	**Total GDDs**
7/31/13	80.8	59.1	0.00	20.0	1692.9
8/1/13	82.0	59.0	0.00	20.5	1713.4
8/2/13	79.0	64.0	0.02	21.5	1734.9
8/3/13	77.0	60.0	0.28	18.5	1753.4
8/4/13	68.0	63.0	0.00	15.5	1768.9
8/5/13	74.0	59.0	0.00	16.5	1785.4
8/6/13	81.0	57.0	0.00	19.0	1804.4
July 2013 Total			2.78”	726.5	
Monthly Avg -			3.26”	635.6	
Season Total			13.63”	1804.4	

Average GDD on August 6: 1568.7 (currently 12 days ahead of average)

Apr 1 GDDs on August 6, 2012: 1869.3

Average Rain on August 6: 13.53”

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.

finger lakes grape program

FINGER LAKES VINEYARD UPDATE
Is published by
Cornell Cooperative Extension
Finger Lakes Grape Program
Ontario, Schuyler, Seneca, Steuben and Yates Counties

Go to Top