

WINE GRAPE INFORMATION FOR PENNSYLVANIA AND THE REGION

From Penn State Cooperative Extension

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ASEV Eastern Section: This is an important meeting for our region. It is an opportunity for viticulture and enology researchers to communicate the results of their work to those it is intended to benefit but equally important is the meeting and exchange of ideas between industry, faculty and students. The pest management symposium was excellent with updates on Brown Marmorated Stink Bug, late season fruit rots, Grapevine Yellows, leafroll virus and more. All of these have an impact on YOUR vineyard. Dr. Joe Fiola from Univ of MD presented his data and wines testing sensory thresholds of BMSB taint in wines. Is there a wine grower in the Mid-Atlantic who cares about wine quality who does not need to know about this? The student papers are amazing for many reasons, first and mostly the students, who are without exception bright, enthusiastically and incredibly smart. Lots of research validates what growers already are doing in the vineyard but there are also plenty of new ideas being tested in vineyard research plots. The list of topics covered is too lengthy to cover here but I'll highlight the work of Vinay Pagay, working with Dr. Alan Lakso at Cornell where they are developing microchip sensor technology that can be implanted in the trunk of a vine to monitor sap flow. Yi Zang and Dr. Imed Dami are investigating the effects of *abscisic acid* on cold hardiness with remarkable and encouraging results. If your vines ever experience winter injury, you need to know about this research. Dr. Gavin Sacks gave two outstanding presentations on the effects of sulfur on juice must and aroma compounds in hybrid grapes. Usually, when I hear Gavin speak I'm confused (my fault, not his) but I know what he is saying is brilliant to someone smarter than me. His work on components of grape and wine from *methoxy-pyrazines* to *ortho-aminoacetophenone* is absolutely amazing and makes a difference in how we understand, grow and make our wines. Thanks to Joe Fiola, Kevin Atticks and the great folks in Maryland for hosting this year's conference. The 2012 conference will be in Traverse City, Michigan (think cool, water, cherries, excellent restaurants and delicious aromatic white wines). [See attachment: ASEVES Notes](#)

Some Viticultural Musings: 2009 was a crummy vintage but I am excited about the wines. At the tippy-top of wine quality I think we are finally getting it. It was only a matter of time, knowledge and technology. When I was in Oregon and we were trying to figure out Pinot noir one of the major goals was to elevate wine quality in poor vintages. We watched the Burgundians do it and so we figured we could do it to. Now, tasting red wines from the very difficult 2009 vintage, it appears that we reaching this goal. We aren't there yet but certainly moving in the right direction. I used to think that vintage variation was an excuse for offering the consumer sub-standard wines but it's not because only the most geeky wine consumer pays attention to the weather at harvest. Most simply expect, and deserve, a good wine for the price.

I think much of the credit goes to Lucie Morton and her proselytizing for higher density vineyards with new clones and rootstocks. I just think it makes a big difference if international style and quality of wines are the goal. Also, the amount and quality of viticulture research in the region is now bearing fruit. We also have a world of knowledge available to us and it's easy to see the ideas that connect fine wines grown around the world. It appears that *vinifera* red wine vineyards planted from 20-30 ft²/vine have the best wine potential in good years like 2010 and bad ones like 2009. So depending on the price point and wine style goals 40-50 ft²/vine would be a good mid-range density with 8'x4-5' sort of in the middle. Many of the new vineyards are less than ten years old but it seems that the higher density vineyards ripen their fruit earlier, which is an important quality factor in our region where frost and rain are constant threats around harvest. If vineyard design and viticulture can encourage Merlot to be ready around mid-September and Cabernet Sauvignon by early October then we are in the range of expectations in Bordeaux. Good sites (rock and slope) and vineyard design (vine density/spacing) are necessary to achieve this goal. Slope may be an underappreciated asset – in a recent visit to northern Virginia two very similar vineyards differed only by amount of slope and the steeper one typically picks a week

