



Finger Lakes Vineyard Update

In the Vineyard

Hans Walter-Peterson

Berries continue to move into, or through, veraison in most vineyards. Early hybrid varieties like Foch, Geneva Red, Baco and Aurore are into full “ripening” mode now, and earlier vinifera varieties like Pinot noir and gris, Lemberger and Chardonnay are well into the process as well. Berries in Riesling blocks around Cayuga Lake that we visited yesterday were starting to soften up. Concord vines have been starting to show some purple color over the past week, but it’s still early in the process for many blocks. Catawba berries had not started to turn color and soften yet, but expect that they will start to do so almost any day now.



Pinot gris clusters finishing veraison color change. (Cayuga Lake, 8/20/13)

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Speaking of ripening, we will be starting our annual ‘Veraison to Harvest’ project next week, including weekly fruit maturity sampling of multiple varieties from multiple locations around the state. Here in the Finger Lakes, we will be monitoring Concord, Catawba, Vignoles, Cayuga White, Traminette, Cabernet Franc, Riesling, Chardonnay, Pinot noir and Lemberger. Watch for the email next Friday, August 30 with the first issue of the 2013 season.

The Veraison to Harvest project is supported by funding from the NY Wine & Grape Foundation and Federal Formula Funds distributed through the NY State Agricultural Experiment Station.

Finger Lakes Vineyard Update

Finger Lakes Grape Program

August 21, 2013

IPM

Hans Walter-Peterson

At our Tailgate meeting yesterday, we discussed the continued presence of downy mildew in canopies at this point in the season. It's under these kinds of conditions that it's nice to have the phosphorous acid materials like Prophyt and Rampart that are effective at preventing new spores from germinating and causing new infections. However, a number of growers have said that they have put out two sprays of phosphonates already, and we still have several weeks to go in the season before harvest is over. There were also some questions about other materials that could be used in order to maintain good resistance management by rotating between different chemical families.

The table below organizes materials that are labeled for use on downy mildew based on their resistance group. For example, if you wanted to try using Reason to control DM at this point, but have already sprayed Pristine a couple of times this year, you would be using a material with a similar mode of action and therefore are just putting more selection pressure on all of those materials in that group (Pristine, Abound, Reason and Quadris Top in this case). The good(?) news is that there are a few materials that have unique modes of action that many growers may not have used for DM control, and therefore could present another option for them, such as Ranman, Gavel, Presidio and Ridomil. Be sure to pay attention to PHI requirements, which are listed next to each material in parentheses.

It would well be worth another visit to [Wayne Wilcox's annual disease management roundup](#) this year to review the information about DM management and materials. That's how I've spent my morning today.

Downy mildew materials grouped by resistance group (RG), with PHI in parentheses (in days). Products like Revus Top and Pristine include two chemical components, and each component belongs to a different RG. Materials are listed below based only on the component that is effective against DM.

RG4	RG11	RG21	RG22
Ridomil Gold/ Copper (42)	Pristine (14)	Ranman (30)	Gavel* (66)
Ridomil Gold MZ WG (66)	Abound (14)		
	Reason* (30)		
	Quadris Top (14)		

RG33	RG40	RG43	N/A
Rampart (0)	Revus (14)	Presidio (21)	Captan (0)
Prophyt (0)	Revus Top (14)		Copper (?)
Phostrol (0)			mancozeb (66)
			Ziram (21)

IPM (continue from page 2)

As I mentioned above, many growers have incorporated the phosphorous acid products into their programs because of their excellent anti-sporulant activity. There are some other materials labeled for DM that have similar physical modes of action against the disease, but to a lesser degree. Some of the materials, like Abound, Revus Top, Pristine or Quadris Top, are probably not going to be used by growers at this point in the season, but others like may still be an option. As always, the preferred practice would be to not apply these kinds of materials to raging infections, but keeping up a good rotation among materials can help to fend that off to some extent.

Materials with anti-sporulant activity on downy mildew (from [NY/PA Pest Management Guidelines for Grapes](#)):

- Abound
- phosphorous acid products (Prophyt, Phostrol, Rampart, etc.)
- Pristine
- Quadris Top
- Reason
- Ridomil
- Revus and Revus Top(?)
- Ranman(?)
- Gavel(?)
- Presidio(?)

Late Season Sulfur Use

There was also discussion at the meeting last night about the use of sulfur later in the season. Powdery mildew looks like it is being held in check pretty well in most places, but most growers will still be including sulfur in the tank as long as they can (and as long as their buyers will allow them).

Below is a summary of the recent work done by Misha Kwasniewski, Gavin Sacks and Wayne Wilcox on measuring sulfur residues on grapes after sulfur applications at different intervals before harvest. This information has been discussed at our Grape Growers' Conference in the past couple of years as well as at field meetings and in newsletters, but it seems like a good time to put this back out again as a reminder. One thing that I thought was interesting to see was Alice's mention that it is a pretty standard practice to shut off nozzles in the fruit zone after veraison (only when applying materials for PM and DM obviously, and not botrytis). This might be something for growers and winemakers to discuss as a way to keep using sulfur to protect the foliage while reducing the amount of sulfur that lands on the fruit.

