



## WINE GRAPE INFORMATION FOR PENNSYLVANIA AND THE REGION From Penn State Cooperative Extension

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**Heading into Harvest:** Although a week of clear weather is in the forecast, it is raining hard in Lancaster as I write this newsletter. [Veraison](#) (read an excellent chemical and physiological explanation of veraison by DeAnna D'Attilio) has arrived in southeast Pennsylvania vineyards so harvest is on everyone's minds now. Visiting vineyards in the area I am impressed by the quality of canopy management in what has been, by most measures, a wet growing season that was punctuated by late spring frost and, in some cases, hail damage. And just how wet is it? I have seen more aerial roots hanging from canes and cordons than ever before, indicating that the canopy humidity is prodigious. I qualify these remarks by saying that rainfall amounts in the summer can be highly variable from one location to another, even in quite close proximity, and areas to the north, east and west, may be receiving less precipitation. To get the Erie perspective, I asked Randy Grahm at [Courtyard Wineries](#) if he was getting rain in his vineyards recently:

*Rain? What rain . . . Oh you mean the everyday version that we have had lately . . . Tis the season for lots of vineyard care, keeping the fruit zone open and exposed by shoot tucking, leaf plucking both by machine and hand follow-up, side hedging and of course a tight spray schedule. (even 6 sprays on Concords!) Not to mention the weed pressure in a wet year, and of course as the cost of raising grapes this year will be unusually high, there will be downward pressure on pricing as there is a large crop everywhere. I have thinned everything, wine grapes by hand and did 250 acres of Concords by machine. (half of that was our farm and half was custom thinning for others). Lots of effort, but I'm reasonably happy with our current crop sizes and lack of mildews, and in most places – good weed control as well.*

These comments are illuminating on many levels – they demonstrate viticultural and economic awareness of the conditions in the vineyard, but perhaps more importantly the grower has not lost his sense of humor or perspective about growing grapes in the East, which is essential to success and sanity. In the southeast, the vines continue to grow like weeds, and so do the weeds. As for the latter, given the abundance of soil moisture (many growers remark that even this late the soil profile is still saturated, a highly undesirable condition at veraison), having weeds both in and under the vines may be helping to relieve excess soil moisture. It doesn't look pretty, but many growers are willing to sacrifice appearance and tidiness for benefits to the fruit. In discussions there is some consensus that vegetative vigor is extending deep into the season, and that red varieties will have a difficult time reaching full

