PENNSTATE

College of
Agricultural Sciences

**WINE GRAPE INFORMATION FOR PENNSYLVANIA AND THE REGION**
**From Penn State Cooperative Extension**
http://pawinegrape.com/

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**The Picking Decision:** As growers and wine makers decompress from this vintage I had a chance to meet with a few of our best recently and got some good lessons from them. I talked a lot during the harvest season about the difficult decision of when to harvest the fruit to make the best possible wine under adverse conditions. The picking decision probably is the single most important one in any given vintage. As with so many aspects of our lives and business, it comes down to your personal goals and risk tolerance. I asked a friend what she would do in a year like this when disease was such a problem and she replied without hesitation, pick the grapes before they rot. I thought this made good sense. Then I considered growers in Oregon, Burgundy, Germany, and here who farm on the edge of existence and quality, who strive to achieve the best wine they can possibly make. They view the situation through a different lens. One grower said he checked every reliable weather forecasting source he knows, including a friend with access to unique weather data, and, well, they were all wrong - it rained instead of being sunny. Needless to say, the grower waited and suffered the consequences of the rain. Low risk growers pick early and probably made good, average wine, while the risk-takers who wanted to achieve something more wait and take their chances. I make absolutely no value judgment on either approach to wine making but will say that we need to offer more options to the risk taker, in the form of research that improve disease control and more accurate weather forecasting. To a person we seem to agree that there was a lot of vintage optimism going into Irene, but even after Lee, there was no clear consensus on hold them or fold them. As it turned out, many of the late reds, especially the bullet-proof Chambourcin, hung on the vines and came off quite nicely. It's never an easy decision but it usually is strongly influenced by type, style and price point of the wines being made. It's pretty clear that there is no easy answer to this dilemma. Risk management will always be an important part of our business. There is no right or wrong, just what you decide to do and the wine that is made.

**Winery/Grower Relations:** I received a message from a wine maker asking me what he should do about a load of Cabernet Franc grapes that did not meet the grape contract standards. Here is my reply…

First of all, bravo and congratulations for using a grape contract. That places you in the vast minority of vineyards and wineries, most who do business on a risky handshake (or less) basis. While I am in absolutely no position to dispense legal advice in this column I am able to share my experience as a grower and extension educator on the important matter of vineyard-winery relations. I can fully appreciate your dilemma. The wine business at the level of small, family owned and operated enterprises is a challenge because the people who are transacting the business are often friends or even family, so it's never just about the grapes, as it might be with a large, corporate winery. This is complicated by the fact that most people are kind-hearted by nature and do not want upset a relationship, so wine makers almost without exception in my experience, will accept sub-standard fruit, with or without a contract, in order to avoid conflict on the crush pad. This can have good or bad consequences both for the wine and the parties involved. My first experience with this situation was as the winemaker at Pindar Vineyards when a new, very proud and self-declared organic grape grower delivered a few bins of Chardonnay that were 100% infected by powdery mildew. He sincerely believed that just because the fruit was grown organically it was of superior quality. We accepted the fruit knowing there was no hope of making even a decent wine from it. I'm not a psychologist (oh, but wait…I have a B.A. in psychology!) but I think there are lots of reasons why growers deliver bad fruit to wineries and wineries accept it – inexperience, harvest chaos, inaccurate sampling, but I think it mostly can be explained by people being nice to each other which is not in itself a bad thing but does not always promote the cause of making fine wines. Yesterday, on a drive to State College, one of our best winemakers told me she had rejected one bin of horribly diseased Gewurztraminer from a local grower. I asked her if it was five or ten bins would she have still rejected the fruit. She had to think about it. Wine regions from Oregon to Sonoma to Pennsylvania have been having a very tough year yet I know wineries everywhere are accepting loads of grapes they would probably rather not have to deal with. In the case of the Cabernet Franc, a grape contract existed and the fruit did not reach minimum brix so the winery could have rejected it at the loading dock, but chose not to. It is my belief that by processing the fruit it has accepted it and therefore voided the contract requirements. So is this the end of the story? It could be but I don't think it should be. The best and most successful vineyard-winery relationships are long-term and built on mutual trust and respect, and seek to optimize the sustainability of both parties. Ending it here does not achieve these goals. So now what? Should the grower get the full contract price for the substandard fruit? From a strictly legal perspective the winery is obligated to pay the grower the agreed upon price for the grapes. Would this be fair? Perhaps not. But there is so much more to a grower-wine maker relationship than just the money. Since the deed is done, an alternative solution that will hopefully serve the interests of the vineyard and winery should be sought. In vineyard-winery relations the objective should be to be fair to both parties when it comes to difficult vintages like 2011. Grape and wine quality is also highly subjective, so there is a fudge factor built into any interpretation of quality. Also, in our business we have very good years (2007, 2010), bad ones (2009, 2011) and lots of in-between ones. We all have to survive the ups and downs together. It takes communication, cooperation and, sometimes, a bit of compassion. Here's how we dealt with this situation in Oregon, where "off" vintages were not uncommon. You would make the wine and see how it turns out, maybe a light red wine, or a rose, in the case of the Cabernet Franc you mentioned. If it is, in your honest-to-goodness judgment a salable product, then you negotiate a fair price for the fruit with the grower – the incentives here on both sides are you need fruit and the grower needs a home for his grapes. If, after your best efforts, a salable product did not result, then you have to protect the viability and sustainability of your business negotiate a very reduced grape price. But if the wine is able to fit into your portfolio, it can the grapes can be valued according to the type, style and price point of the wine. It was an extremely difficult vintage and many growers, even our very best, was under tremendous stress to meet the expectations, whether contractual or otherwise, of the wineries. In this business, some give and take is necessary. Now is not a good time to make a judgment about wine quality. As a grower, I grew weary of winemakers who would make snap judgments about grape/wine quality on the crush pad. Any wine can change, even dramatically, after resting in the cellar for a few months, and it usually gets better, not worse. I saw that happen often with Pinot Noir. I would sit down with the wine makers in late winter or spring to evaluate the wines from a difficult vintage and decide what the product is worth. Both of the experienced winemakers that I was with yesterday concurred with this approach to handling a situation like this. On the other hand, a winery cannot be afraid to reject grapes

