

WINE GRAPE INFORMATION FOR PENNSYLVANIA AND THE REGION

From Penn State Cooperative Extension

Table of Contents

1. Mark Greenspan Workshop
2. Black Ankle Vineyard
3. NY Grape Prices
4. Pruning Workshops in PA and MD

Note: The Vineyard Development Workshop scheduled for January 16 has been postponed until an as yet to be determined date in February or March.

Mark Greenspan

Mark is well known for his articles in Wine Business Monthly which I suggest all grape growers subscribe to and read. Alternatively, you can find his articles at his web site <http://www.advancedvit.com/>. Mark runs a viticulture consulting company called Advanced Viticulture that operates primarily in the north coast counties but extends to the central coast. He came here to give a presentation on basic viticulture principles that allow his clients to be successful growers. Mark sees a lot of acres of grapes and has a unique ability to put practices into words that growers can understand and recycle back into their own vineyards.

Uniformity and synchrony are not terms that are often found in our Eastern vit lexicon. It may be because the conditions we work in simply do not allow those terms to penetrate our viticulture realities. Between winter injury events and harvest season hurricanes it is difficult to build either uniformity or synchrony, much less both, into our grape growing. But that does not mean we should not strive for them. Uniformity arrives in the form of equal distribution of essential viticulture characteristics across single vines and blocks of vines in a vineyard. He talked about uniformity in grape composition and quality, ripeness, and spatial parameters. Synchrony is the uniformity of grape and vine physiological processes that occur along a timeline, such as all clusters maturing at a similar rate and arriving at full maturity at the same time. Mark talked a lot about fruit zone management and how important it is to achieving uniformity and synchrony among clusters. We know fruit zone management primarily as crop regulation and canopy (shoot, leaf and lateral) management but he wants us to look past appearances and understand the physiological and biochemical processes that these management practices impact during the season. Veraison is absolutely a critical time for many important fruit ripening processes. The 2006 vintage demonstrated this very well. Despite the fact that we had variable ripening conditions due to unstable weather patterns it was not until quite late in October that it was clear that most late reds would not fully mature. My assessment is that flavor and color are good (if crop regulation was correct) at low sugars but wines do not show great depth and concentration if more heat had been applied after veraison. Again it's the warm/dry vs. cool/wet phenomenon at ripening. After veraison there are two very important biochemical processes going on that are relatively

independent of each other which he puts in separate boxes. The first is fruit ripening that is driven by enzymatic reactions responsible for the synthesis of secondary metabolites responsible for flavor, color and phenolic compounds that make wines taste, look and feel good. The other process is photosynthesis which produces the sugars so critical to an alcohol balance that gives wine the right weight and mouthfeel. All of these processes are intermingled with the balance of available light, heat, water, nutrients, etc. Light drives photosynthesis and there is a range of light conditions that allow leaves to photosynthesize at optimal levels. Canopy architecture will have a great influence on this process. Many biochemical processes are temperature driven and function most efficiently within a specific range of temperature. Ideally grapes should be ripening under these conditions. Heat may be one of the critical post-veraison conditions that we need to better utilize to improve grape quality. There is also rainfall and its impact on shoot growth and berry size to consider as well as the effects of relative humidity, diurnal temperature and the effect these have on plant respiration and grape acidity. While the secondary metabolite and sugar processes can be put in separate boxes they are surely intertwined chemically in ways I cannot yet fully appreciate or explain. All of this is critically important for viticulture in the East because we have such a changeable climate, unlike our arid region colleagues who can rely on heat and light and control water to the vines. We need to figure out how to gain those kinds of control through methods of viticulture and artificial manipulation of terroir characteristics. At a practical level, Mark suggests that cluster exposure and position be made optimal each season to help achieve uniformity and synchrony. This means the correct number of evenly spaced (no clumping, please!) and exposed clusters in the fruit zone that are open to light (heat), air and spray penetration. In addition to this row direction, fruit wire height and vineyard floor management practices have a critical influence on light and temperature in the fruit zone.