maturity, so though we are near the terminus of the period when cluster thinning may offer a fruit ripening benefit, it may be worthwhile to drop some crop, especially in late red varieties, which must hang many more weeks. Removing unripe clusters (or parts of clusters) and-or wings will likely enhance uniformity and overall maturity of harvested grapes. It should be mentioned that hanging a big crop in a wet season may be prudent since it can act as an “anchor” or significant resource sink to help moderate vegetative growth, but the vine may not ripen a big load so thinning may be necessary. Whites are almost inevitably more malleable and agreeable than most red varieties, but can also benefit from proper crop management. When thinning clusters, choose those in areas of the fruit zone that have bunches touching each other, which are sure to be among the first to get botrytis. Speaking of which, we are entering fruit rot season, and the proper spray materials should be applied – we have talked about this a lot over the past 2 seasons and Dr. Wendy McFadden-Smith and her grad student Cristina from Ontario have traveled many miles to spread knowledge and recommendations of sour rot avoidance - click [HERE](#) for Wendy’s 2012 Grape IPM Workshop presentation about sour rot and the [Ontario Grape IPM](#) website. Please also review recommendations from the [NY-PA Pest Management Guidelines for Grapes](#) and Dr. Wayne Wilcox’s [Disease Update](#). Also, an exposed fruit zone will greatly help with aeration and spray penetration. Any way you can, protect the integrity of the berry skin, and keep all critters – mainly birds and bees at this point (easier said than done). Bird nets and noise devices should be in operation now, or very soon – protect and discourage before they arrive! Before 2011/12 I would hesitate to recommend picking early (okay for whites, more problematic for reds) but some winemakers feel that getting fruit that is at various levels of unripeness has greater wine quality potential than rotten fruit, and I would, in many cases, agree with them. That’s strictly a personal call based on risk tolerance, intuition, and experience and skill in the vineyard and cellar, but it’s worth considering heading into this harvest. While powdery mildew has been strangely absent from vineyards this season, downy mildew is thriving and growers will have to work hard to keep leaves protected into the harvest season – continue to very careful in rotating materials. Growers are comparing this season to 2003 or 2004 - I think it’s a rather ugly blend of both – in ’04 you could count on one hand the number of clear and sunny days we had during the summer, which leads me to ponder the effects of diffuse light conditions on fruit ripening, in ’03 it simply rained from start to finish. It’s not like 2011 or 12 when we actually had some nice conditions in August, which were eventually spoiled by Irene/Lee and Sandy respectively. Three weeks ago we had some dry weather (and heat spike that caused some sunburn) and I thought we would break out of the afternoon showers pattern but it didn’t hold. I’m hoping that there was enough warmth in mid-season to moderate the accumulation of methoxypyrazines (especially in red varieties) which I believe helped red wine quality in 2011 and 2012. Opening the fruit zone will help to lower levels of MPs in red varieties. Soil moisture or plant available water, as our French colleagues have often expressed, is the key to fine red wine production – mild deficits are desired after fruit set to set small berries, and prior to veraison to regulate vegetative growth, and excess moisture levels tend to compromise all the efforts of vineyard design and management to create a balanced vine of a particular size. In vintages like this, well-drained soils prove their worth. I’ve learned since I have been in Pennsylvania that vintage quality can often be measured relatively according to the number of hedging passes through vinifera varieties. In the utopian vineyard and vintage, zero passes are needed, but normally 1-2 indicates a fine vintage, 2-3 is in the middle and 3+ and red varieties are problematic. This is a 3+ year in many vineyards, but more growers are letting their vines grow shaggy to increase vine transpiration. We know from experience that this means rigorous triage of grapes in the field and-or prior to the destemmer, and even more so if fruit rots are a problem. It’s not too early to be thinking of all of these measures. Seasons like this are long and exhausting with lots of tractor time and canopy, fruit and vineyard floor management effort and expenses, but these final weeks before harvest can really make a difference in fruit quality. One of our most experienced wine makers told me yesterday that he still thinks he can make fine red wine if it stops raining TODAY! If the weather dries out and the sun appears, we’ll certainly make wonderful white wines and still can pull a rabbit out of the hat with reds. I would observe that in years like this one, hybrid varieties make good sense for their general sturdiness and disease resistance. Chambourcin, for example, simply winks at conditions like these. The white hybrids are all at risk to rot, but have good wine potential. Good luck to all of our growers as we head into September.

In preparation for harvest, you can read [Harvest](#) (2011), which was written by Dr. Ed Hellman at Texas A&M University and Mark Chien at Penn State Extension. It’s a nuts and bolts guide to preparing for and

executing a wine grape harvest. Also, [Rain at Harvest](#) was written to provide some insight into coping with wet conditions during the harvest season.

**Berry Maladies:** We are fortunate to have some of the great minds in viticulture visit Pennsylvania, including people like Richard Smart, Kees Van Leeuwen, Xavier Chone, and many others. They bring their vast and international experience to bear on our vineyards, and we benefit from their knowledge and advice. This week the Pennsylvania Quality Assurance (PQA) group brought [Dr. Bhaskar Bondada](#), an eco-physiologist who works with grapevines at Washington State University to talk specifically about the problems of berry and cluster shrivel, particularly in red varieties. This includes early and late bunch stem necrosis, berry or sour shrivel, sunburn and dehydration. These have been notable problems in Washington and California in recent years and have been seen in Mid-Atlantic vineyards. They are environmental, nutrition and physiology maladies that are not well understood and frustrate growers and researchers alike by their random appearance and disappearance in vineyards. They can negatively impact both yields and wine quality. Unfortunately, there is no silver bullet cure for these problems, and ESBN, LSBN and berry shrivel are particularly exasperating. Dr. Bondada's best recommendation at this point is to accurately identify and assess the problem and then simply remove the fruit and do not make wine from it. Each type of shrivel has a unique appearance, from the golf ball dimpling of berry dehydration, to the raisin-like skin deformation of berry shrivel. LBSN often affects the lower portion of the cluster, and has more angular features in it shrivel. Sunburn begins at the circular spot on the berry and shrinks into a depression around the seeds. This is explained in great detail in an AJPS article: [Not All Berry Shrivels are Created Equal](#) (Bondada, Keller. 2012) More research is underway to understand the causes of these maladies, and hopefully they will be treatable in the future. A more general account of berry shrivel by Dr. Bondada appears in the Washington State University Wine and Grape Research and Extension Newsletter (Vol. 15, Issue 4, Winter 2005) called [Berry Shrivel: Grapes Behaving Badly](#). Dominic Strohle (Big Creek), Sarah Troxell (Galen Glen) and Brad Knapp (Pinnacle Ridge) are the PQA members that organize the seminars, and should be appreciated for this service to the wine industry.