earlier. While the red wines from 2009 are generally lighter than '07 or '10, the ones I have tried still have plenty of goodness to them. Cabernet Sauvignon is a difficult grape in southeast Pennsylvania – it never seems to quite get to full maturity, yet a barrel sample of a '09 from 10 year old vines using a rotary fermenter yielded a delicious wine. It shed light on the responsible and intelligent use of technology to nudge a wine in the cellar. As I understand it, all of this can go terribly wrong if not used correctly so the wine maker really has to know what he or she is doing – in this case, a skilled consultant was the key to success. Cabernet Sauvignon and Merlot are also very cold tender, as growers in Erie can attest, so maybe tent technology or something creative needs to be applied, perhaps purchasing fruit from Virginia. A mature core to a wine, and particularly a red wine, is essential to achieve overall balance. This should be accomplished in the vineyard, but if it isn't, then judicious blending may be answer.

As the region explores fine wine production the issue of bottle price and value will enter into the economics of wine growing. I believe that the new wine grower should figure out what style, type and price point of wine is the goal and then figure out all the costs necessary to create it – a Concord wine will vary significantly from an expensive Bordeaux blend. At the ASEV conference there were two presentations about the relative cost of production to what a consumer is willing to pay for a bottle of wine. It's an important question, especially as wines get more expensive to produce. As far as I can tell, it's a bit of a chicken and egg game that the wine industry has to play with the consumer. The unanswered question is if we make it will they come and if they do, will they pay enough to compensate for the viticulture and winemaking necessary to make fine wines? Can 2 t/a wine growing work in the East? So far, the results are not encouraging, aside from a few very expensive small production wines, there is definitely a ceiling that Eastern wines butt up against. I think that's why the wineries in the Finger Lakes gave up trying to make Pinot Noir, even though in Oregon the low yield economics appear to work even in a wholesale market formula.

Just to be clear, we continue to excel at making high quality native and hybrid wines of many types and styles. These are our *raison d'être* and will likely be the core of our regional wine industry and identity for years to come. I feel confident that the viticulture and wine making are well understood and practiced for these wines and that was bolstered by a recent visit to the Erie region, where these wines dominate. I tried some excellent Noiret wines, which I had little prior experience. However, we can certainly learn and do more, especially with the new cold hardy hybrids, so I plan to hold a hybrid wine production workshop this fall.

Our wines are getting better, there is no doubt about it. David Schildknecht from the Wine Advocate will be here tasting Mid-Atlantic wines later this month. Consistent scores in the high 80s and low 90s are surely in our future, which help to calibrate our progress in the minds of these publications relative to other wine regions. When I first got here 11 years ago I was always afraid to encounter Eastern wines, knowing that many were substandard in quality. Now, for example at the ASEV Eastern conference where we tasted dozens of wines, I dive right in, confident that I will find great pleasure and surprises in the wines I taste, and it's only going to get better. A recent swing through northern Virginia with stops at RdV, Delaplane and Linden, and in Erie and Western NY appear to confirm this trend.

Field Grafting: This has been a bit of an Achilles Heel for eastern viticulture over the years. In arid wine areas they change varieties like socks to accommodate the whims of the consumer, field grafting and budding to a new variety and full crop in the second year. Here, we struggle to remove vines, replant entire fields and wait forever for the vines to start producing again. It's not a happy scenario. Maybe it's a benefit of climate change, who knows, but recently I have seen two demonstrations of successful field grafting. In Erie, Bryan Hed at the Penn State Lake Erie Regional Grape Research and Extension Center along with Andy Muza in cooperative extension have grafted successfully in the past two years using native varieties like Concord as the rootstock. I saw the vines last week and many are flourishing. Further to the south, Jim Law has side grafted Carmenere to Merlot with great success this spring. All the more surprising is that they have done the grafting work themselves using only self study and care in the vineyard. Remember too that it was a long, cool and wet spring, not friendly conditions for field grafting. Both suggested that timing and conditions are critical to success. Waiting until mid to late May after the spring rains fade is important and having enough heat to get the healing process moving. These are promising experiences that may offer greater hope of varietal flexibility for wine growers in the future. I tip my hat to Jim, Andy and Bryan for their industriousness and clever work in the field.

