Finger Lakes Grape Program

December 23, 2015

What's This Wacky Weather Doing to the Grapevines?

Hans Walter-Peterson

The FLGP office in Penn Yan will be closed December 24-25, and December 31 and January 1. Gillian will be in the office December 28 – 30, while Hans will be Minnesota for the week, where he's hoping to find something a little closer to actual winter. We'll both be back in the office on January 4.

Wishing you all peace, health and happiness this holiday season.

Hans, Gillian, Jim and Brittany

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It's a question that I have been getting a lot lately, not surprisingly. The warmer than normal temperatures that we've had since the end of harvest have raised some concerns about what impact they are having on the vines this winter, especially the hardiness of the dormant buds.

As far as hardiness goes, the buds are actually in good shape. The most recent samples were collected at the Experiment Station in Geneva one week ago on December 14 (we will start collecting samples from other areas in the Finger Lakes and New York in January). The LT₅₀ values for all four varieties are about where they would be if we were experiencing a more "normal" winter, except for Concord which may be a little less hardy than it has been at this time over the past couple of years. Even so, these data indicate that bud hardiness is still good, and has not been significantly impacted because of the warm weather

Variety	LT ₅₀ Value (°F) on	
	Dec. 14	
Concord	-11.3	
Noiret	-10.7	
Cabernet Franc	-9.5	
Riesling	-10.1	

That's not to say, however, that the weather is not impacting the vines at all. The warmer weather has meant that the vines are accumulating more *chilling hours* than they normally would at this time of year. Chilling hours are how the grapevine tracks the length of the winter, and has a major impact on how

the vines respond to warming temperatures during the winter and early spring leading up to budbreak. If a vine's chilling requirement is met during the winter, then budburst tends to be much more synchronized than if the chilling requirement is not met.

Chilling hours are accumulated when temperatures are generally between 32 - 54°F. When temperatures are outside of this range, the plant basically doesn't count them. The warmer than normal temperatures this winter means that we have spent more time in that 32 – 54 degree temperature range than we normally do, and therefore are accumulating

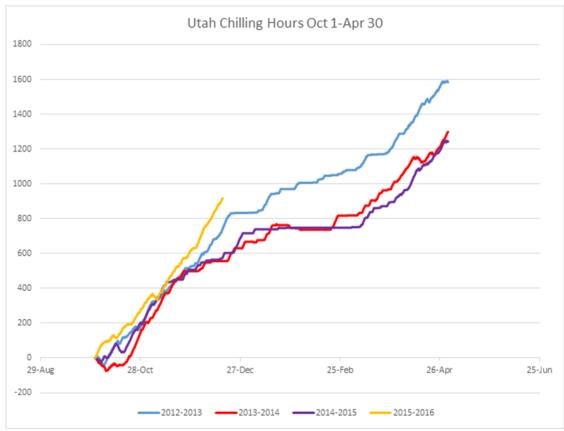
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more chilling hours up to this point than we have in the past several years.

Jason Londo, who spoke about this subject at last year's B.E.V. NY conference, provided us with the following graph showing the accumulation of chilling hours so far this winter compared the past three:



Chilling hours accumulation in 2015-16 compared to the past 3 years. Based on temperature data from Geneva NY. Source: Jason Londo, USDA-ARS, Geneva NY.



The yellow line is the chilling accumulation so far this winter, and you can see that we are well ahead of where we were the past two winters, and even ahead of the 2012-13 winter, when we also had a warmer than normal winter. At this point, most of our important commercial varieties have already met their chilling requirements for the year. According to Jason, Concord is very close and will probably meet its requirement this week, while Cabernet Sauvignon requires a higher amount of chilling, but will likely meet that target within the next week or two.

OK, so the vines are meeting their chilling requirements earlier – so what? Once the vines have met their chilling requirement for the season (each variety has somewhat different requirements depending on its genetic background), they are primed to

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break bud under the right conditions. In other words, the vines are at a higher risk of breaking bud in response to an early warming event, which increases the risk of frost damage

A follow-up question might then be "How warm does it need to get, and for how long, for the buds to break?" Unfortunately, we don't know the answer to that, except that it will take less time at warmer temperatures for the buds to come out of dormancy under these conditions than it normally would. Varieties that need fewer chilling hours before budbreak, such as riparia-based varieties like Marquette, Frontenac and Baco noir, will still respond to warmth more quickly than those that require higher amounts of chilling, much as they do in a normal season.



Let me emphasize that we are not predicting that we will have an early budbreak, but based on what we know right now, there is an increased risk that we could have an earlier start to the season if we get a spell of warm weather in March or early April. If temperatures don't warm up quickly this spring, we may still have budbreak that is closer to its normal timing. As always, Mother Nature gets the last word in farming.



Double pruning can be a strategy to use when there is a higher risk of early budbreak and frost damage.
Apical buds will push first, while basal buds are suppressed.