**Viticulture and Enology Courses at Harrisburg Area CC Begin Soon:** There is still time to register for Fall courses in Enology and Viticulture at Harrisburg Area Community College. These courses are offered online, and can be taken as part of an associate degree, certificate, or as stand-alone studies in a particular topic. All lecture material is presented online, and there are no set meeting times (except as noted for Wine Chemistry and Microbiology) so you can complete your studies as your daily schedule allows. Courses offered this Fall include:

- **ENVI 100 General Viticulture, Instructor: Joyce Rigby** - An introduction to the grapevine, grape production, and the world of viticulture. Students learn the taxonomy, anatomy, physiology, and propagation of the grapevine. Grape uses and products are discussed with an emphasis on commercial wine production. Course also explains the climate-soil-grapevine relationship and how it has shaped the history and creation of wine regions.
- **ENVI 161 Fundamentals of Enology, Instructor, Bob Green** - Provides an overview of commercial wine production. Students learn the distinction between white, rosé and red wines as well as sparkling, fortified and dessert wines. Basic wine chemistry and microbiology, production operations, and common terminology are covered. Winery sanitation theory and methods are introduced.
- **ENVI 164 Wine Chemistry and Microbiology, Instructor, Dr. Barry Gump** - Course covers the basic concepts, principles and practices of the chemistry and microbiology involved in wine production. Students learn chemical composition of grapes, must and wine, and the changes that occur during the production of aged wine. Wine quality measurements are introduced and appropriate correctives are outlined according to industry standards. Common microbial organisms, yeasts and bacteria and their effects on wine quality are introduced and discussed. Students learn laboratory methods to determine basic chemical composition of must and wine and complete assays that evaluate product stability and procedures for identifying microbial

populations. In addition to the online lecture material, the class meets for two weekends for hands-on experience running laboratory analyses.

- **ENVI 253 Sensory Evaluation II** - Students compare and evaluate hot and cool climate wines originating from the Eastern US with archetypal wines. Course requires students to evaluate wines on their own time and participate in two on-campus weekend evaluation seminars. Anyone with basic wine sensory skills will improve their ability to identify qualities of Eastern wines, as well as hone their skills for evaluating wine in general. Students must be at least 21 years of age to participate in wine evaluation. A course fee of \$50 is required in addition to tuition. This is an advanced level course, and as a prerequisite, requires basic sensory skills. For more information, and to receive permission to register, please contact the instructor, Joyce Rigby at [jcrigby@hacc.edu](mailto:jcrigby@hacc.edu).

Classes start on Monday, August 19, and there is still time to register! For more information about these courses or the HACC Viticulture & Enology Program, please contact: Bob Green, Program Director, Viticulture & Enology, [HACC, Central Pennsylvania's Community College](http://www.hacc.edu), Phone: 814 860 1452. Email: [ragreen@hacc.edu](mailto:ragreen@hacc.edu). **Find us on Facebook** at [HACC - Wine Programs](https://www.facebook.com/HACC-Wine-Programs)

Two excellent meetings offered by Cornell Cooperative Extension in Geneva, NY:

**Cultivar 'X' Seminar:** August 15, 2013 from 8:30 to 5:00 p.m. at the Ramada Lakefront Hotel in Geneva, NY. The multistate NE 1020 project was designed to test the performance of interesting grape cultivars, both new and existing, at 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 - Penn State has variety trials in Adams and Erie counties. 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. Registration is free but pre-registration is required and space is limited. Contact Sarah Lincoln at [sjl38@cornell.edu](mailto:sjl38@cornell.edu) or 315.787.2255 for information and registration.

**New Grower/New Winery Workshop hosted by Cornell Cooperative Extension in the Finger Lakes:** August 22-23, 2013 from 8:30 AM – 5:00 PM at the 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 vineyard or 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](#). Contact Gemma Osborne at [gro2@cornell.edu](mailto:gro2@cornell.edu) or 315-787-2248 with any questions.

Vineyard for Sale: A small vineyard in Berks County is for sale. For information go to <http://www.bluebirdvineyard.net/>

Note: Check the PWGN [Buy/Sell list](#) for grapes wanted and for sale and send in your own requests.

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