that do not meet its quality standards. In some cases that is the only way to make a vineyard improve its production practices. As the wine maker you should have been in the vineyard during the harvest season making your own assessment of fruit quality and quantity and if it did not meet your standards, give the grower a chance to find another buyer. It takes two people who are working towards a common goal and the health and sustainability of each of their enterprises. A lot of good will is necessary to be successful. In the end, you can decide if you wish to continue your relationship with the vineyard. Maybe in the future you will continue to buy other varieties but not the Cabernet Franc. Make sound decisions based on the style, type and price point of the wines you make and must sell. Grower and wine maker relations, like a marriage, is definitely a journey, not a destination so try to make it fun, educational, rewarding and sustainable. *(printed with permission)*

**... FROM NORTH EAST, PA: Bryan Hed, Penn State grape pathologist:** We recorded nearly five inches of rain in October; wetter than average. Growing degree day (gdd) accumulations have pretty much ended for the year (at least as far as we're concerned) and we have recorded less than 10 gdds within the last 10 days of October, putting October of 2011 at slightly colder than average (12 year average) at our location. Our first serious frost event occurred on October 30, when the mercury dropped below freezing for about 8 hours, bottoming out at 29 F. As we look back over the past season from a disease management perspective, what concerns me most about 2011 and beyond, is the abundance of *Phomopsis* lesions that have developed on shoots of susceptible juice and wine grape varieties. The infections causing these lesions occurred during early shoot growth in May and therefore tend to be found on the oldest nodes and internodes on a shoot. This means there is no way to prune your way out of the inoculum sources for next May and June. Nevertheless, inoculum load can be minimized through pruning. This disease, like most other diseases, tends to be most severe in areas of the vineyard with poor air and water drainage (areas that border woods, low areas, etc) and in vineyards that are machine pruned and tend to accumulate several years of infected/dead wood (especially where there is no follow up with hand pruning). Efforts to minimize overwintering inoculum through pruning (removal of dead and heavily infected wood) can be focused on those areas. Scouting your vineyards for cane lesions can be done during the dormant period and will help growers determine where extra attention needs to be applied. In addition, research has shown that early applications of mancozeb (at 3-5 inch shoots) can reduce these infections within a given year, reduce the damage to current season yield, and reduce the level of carryover inoculum into the next season. This will be an important topic of discussion next April as we anticipate what sort of weather 'mother nature' will dish out. Other diseases, such as powdery and downy mildew, and black rot were relatively well controlled on fruit in most vineyards I scouted this year. Fruit of all varieties are most susceptible during, and shortly after bloom. Although the bloom period for juice grapes was relatively dry, we recorded nearly 2 inches of rain over a four day period immediately following bloom. This had the potential to cause a lot of damage to unsprayed or poorly sprayed fruit; downy mildew actually destroyed 14 % of the crop on unsprayed Concord vines in a trial here at the North East lab. That's a loss of around $250 or more, per acre (if we figure a 7-8 ton/acre vineyard); much more than the cost of properly timing a single fungicide application at a time when fungicides are normally applied anyway. Beyond this period, the weather was dominated by relatively warm, and very dry, sunny conditions (four weeks from late June through mid July in which less than one quarter inch of rain was recorded) that greatly reduced the opportunity for epidemic development of these diseases in vineyards. Powdery mildew caused little damage to fruit and developed at a snail's pace on leaves in 2011, and I strongly suspect that the abundance of sunshine we experienced throughout July and into early August was a major contributing factor to this phenomenon. As for late season bunch rots (mainly caused by *Botrytis* up here in Northwestern PA), most growers of susceptible wine varieties (Riesling, Chardonnay, Vignoles, Pinot Gris and Noir) kept losses to a minimum, as rainfall during September was actually below average for our region. Here at the North East lab, early leaf removal in the cluster zone greatly improved rot control even without late season sprays for *Botrytis* and was more effective than an additional Botrytis application after veraison. However growers farther to the east were hit with very heavy rainfall during Hurricane season in late August and September providing ideal conditions for the development of *Botrytis* and other late season rot organisms. Some of these vineyards sustained heavy losses to cluster rots and discussions are being held to determine better rot control strategies for 2012. (*Bryan Hed*)