Photo: Ed Hellman, Texas A&M

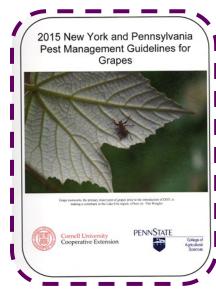
With all that in mind, are we recommending that growers alter their pruning practice in response to this information? The answer, as usual, is "it depends." In the case of varieties that have an early budbreak, or areas that are more prone to frost damage, leaving some extra buds could help to balance out any frost damage that might come. Double-pruning is another option to consider, where much of the bulk pruning is done during the winter, and a follow-up pass is done to finish pruning after the major threat of frost has passed. Growers who consider trying one of these will need to keep in mind that both practices may require an additional pass through the vineyard, either to finish the pruning or to thin excess shoots if we don't end up getting significant frost damage.

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FLGP Enrollment Will Open in January

Enrollment in the Finger Lakes Grape Program for the 2016 season will open up the first week of January. The enrollment fee for growers in Ontario, Schuyler, Seneca, Steuben and Yates Counties will be \$75 this year. Growers in Wayne County should check with their county Extension office for information about enrollment in the FLGP. Growers who farm outside of those 6 counties can enroll in the program for \$130 for the year. Payment can be made by credit card using our online form at http://flgp.cce.cornell.edu/enrollment.php, or by check using the printed form at the end of this issue of the Update.



Growers will be able to order a copy of the 2016 NY/PA Pest Management Guidelines for Grapes when they enroll as well. The cost will be \$30 again for a hard copy. If you are interested in purchasing online access to the Guidelines, either alone or in a bundle with the hard copy (there's a discount if you order both versions), visit http://store.cornell.edu/c-875-pmep-guidelines.aspx. Printed versions of the quarterly *Vineyard Notes* newsletter are available for an additional \$25 charge to cover postage and printing.

We trust that you find the information that we provide worth the investment and a valuable asset for your business. Thanks to all of you who have supported the work of the FLGP over the past year by enrolling in our program. We look forward to working with all of you in 2016.

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FLGP Enrollment Form



A Regional Extension Program of Ontario, Schuyler, Seneca, Steuben, Wayne, and Yates Counties

Finger Lakes Grape Program 2016 Enrollment Form

Contact Name:		Select ALL the counties in which you have a vineyard or conduct business	
Vineyard /Business Name:		0	Ontario Schuyler
Address:			Seneca
Business			Steuben
Phone:	Cell:		Wayne
			Yates
Email 1:			Out of Area
Email 2:			County
	You may list up to two email addresses		State
	Will you be planting/replanting any vineyards in 2016 (circle one)?	Yes	No

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Return to: Finger Lakes Grape Program, 417 Liberty Street, Suite 1024, Penn Yan, NY 14527

For your convenience you may enroll at the Finger Lakes Grape Program website using a credit card. https://flgp.cce.cornell.edu/enrollment.php





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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.

B.E.V. NY 2016

Thursday, March 3 – Saturday, March 5, 2016

Trade Show: Friday, March 4 – Saturday, March 5RIT Inn & Conference Center

Henrietta, NY

Program and registration information is coming soon!

Exhibitor registration is open now. Don't miss out on the chance present your products and services to more than 400 people during our two-day trade show at B.E.V. NY this year. Exhibitor information and online registration is available at http://flgp.cce.cornell.edu/event.php?id=162.

We are also looking for sponsors to help support this year's B.E.V. NY conference. Being a sponsor can make your organization to stand out from the crowd at B.E.V. NY, and helps us to provide the best possible information to the industry. Information about our sponsorships levels and associated benefits can be found at http://flgp.cce.cornell.edu/event.php?id=161. We are happy to discuss other sponsorship options with you as well. Please contact Shelly Cowles at mw69@cornell.edu or 315-787-2274 if you would like to discuss these opportunities.

2016 Pesticide Training and Recertification Series

Classes: February 1, 8, 15, 22, 2016 7:00 pm - 9:30 pm

Exam Date: Monday, February 29, 2016 6:30 pm - 11:00 pm

Cornell Cooperative Extension-Ontario County

480 North Main Street, Canandaigua, NY 14424

Anyone interested in obtaining a pesticide certification and meets the DEC (Department of Environmental Conservation) experience / education requirements **OR** current applicators seeking pesticide recertification credits should attend. 2.5 recertification core credits will be available for each class.

Cost is \$175.00 for certification, which includes the training manuals and all 4 classes. This does not include the \$100.00 exam fee. Fee for recertification credits is \$25.00 per class. For more information or to register, please contact Cornell Cooperative Extension of Ontario County at 585-394-3977 x 427 or x 436 or email nea8@cornell.edu or rw43@cornell.edu. An online registration form is also available on the website www.cceontario.org.

Cornell University
Cooperative Extension
Finger Lakes Grape Program

GRAPE MEETING

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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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