Correct yields for vine balance and fruit quality are probably even more important here than in California because we are on the razor's edge of ripening. Each grower really needs to figure this out his or her site. Mark stated that the best wines almost always come from low-yield sites but that low yielding vineyards do not necessarily produce the best wines. It is really a question of balance. Mark explained that yield adjustment begins with pruning. He discourages formulaic pruning, preferring more conceptual pruning based on the appearance of each vine (this comes with experience). He encourages short canes and no overlap. Cluster thinning must be done well before veraison but a green drop at 3/4 veraison will remove any fruit that is lagging behind. No clumps! Thin clusters for position. Lower yields will usually help maintain uniformity and synchrony among clusters and will help sugar accumulation, flavor development and reduce veggie character.

Mark also talked about fruit set issues which is generally not a problem for us, with the exception of Merlot this year. His suggestions are to avoid vigorous shoot growth at bloom by reducing or eliminating nitrogen fertilizing and avoiding excess water. Boron, Zinc and Molybdenum may especially help to improve set. Mark saw distinct improvement in Merlot, in particular, with pre-bloom foliar Mo applications (1/4 - 1/3 lb/ac).

With nutrient management Mark stresses the need to understand soil nutrition and suggests soil tests every 3-5 years at several depths looking at pH, Ca, Mg, K, and organic matter. He covered specific soil amendments for remediation. Visual signs are the best indicator of plant nutrition status and include foliar symptoms and rate of shoot growth in the spring. He encourages petiole sampling at bloom for making adjustments during the current year. Avoid excess N and K after veraison.

Finally, he covered irrigation which is a topic we little or nothing about for wine grapes in the East. Because of our variable rainfall it is extremely difficult to schedule irrigation. But in a drought year it could be critical for quality, especially to avoid late season severe water deficits. In CA the biggest mistake is to irrigate too early and too much. He likes shoot length of 3.5-4.5 ft or 18-22 nodes and shoots to stop growing before veraison. Mark does not want to stress his vines, he wants just enough water to keep them from becoming stressed. We want these exact same vine parameters but have to use different strategies to achieve them.

Best of all, Mark was a catalyst for us to further ponder the processes that go on in the vine that are responsible for wine quality that we do not see but can affect through our viticultural decisions and practices. Fruit zone management, soil-water relations, the effects of temperature, humidity and light on fruit maturation, these are all critical processes that we need to better understand and influence if we are to make consistently high quality wines under our conditions. He demonstrated clearly the value of conceptual viticulture knowledge and principals and how they can be translated into practices that help to improve wine quality.

Black Ankle Vineyard (attachment)

Every once in a while a vineyard project shows up that really causes a lot of excitement. When I first met Ed Boyce and Sarah O'Herron it was clear that they were typical wine nerds that wanted to have a vineyard but the more I got to know them the more they stood apart from the crowd. It eventually became painfully clear (to me, not them) that they had learned more about viticulture in their few years of independent study than I had paying for a classical viticulture education at UC Davis. Mon dieu! How could that be? Well, it turns out that if you are really curious and ask the right questions of the right people you can learn a whole bunch in a pretty short time. Each of them spent time working at vineyards and wineries in California, Bordeaux and Long Island to gain hands-on experience. They read a lot and visit places and ask a lot of questions. After acquiring a solid foundation of viticulture knowledge they looked for the right place to grow wine and eventually settled on a beautiful property of rolling hills near Mt Airy in Maryland. All of this is going on while Ed was working and Sarah having and raising for children. They have connected with the right people, hiring Lucie Morton and Lucien Guillemet (Chateau Boyd-Cantenac) as consultants to help them develop the vineyard and winery. 2006 was their first real harvest and from all indications all the work and learning has paid big dividends. As always, the truth is in the wine. BAV has been recognized for its efforts to adhere to principles of organic and biodynamic viticulture

which put them on the forefront of this frontier in East. Ed and Sarah have a lot of virtues but without a doubt what I appreciate most about them is their willingness to share their knowledge and experience with others. They represent the best of the generous and hospitable nature of this industry that all of us find so attractive. I had a chance to visit BAV before the harvest and took some notes that you can find attached to this message.