**Grapes are picked. Now what?** This might be a little bit late but there are many loose ends to tidy up after a harvest and especially a difficult one. I made a Post Harvest To Do List of the things I think about when the grapes are gone and there has been some time to reflect on the vintage. I hope this will offer some helpful tips.

**Some wine making ideas (from a non-wine maker):** Growers have done the best they could in the vineyard in a challenging vintage in many wine areas of the Eastern US and now it's up to the wine makers to produce tasty wines. While I'm not a wine maker I talk to a lot of them and believe sincerely that the grower who understands wine will be better able to grow grapes for wine. When I hear interesting ideas I like to pass them on because maybe they can help someone make a better wine. I had a chance to taste the Mazza Bare Bones white blend recently and it is a vibrant, fruity, tasty blend of Cayuga, Traminette, Vidal and Riesling with a little over one percent residual sugar to balance the bright acidity, boy what a delightful wine and the perfect match with Thai food we had for lunch. Another winemaker who had a difficult time with white varieties told me that when he blended three together in a bench trial and sweetened it a bit the wine took on a whole new and wonderful character. As a general rule, it's amazing what a little sweetness can do to bring out the attractive (or maybe hide the less attractive) qualities of a wine. The same wine maker produces a red wine with St Croix as the base with some *vinifera* blended back to add structure, depth and mid-palate and it's a really nice wine! I think most wine makers know that when no particular wine shines in the cellar that blending may be a good way to improving quality. But blending is the pinnacle of art and science in wine making and it takes a particular skill and experience to do it well so try to learn from someone who knows what they are doing. I'll stick my neck out and say that in difficult vintages I am not against using "sunny wine products" to make a wine better as long as it is done within legal limits and truth in labeling is applied. The fact of the matter is, at least for now, provenance is not a hugely important factor in customer wine purchasing habits, though wine quality is and so it just makes sense to make as good a wine as possible. That's just my opinion.
On Long Island, rose has become a fashionable wine just in time for the 2011 vintage. A number of wine makers told us that grapes normally destined for red still wine were processed as rose, not a bad fate for any grape but certainly not capable of the return of red wines. There are many ways to make a rose so it's worth exploring the method that will make the wine you want. Taste local examples and benchmarks to establish stylistic goals for the wines. Saignee, or bleeding, has been widely employed on red wines this year with varying impact. Some winemakers say there was so few goodies to begin with that didn't really help, while others say it changed the complexion of the wine for the better. Usually 5-10% bleeding is done but this year I have heard numbers up to 25%. Of course, the bulk wine market is a possible exit strategy out of a difficult vintage. My preference as viticulture extension educator and wine consumer is that sub-standard wines not find their way into the marketplace – it's the "one bad bottle" rule in effect.
There are so many tools available to wine makers now, from amazing processing technologies to additives and practices that can alter or improve a wine. Of course, many of these exact same processes and practices may reduce wine quality, too, so they must all be used intelligently and skillfully. Wine makers should learn what their options are. This means not having a bunker mentality when it comes to the cellar and getting out to explore the possibilities. The best way is to talk to other wine makers, either your neighbors or at meetings. The winter meeting months are coming up with opportunities to learn from researchers, fellow wine makers, vendors, extension educators and others. I get to meet and talk to some of our best wine makers and they impress me because they are always thinking, both inside and outside the box. When I think of someone like Peter Bell, Rich Olsen-Harbich, Jim Law, Carl Helrich, Brad Knapp, just to name but a few, I am in awe of them. They are constantly in motion and you can hear the gears grinding especially in a vintage like 2011 when they are looking for creative solutions to cellar challenges. The end result is usually a better wine and wine maker and that's good for wine drinkers like me!

