Finger Lakes Vineyard Update

In the Vineyard

Gillian Trimber

Cold nights, emerging shoots—these past few days have been harrowing for many growers as the risk of frost hangs over our heads. We've seen early morning temperatures around 31- 32 F in parts of the Finger Lakes this week, and had reports of frost on car windshields and wind machines kicking on, but to date—knock on the trellis post—we haven't heard of any vineyards actually showing freeze damage on the vines. Hopefully this jibes with what you've seen in your own vineyards as well.

Daily Minimum Temperatures for May °F						
	Watkins Glen (Lakewood)	**Hammondsport (Doyle Vineyards)**	**Interlaken (Airy Acres)**	**Branchport**	**Geneva**	**Sodus (Lake)**
5/1/2017	59.6	*58.5*	56.3	*58.5*	51.6	42.8
5/2/2017	48.7	46.2	47.7	46.4	47.6	47.7
5/3/2017	39.0	37.8	39.8	38.4	*41.8*	42.3
5/4/2017	33.4	31.9	34.9	31.9	*33.7*	36.8
5/5/2017	45.0	44.9	44.3	44.7	44.6	46.1
5/6/2017	44.8	43.3	44.2	*43.3*	43.5	44.9
5/7/2017	40.6	36.9	39.4	38.5	38.3	39.5
5/8/2017	36.9	33.8	35.2	35.1	35.8	38.4
5/9/2017	33.9	32.4	33.7	32.9	35.1	35.2
5/10/2017	35.4	34.2	35.6	34.1	34.9	32.8

Not sure what freeze damage looks like? It's essentially damage through dehydration, and will appear as brown, droopy shoot tips and leaves where tissues were previously green and shapely. Ice crystals form in the space between cells and draw the water out of the cells, causing desiccation inside the cell and ruining the cell membrane. The cell is then no longer able to hold its insides in, so phenolic compounds and other contents leak and oxidize (causing the brown color) and turgor pressure drops. An excellent article by Michela Centinari explaining this process in detail, with links to additional resources, can be found in our April 2016 Vineyard Notes Newsletter.

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Freeze damage on new growth.

Image source: University of Missouri Extension, http://extension.missouri.edu/explorepdf/winegrape/wg1001.pdf

At this point in the season, at least near the larger Finger Lakes, nearly all varieties have gone through budbreak. Many of our more precocious varieties are at the 3-5 inch growth stage, showing clusters peeking out for the first time as the fifth and sixth leaves unfurl. Cool temperatures, in addition to having frightened us with the risk of frost, have slowed down the growth a little bit. Thank goodness, too, because with all of this rain that we've had it would be difficult to drive into the vineyard to put on that first spray.

A soggy vineyard spotted along the west side of Cayuga Lake

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IPM

Gillian Trimber

Preparing to Spray

Rain clouds can have their silver lining—hopefully the weather this past week has provided both the time and the incentive to get both your spray equipment and spraying schedule tuned up for the growing season. Now is the perfect time to replace nozzles, calibrate the sprayer, make sure your pesticide inventory is up to date, and order any new personal protective equipment you'll need for the season. Since wet weather creates great conditions for fungal growth, you'll want to make sure that you have everything in place to spray effectively and safely once the ground is firm enough to drive on.

This is also the time, if you haven't yet done so, to plan your spray program for the season. Hans' public service announcement about resistance development rings just as true this year as it did last May, so I've included it in full here:

> You hear it preached every year from us, from the suppliers and anybody else involved in pest management – rotating between different materials for a particular disease isn't what's important, it's about rotating between different types of chemistries. Relying on a single class of materials, whether I t's strobilurins for disease control or carbaryl for insects or glyphosate for weeds, will eventually lead to the development of a population that is resistant to it. We have been seeing this most recently in the Finger Lakes with the development of populations of downy mildew that are resistant to the strobilurins.
>
> So once again, here is your annual reminder to pay attention not just to pre-harvest intervals and appropriate application rates for each material you use, but also to the **Resistance Group Number (RGN)**, which is included for every fungicide listed in the Grape IPM Guidelines. When selecting fungicides to use for the year, try to avoid using materials from the same class back to back if possible, or at a minimum no more than twice in a row before switching to something different. Fortunately, there are several different classes of materials available for the major diseases that have to be managed each year.
>
> Materials that have very low potential for resistance to develop (e.g., sulfur, salts, captan) can be mixed with those with higher potential for resistance to help catch individuals that may have developed resistance. Materials that have two RGNs listed are mixes of two different chemistries. Using one of these is just like using a material with just either one of those resistance numbers. For example, applying Pristine (RGN 11 and 7) and then Reason (RGN 11) is akin to using Pristine back-to-back (at least the strobilurin portion of it) because both materials work on the same mode of activity against downy mildew, even though the chemicals themselves are different.