NY Grape Prices

New York tracks grape prices through some of its larger wineries each year. While they do not translate directly to Pennsylvania they are useful yardstick for our own prices. This is a practice that we need to institute in Pennsylvania as part of an annual vineyard survey. We'll get there someday. Until then, growers and wineries can get a sense of grape prices by reviewing the surveys from NY and VA each year. I found the recent 2006 grape price listing published in the Finger Lakes Viticulture Notes to be very helpful. You can access this and a lot of other very useful information at <http://flg.cce.cornell.edu/>.

How do grape prices work in the field? I don't really know. When I was a grower I would ask neighbors who grew grapes of similar quality what they charged the wineries. There always seemed to be a vague and sometimes elusive consensus on what the fair market value was for high-end Pinot Noir. Ultimately, price was determined through direct negotiations with individual wineries - in this business because of the uniqueness of the product that's pretty much the only way to do it at the scale of our industry. They, too, make it their business to understand the range of prices in the grape marketplace. Rarely was there any in-depth discussions about the relative economics of either business although to this day I think that would be helpful to both sides and the task of setting a fair price. It is worth remembering that, in the end, everything trickles downhill from the price of the bottle of wine received by the winery. Higher prices allow for better grape prices and improvements in vineyard practices. That is direction I hope we will go as a region. I think most people in our business have a sense of what is fair based on accepted standards of grape and wine quality. During the chaos of harvest it may be hard to objectively project wine quality although grape quality should be carefully recorded. That's why I always preferred to assess wine quality in the spring. Somehow, grape prices have to correlate to what ends up in the bottle. Eventually, when quality and relationships improve there will be a shift away from tonnage contracts towards acreage agreements. These always seemed easier to implement, probably because both sides were interested in the same goal - quality. I continue to endorse the use of grape contracts. In the end it is about two business people trying to make a living and hopefully being fair, honest and loyal to each other, the kind of virtues that long term relationships are built upon. We are an unusual business in that the grapes and wines are so inextricably linked together. We need for both to do well so that everyone can continue to prosper. This should be a common goal in our community.

Pruning Workshops in Pennsylvania (attachment)

Two pruning workshops are planned in SE PA.

January 11 at Manatawny Creek Vineyards in Berks County

February 6 at Naylor Wine Cellars in York County

Pre-registration is requested. The workshops are from 9 to noon and include a slide presentation and demonstration in the field. Cost is \$20. Registration form is attached.

Please note that there are pruning workshops in Maryland in February. Check the regional events calendar for dates and locations.

Fritz Westover, viticulture extension associate for VA Tech, has developed a set of Macromedia Breeze Pruning Instruction Modules are available from Virginia Tech Cooperative Extension and suggested as a primer to these workshops. You can access these at .

http://arecs.vaes.vt.edu/arec.cfm?webname=winchester§ion=about_us&pid=westover

Updated 2007 Vit/Enol Regional Events Calendar (see attachment)

I'd like to highlight Viticulture 2007 which is taking place on February 7-9 at the Rochester Riverside Convention Center in New York. It looks like a terrific program. Please see that attached flyer and check the Vit07 web site for information and registration www.viticulture2007.org.

Attachments:

[07calendar_121806.doc](#)

[BAVnotesSep06.doc](#)

[PruningManatawnyJan07.doc](#)

[Vit07flyer.doc](#)

Mark L. Chien, Wine Grape Agent
Penn State University Cooperative Extension
College of Agricultural Sciences
Lancaster County
1383 Arcadia Road, Room 1
Lancaster, PA 17601-3184

Phone: 717 394-6851

Fax: 717 394-3962

Email: mlc12@psu.edu

Web <http://winegrape.cas.psu.edu>