Grapevine Yellows: This disease caused by *phytoplasma* comes in many forms. Pierce's Disease, the scourge of viticulture in the south and the cause of much trouble in California to the point they passed a marketing order that has provided millions of dollars of research funds to deal with it. In the East, it seems to have primarily affected vineyards in Virginia and Dr. Tony Wolf at Virginia Tech and a former research technician, LeAnn Beanland, did considerable study of GY and its vectors. They found it has a bunch of host plants that live in the woods (another reason for vineyards to stay

far away from trees) and numerous insect vectors, primarily leafhoppers. It appeared to mostly affect Chardonnay but recently I have seen it move into Cabernet Sauvignon and Merlot. These are important varieties to the Mid-Atlantic region and the industry can hardly stand to have them compromised. The symptoms of GY are very obvious and include poor fruit set and the curling of leaf margins but can sometimes be confused with leafroll. At the moment, like PD, there is no way to rid or immunize a vine against a *phytoplasma* and vector management is the main control measure. It is very troubling to see vines being removed due to GY, as if winter injury and the other host of trunk disease problems that Eastern growers face isn't bad enough. This is a problem that needs to be on our radar screen. While both Tony and USDA-ARS scientist Bob Davis have not found GY in Pennsylvania vineyards, I'm pretty sure I have seen it and would be hard to believe that it is not spreading. Bob gave an excellent overview presentation at ASEV-ES. You should visit his website to learn more about *phytoplasmas*, identification in grapes and its vectors.

<http://plantpathology.ba.ars.usda.gov/phytoplasma.html> There is more information about Bob's talk in the ASEV report. UC IPM has an excellent page on leafhopper control at <http://www.ipm.ucdavis.edu/PMG/r302300111.html>. I spoke with Dr. Glenn McGourty, UC farm advisor in Mendocino/Lake who works with many sustainable-organic growers and there are others low-impact management practices for leafhopper control. Jim Law is always willing to share his experiences with others and wrote about the GY situation at Linden. This is one grower's approach to dealing with the problem in his vineyard. **See attachment: Grapevine Yellowings at Linden Vineyards**

Erie, PA: If nothing else, we have tremendous viticultural and wine diversity in Pennsylvania and it's both a blessing and a challenge. Erie is home to our first bonded winery after Prohibition so you can say that the modern Pennsylvania wine industry started there. It is also the home to 11,000 acres of process juice grapes and a growing wine industry. Denise Gardner, Penn State extension enologist, and I recently spent two days touring vineyards and wineries and attended a winemakers' roundtable. One of the best wine growers is Moorhead Farms in North East and I wanted to put the spotlight on them as a very successful independent vineyard. **See attachment: Moorhead Farms**

Wolpert and Yuste: There is still room for more participants in this extraordinary viticulture seminar on Wednesday, August 10th at the Farm and Home Center in Lancaster, PA. The topics will include Vine Balance and Rootstocks, New Viticulture Ideas and Technology from California, Viticulture Practices and Technology in Spain, Canopy Management and much more. It will be a good chance to interact with two premier viticulturists in the world. Registration fee is \$50 and includes snacks and lunch, and handouts. For registration and information please contact Mark Chien or go to <http://pawinegrape.com/>

Yikes! Ostararo Vineyards in southern Lancaster County has reported veraison on young Merlot and Malbec vines. Others say they are on the verge. How the vintage has turned on a dime (and it could turn back around on another dime). But right now it feels like it will stay warm and dry. In Lancaster we have had 15 90F+ days since May and it seems like more to come. We may not beat 2010 to the finish line but it looks like it might be close. Prepare for white wines with low acid and high solids and ripe reds. I was reminded on a recent trip to Erie that late generations of grape berry moth caused a lot of harvest rot issues. We could have a repeat of that problem. If rain comes, there is also plenty of lingering latent infections from a messy spring season. Birds should arrive soon. It would be wise not to be complacent about our usual harvest concerns. Continue to regulate crop according to wine objectives. If you have young vines, supplemental water will very likely be necessary.