It's worth pointing out that though we definitely need to plan out what we'll be spraying throughout the season in order to ensure proper rotation of materials and that we have the materials we need when we need them, thinking of this as a "schedule," set on the calendar for every 7-10 days, is misleading. Pesticide application decisions should be made according to weather conditions, infection periods for the organisms we're trying to

IPM (continued from page 3)

control for, growth stage of the vines, and observations in the vineyard. Tailoring the pesticide application to the need is critical, both for effective control and to avoid expensive unnecessary applications.

Phomopsis

The first spray applied is generally for phomopsis, and is of particular importance in vineyards that have cordons and older wood in the canopy or have had problems with phomopsis in previous years. Depending on weather and infection periods, vines should be sprayed when shoots are approximately 3" in length. The infection period modelling tool available at (http://newa.cornell.edu/index.php?page=grapediseases) can be used to help decide whether a phomopsis spray might be necessary and when it should be applied, and

NEWA Grape Forecast Models

Select a disease or insect: Grape Diseases

State: New York

Weather station: Dresden (FLGP/FLCC)

Ending Date: 05/10/2017

Calculate

Map | Results | More info

Grape Disease Infection Events for Dresden (FLGP/FLCC)

	Past	Past	Current	Grape Disease 5-Day Forecast				Forecast Details
	May 8	May 9	May 10	May 11	May 12	May 13	May 14	May 15
Phomopsis	No	No	No	No	No	-	-	-
Powdery Mildew	No	No	No	No	No	-	-	-
Black Rot	No	No	No	No	No	-	-	-

Phomopsis - calculates when weather conditions may allow spores to infect susceptible tissue.
Powdery Mildew - calculates primary infection when weather conditions may allow overwintered, primary spores (ascospores) to infect susceptible tissue; runs from bud break until pre-bloom. Once primary infections have occurred, secondary infections (disease spread) are possible every day. The threat is greatest when temperatures are between 65 to 90 degrees F and is particularly high when conditions are cloudy.
Black Rot - calculates when weather conditions may allow spores to infect susceptible tissue.

Phenological stage: 1 inch shoot

Choose the phenology stage for the grape variety of interest to display management messages. Concord grape phenology is estimated by the model from historical records for this variety.

Disease	Disease Management
Phomopsis	The early spray at around 3 inch shoot growth, when clusters first become visible, is most important for controlling rachis infections, shoot infections that serve as future sources of inoculum, and infections that move from berry stems into the fruit. A minimal spray program should include at least one application during this period to protect against infection events, especially in blocks with a history of Phomopsis and on highly susceptible varieties.

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May 9th, Tailgate Recap

Gillian Trimber

It was great to have Tim Martinson, Statewide Viticulture Senior Extension Associate, come out to speak at last night's Tailgate Meeting at Airy Acres Vineyard in Interlaken, NY. The group was eager to talk about frost risk, wet fields, and the springtime frustration of having too much to do and too few dry weather windows to do it in. As Airy Acres is a relatively new vineyard, and spring is the time for planting, we focused our meeting on issues surrounding planting and re-planting grapevines.