Now… read a real life case of creative thinking in wine making…

**Case Study: A Wine Recovered.** My high school shop teacher, who was a master woodworker, once told me that the mark of great craftsman is the ability to cover his or her mistakes. Well, hopefully we

don't make too many boo-boos but they are inevitable and our ability to recover or ameliorate them is part of what makes us successful in our profession. Brad Knapp, the owner and wine maker of Pinnacle Ridge Vineyards in Berks County (Lehigh Valley) had a wine with a problem. On the same drive to State College mentioned above, Brad told a remarkable story of enological problem solving that allowed him to take a wine with a volatile acidity problem and transform it into a salable product. The story here is not about the wine at all but the process Brad used to find a solution to a wine making problem. In fact, farming and wine making is mostly about problem solving. In vintages like 2010 there are few problems, in 2011 there are lots. It's a particular discipline and thought-process that allows wine makers and grape growers like Brad to find solutions to vexing problems. In this case, it was finding the right sources for information, identifying the problem, getting proper analysis, finding the best expert advice, and using technology that could correct the problem. Brad was very, very generous to share his experience with you.

**20XX XYZ Red at Pinnacle Ridge – for industry members only, not for public distribution.**

20XX was a very strong vintage for XYZ Red in the Lehigh Valley AVA and we had/have very high expectations for the wine. I did note, throughout the summer of 20XX that barrel samples of XYZ displayed high acid (to taste). This is not atypical of the variety but it seemed more acidic than expected (based on the warm vintage). Clark Smith of Vinovation came through our winery and tasted (one of the benefits of membership in the PQA) while he was in Pennsylvania for his two-day seminar in Lancaster. When he tasted a barrel sample of XYZ Red, he commented on the acidity and asked whether the wine had completed malolactic fermentation. I responded that I thought that it had but I had not confirmed it with lab analysis. Consequently, I sent a sample out to Eastern Wine Labs for analysis of malic acid and also tested volatile acidity (VA) at the same time (just as a check). The results of this first analysis were that the ML had completed but the VA was high (0.126 gms/100 mls – over the legal limit). I then pulled samples from more barrels and had them analyzed and all of the barrels displayed high VA to varying degrees. In total there were 24 barrels of 2010 XYZ Red with high VA.

Obviously, this was disappointing news and I was not quite sure as to what to do. I ended up talking with numerous people (other winemakers in the area, vendors) and finally decided to use Clark Smith's mini-consulting services (ask any question for $50). Clark suggested that I get some microbiological analysis done on the wine to determine if this was a problem that was getting worse or if the wine was in a stable condition (not getting worse). I sent samples to ETS Laboratories for their Scorpion analysis and found that the wine had a large population (2.8 million cells/ml) of oenococcus (good ML bacteria) and a reasonably large population (900 thousand cells/ml) of L. brevis/hilgardii (not as good ML bacteria). Apparently the brevis can convert sugar into acetic acid (VA) if the population gets a foot hold while sugar is still present. ETS had also run an analysis for residual sugar and the wine was completely dry. So it turned out that the "bad" bacteria had gotten a foot hold in the primary fermenters (and must have spread from fermenter to fermenter via punch down tools or other means), and created high VA early in the wine's life. The good news is that the wine was stable and not getting worse.

Clark had recommended reverse osmosis (RO) to treat this wine. I ended up calling two vendors (one that travels and one that doesn't) and hired the traveling vendor to come to the winery with their RO equipment. They arrived, set up the equipment, ran the wine through the RO process and reduced the VA down to "normal" levels.

The wine is still resting in barrels awaiting bottling.

The End

**Editor's note:** *ETS, Clark Smith, Eastern Wine Lab, the mobile R.O. service… notice what a diverse and expert sources for information and services Brad used to solve his problem. And that he was not afraid to spend some money to solve the problem, make a better wine and, in the end, make some money. My thanks to Brad for sharing this story with us.*

**2012 Viticulture and Enology Events Calendar:** It's coming up fast, the winter meeting season which is a chance to learn and network. I have tried to capture the major events happening in the Eastern US and will continue to update this calendar as events come to my attention. As you can see this is a work in progress so check it regularly on the EVENTS page of PWGN and mark the dates of the events you want to attend. Contact your local viticulture and-or enology extension educator for more details of events in your area.

**Beginner Grape Grower Workshop in Virginia:** The excellent extension team at Virginia Tech is offering a workshop for new and prospective wine grape growers on Tuesday, December 6 in Brookneal, VA. This is an excellent opportunity to learn going into the winter reading and meeting months. Click here for program and registration information.

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