



Finger Lakes Vineyard Update

IPM

Hans Walter-Peterson

While we are in the early stages of harvest now, there may still be the need to apply sprays for late-season issues that arise, like botrytis and sour rot, downy mildew, or late flare-ups of insects like leafhoppers or multi-colored Asian ladybeetles (MALB). Growers that are contemplating sprays late in the season should first check with wineries that are purchasing their fruit to make sure they understand why a spray might be necessary and that they are OK with that spray being applied.

Following that, or as part of that discussion, consideration needs to be given to the pre-harvest interval for any material that might be used. The pre-harvest interval (PHI) is set for each pesticide material so that enough time can pass in order for the remaining residue of the chemical to drop below thresholds that could have health impacts to consumers of that crop. There are obviously disagreements about appropriate residue thresholds for some of the chemicals used in agriculture and whether the stated PHI requirements are appropriate, but I won't deal with that here.



PHIs for materials used in New York vineyards can vary significantly, from 66 days for EBDC materials like mancozeb to no PHI requirement for "soft" materials like potassium bicarbonates (e.g., Armicarb, Kaligreen) or Elevate. While some materials state that they have a 0 day PHI, growers also need to abide by the re-entry interval (REI) requirements. For example, Captan 80 WDG has a 0 day PHI, but the REI requirement is 48 hours, which effectively makes the pre-harvest interval 48 hours as well.

One concern that some winemakers might have about late-season sprays is their potential impact on fermentation and wine quality. The primary concern of chemical residue limits (and PHIs) is human health, not impacts to fermentation by yeast or malolactic bacteria. In a three-year trial conducted by our program and our friends in the Enology Extension Lab, several fungicides used for downy mildew and botrytis (Elevate, Vanguard, captan, and Pristine) were applied to grapes as late as was allowed by their respective PHIs before harvest. We found no impacts to fermentation rates by yeast or MLB by any of the materials, and sensory panelists were unable to distinguish between wines made from fruit sprayed with the various materials at their PHI and from wines made from fruit that was not sprayed just prior to harvest. We did not test any insecticides during this trial, nor did we test another fungicide that could be applied near harvest but may have an impact on yeast – copper.

Be sure to consult the product label to learn about PHI and REI requirements for any materials that might be used near harvest. Another resource to look for label information is the [NY Pesticide Product, Ingredient, and Manufacture System \(PIMS\)](#), which allows users to search for labels of any pesticide that is approved for use in New York State.

Fruit Sampling Basics

Gillian Trimmer

It's a perennial question from growers, winemakers, and onlookers alike: "How is the fruit doing?" Though we gain a great deal of information from looking at the vines, examining the clusters, talking to one another, and watching the weather, sometimes we need to quantify and evaluate the state of our grapes in a more concrete way. One of our best methods for determining how ripening is going and deciding when to pick is to take fruit samples.



The idea behind sampling is to collect a subset of fruit that is representative of what you'll be picking. It is important to be as objective and unbiased as possible, but that doesn't mean that all sections of the vineyard need to be treated equally. Different varieties and blocks should be sampled separately, as should areas of the vineyard where the land or the health of the vines varies from other parts of the farm. This year in particular, special attention should be paid to soil variation, as soil texture, depth, organic matter content, and a number of other characteristics can have a large impact on the amount of water available to the plants. With the drought conditions we've had all season, it's likely that the effect of soil type on vine growth and crop will be more pronounced than usual. Thus, taking separate fruit samples from vines on separate soil types—even where those occur within the same block—can inform whether it would be worth it to pick those sections separately. Berries sampled should also be representative of what will be picked; only sample from clusters of the sort that would make it into the bin. Where you'll be machine picking, this probably means taking berries regardless of how they look, since the harvester won't be too selective.