My thanks to Alice Wise, Gavin, Wayne and Misha for putting this together this year.

Late Season Use Of Sulfur In The Vineyard

Alice Wise, Gavin Sacks, Wayne Wilcox and Misha Kwasniewski

Cornell University

[K]eeping the canopy free from the mildews is absolutely critical to maintaining a photosynthetically active canopy. A healthy canopy is necessary to properly ripen fruit and to allow vines to accumulate carbohydrates that help them overwinter. From a winemaking standpoint, one of the primary concerns about late season sprays is that potential residues may inhibit fermentation. Some winemakers consider this an issue, especially with sulfur, others discount it. Some enologists demand a particular interval (ranging from weeks to months) between the last sulfur spray and harvest. However, most vineyards on LI have reached the point in the season where fruit is no longer susceptible to new PM infections. Consequently, regardless of materials being used, most growers have turned off the nozzles in the cluster zone (easy to do with VSP training that facilitates a well-defined cluster zone) and are focusing on keeping the canopy clean.

IPM (continue from page 3)

Nevertheless, sulfur applications in the vineyard are often demonized by winemakers. Excessive S may be converted to H₂S by yeasts, resulting in stinky wines and/or sluggish fermentations. Because of industry concerns, this is an area of research addressed a couple of years ago by Cornell researchers, Drs. Gavin Sacks, Wayne Wilcox and Misha Kwasniewski. The team developed a new, simple method for measuring S residues on grapes, and then applied the approach to field trials. Based on 2009-2011 data from the Finger Lakes, it appears that 5 lbs/acre sprays of both Microthiol and wettable sulfur within *4 weeks of harvest* can result in sulfur residues on harvested grapes sufficient to result in increased levels of H₂S production, particularly in red wines (see below). The reason for writing “increased levels” is that all fermentations will produce some amount of H₂S as part of basic yeast metabolism, even in the absence of elemental S.

Six weeks is a gray area, and eight weeks seems to be safe. However, these precise cut-off times likely vary with site, year, canopy characteristics, type of sprayer/nozzles, pressure and so on. Note also that in their research protocol, the cluster zone nozzles were not turned off. The LI practice of turning off nozzles in the cluster zone at veraison should help to mitigate potential sulfur residues. However, measuring sulfur residues on your grapes is the only sure way to know. Interested winegrowers should contact Gavin Sacks <gl9@cornell.edu> for information on making S measurements on grapes.

Sulfur residues are primarily a concern with skin fermented wines. For standard white winemaking conditions, if the must is well clarified (<100 NTU), over 95% of sulfur residues will be removed. So, if you have concerns, make sure your juice is well clarified! However, with reds, skin contact is important so the concern is real.

A number of factors – rainfall, wind, temperature, sunlight – may be important in determining the degree of sulfur residue. There may be seasonal differences in these factors, i.e., one may carry more weight one season vs another.

Tailgate Summary

Mike Colizzi

With Constellation scheduled to start taking Aurore's in less than a week we held our final tailgate meeting of the season last night at Goose Watch Winery. At the meeting we talked about everything from downy mildew to this years market trends. We also discussed botrytis, nutrient sampling, berry moth, and the effects of late season fungicide applications on fermentation.

During our visits yesterday we were seeing some significant downy infects mostly dead but some still active. When we asked growers what they sprayed to kill it and how many times the answer typically was phosphorus acid sprayed two to three times. This brought up the idea of being careful to not burn out the phos acid products. Downy **CAN** build up a resistance to phosphorus acid. Botrytis infections have seemed to slow down with the dry weather we have had the past couple days. This doesn't mean we are out of the woods by any means. The potential for increased activity is still there if weather conditions turn damp again. Growers should be considering extra leaf removal this year and eliminating cluster stacking.

We would like to thank everyone who has participated in our tailgate meeting this year and look forward to next years. If you have any comments or suggestions about the meetings please feel free to contact us. Also if you are interested in hosting a meeting next year please let us know.

Thank you to Dave Peterson, Rick Waite, and everyone at Goose Watch Winery for hosting last nights meeting. We would like to wish everyone a safe and productive harvest!

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
8/14/13	67.3	53.8	0.00	10.6	1948.5
8/15/13	73.6	52.1	0.00	12.9	1961.3
8/16/13	76.1	53.4	0.00	14.8	1976.1
8/17/13	79.6	54.0	0.00	16.8	1992.9
8/18/13	77.9	59.6	0.00	18.8	2011.6
8/19/13	82.4	61.2	0.00	21.8	2033.4
8/20/13	84.5	60.8	0.00	22.7	2056.1
Aug 2013 Total			3.22"	363.2	
Season Total			16.55"	2056.1	

Apr 1 GDD on August 20, 2013 at Geneva: 1854.8 (currently 2 days ahead of average)

Average GDD on August 13 (Geneva): 1833.2

Apr 1 GDDs on August 20, 2012 (Geneva): 2136.2

2013 Rain on August 20 at Geneva: 20.73"

Average Rain on August 20 (Geneva): 14.95"

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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