Tim updated the group on the latest with efforts to have certified virus-free planting stock available, and the ways in which the plants and budwood blocks will be checked for virus at several steps throughout the process. As we had several people at the meeting that are actively involved with grapevine nursery operations or providing budwood to nurseries, plus many that have experience with the challenges of finding virus free vines to plant and keeping them that way, we were able to hear about this issue and efforts to manage it from several angles. Though concern over Grapevine leafroll disease and Red blotch disease has grown recently, these viruses have likely been spreading slowly in New York for many years. Tim discussed short-range spread of Grapevine leafroll-associated viruses through mealybugs, as well as the development of tools to test for viruses in grapevines and how these have influenced our understanding of the issue. Plenty more information can be found in the May 2016 *Appellation Cornell* article Tim shared at the meeting, 'Clean Plants for the Future of the Eastern Wine and Grape Industry, available at https://grapesandwine.cals.cornell.edu/sites/grapesandwine.cals.cornell.edu/files/shared/Research%20Focus%202016-2.pdf

We also spent some time at the meeting discussing trellis construction, catch-wire set-ups, drainage and irrigation for new plantings, and simply fielding questions on new vineyard establishment. As always, we were excited to see many meeting participants learning as much from one another as from what Tim and I had brought to share.

Many thanks to Tim for coming out to speak, as well as to Fred and Pam Bassette for hosting our meeting! The next scheduled Tailgate Meeting will be replaced with our 2017 Spring IPM Meeting, on May 23, 2016 from 4:30-6 PM at Vine Country Farms in Pulteney. Hope to see you there!

Young vines and replants were a major topic at the Tailgate Meeting. Both photos, taken May 9th 2017, show vines planted in 2016 on the west side of Cayuga Lake.

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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.

Respirator Medical Exam and Fit Testing

Thursday, May 11 8:00 AM – 4:00 PM
Yates County Office Building Auditorium
417 Liberty Street
Penn Yan, NY 14527

Spring Grape IPM Meeting

Tuesday, May 23 4:30 – 6:00 PM
Vine Country Farms (Roy & Gordon Taft)
8907 Stone Road
Prattsburgh, NY 14874

Registration link: https://flgp.cce.cornell.edu/event_preregistration.php?event=292 or call the FLGP office at (315) 536-5134.

Don't forget to register for the Spring Grape IPM Meeting on Tuesday, May 23, which will be hosted by Roy and Gordon Taft at their farm, Vine Country Farm, at the corner of Stone Road and County Road 74 in Prattsburgh. The program will provide growers with updated information on insect and disease management, pesticide application methods and equipment, a quick summary on new Worker Protection Standard regulations, and more. This will also be the final appearance at this event by Andrew Landers and Wayne Wilcox (at least in their role as faculty at Cornell), who have helped growers to make great strides in improving their pest management programs, not just in the Finger Lakes, but throughout the country.

There is no charge for FLGP-enrolled growers, and a $15 registration fee for those not enrolled in the Grape Program (if you aren't sure of your enrollment status for 2017, please call our office). We do ask everyone to register for the meeting ahead of time, however, so that we have a head-count for dinner. Walk-in registration will cost $25 per person regardless of enrollment status, and only a limited number of walk-ins will be allowed.

Sponsors: We are also accepting sponsorships for the Spring IPM meeting to help defray our costs. If you are interested in being a sponsor, please go to https://flgp.cce.cornell.edu/sponsor_event.php?event_id=292 or contact Brittany Griffin at (315) 536-5134.

Tailgate Meeting

June 7, 2017
4:30 pm - 6:00 pm
Fox Run Vineyard
670 Route 14
Penn Yan, NY 14527

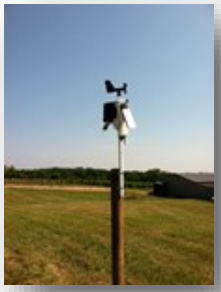
Our third tailgate meeting of 2017 will take place on June 7th at Fox Run Vineyards in Penn Yan.

2017 Growing Degree Days and Rain Fall

FLX Teaching and Demonstration Vineyard - Dresden NY					
Date	Hi Temp (F)	Lo Temp (F)	Rain (inches)	Daily GDDs	Total GDDs
5/3/2017	56.3	43.4	0.01	0	177.5
5/4/2017	54.7	37.1	0.16	0	177.5
5/5/2017	58.1	45.9	0.6	2	179.5
5/6/2017	57.4	45.9	0.64	1.7	181.2
5/7/2017	45.5	40.3	0.12	0	181.2
5/8/2017	50.7	36.9	0	0	181.2
5/9/2017	53.4	36.2	0	0	181.2
Weekly Total			1.53”	3.7	
Season Total			6.45”	181.2	

GDDs as of May 9, 2016: 164.6

Rainfall as of May 9, 2016: 3.06”



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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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