Controlling for bias is difficult, particularly when some parts of the vine or vineyard are more easily reached than others. Care should be taken to make sure berries are taken from clusters in

Fruit Sampling Basics

Gillian Trimmer

different sections of the canopy (i.e. some near the trunk, some near the ends of canes, some from the exterior, some from the interior...) and from different sides and portions of the cluster. For every three berries taken from the upper and middle parts of the cluster, one should be taken from the tip. Samples should be taken from both side of the row—this is accomplished by alternating taking berries between two rows that one is walking between, or when sampling only one row, simply making sure to sample up one side and back down the other. To help avoid the tendency to always pick from the same kind of cluster or position on the vine, you can choose a predetermined number to count to or pace before stopping, then reach out into the nearest vine without looking and take a berry from the first cluster your hand hits. The Veraison to Harvest sampling protocol suggests sampling after going a certain number of panel lengths. Within an entire sample (typically 100 berries), it is best to take fruit from several rows spread over the section.

Once a given fruit sample is brought back to the winery or lab, it is weighed so that average berry weight can be determined, then crushed within the bag to release the juice. Soluble solids (which tell us about the sugar accumulation), titratable acidity (which tells of how much acid will be perceived) and pH (which tells of microbial stability) are all then determined. By collecting these numbers over the course of the season and comparing them to previous years' readings, we gain an easily referenced and quantified way of evaluating ripeness—a valuable tool to have during the chaotic harvest season.

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.



Training on Changes to Worker-Protection Standards Regulations

Wednesday, October 5

Dickman Farms

13 Archie Street, Auburn NY

A number of significant changes to the federal Worker Protection Standard for Agricultural Pesticides (WPS) will go into effect on January 2, 2017. These changes will affect farms, greenhouses, nurseries, forests, and other establishments (including organic establishments) on which pesticides are used in the production of agricultural crops.

If you use, supervise the use, or are responsible for the use of pesticides on such establishments, the Department of Environmental Conservation (NYSDEC) invites you to attend a WPS Mock Inspection on the morning of October 5th at Dickman Farms, 13 Archie Street, Auburn, NY. NYSDEC staff will be on hand to explain the rule changes and how to comply with them.

Check-in is from 9:30 to 10:00, with training to follow from 10:00 to noon. Attendees who are certified to apply pesticides in Categories 1A, 1D, 10, 21, 22, 23, 24, or 25 will earn 2 recertification credits. (Remember to bring your NYS pesticide certification photo ID card.)

To register, please send an e-mail to PesticideCompliance@dec.ny.gov. If currently certified in New York as a pesticide applicator or commercial technician, include your Certification ID Number.

You can find additional information about changes to the WPS on EPA's website at: <https://www.epa.gov/pesticide-worker-safety/revisions-worker-protection-standard>.

2016 Growing Degree Days and Rainfall

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	Hi Temp (F)	Lo Temp (F)	Rain (inches)	Daily GDDs	Total GDDs
8/31/16	79.7	67.0	0.12	23.4	2440.7
9/1/16	73.2	62.7	0.00	18.0	2458.7
9/2/16	72.3	57.7	0.00	15.0	2473.7
9/3/16	74.8	50.4	0.00	12.6	2486.3
9/4/16	82.2	53.6	0.00	17.9	2504.2
9/5/16	83.6	58.9	0.00	21.3	2525.4
9/6/16	84.3	58.5	0.00	21.4	2546.8
Weekly Total			0.12"	129.5	
Season Total			9.34"	2546.8	

GDDs as of September 6, 2015: 2423.9

Rainfall as of September 6, 2015: 18.49"



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Finger Lakes Grape Program

September 7, 2016

Seasonal Comparisons (at Geneva)

Growing Degree Days

	2016 GDD ¹	Long-term Avg GDD ²	Cumulative days ahead (+)/behind (-) ³
April	36.1	65.2	-9
May	270.1	252.3	0
June	489.1	480.6	0
July	695.9	639.8	+3
August	742.9	588.2	+15
September	95.1	351.0	+18
October		105.2	
TOTAL	2329.1	2481.8	

1 Accumulated GDD's for the Month

2 The long-term average (1973-2015) 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.

Precipitation

	2016 Rain ⁴	Long-term Avg Rain ⁵	Monthly deviation from avg ⁶
April	1.17"	2.89"	-1.72"
May	1.66"	3.11"	-1.45"
June	0.65"	3.68"	-3.03"
July	1.01"	3.42"	-2.41"
August	2.22"	3.15"	-0.93"
September	0.00"	3.64	
October		3.22	
TOTAL	6.71"	23.12"	

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



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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