



## Getting Information to Make Better Wine

During a recent visit to Galen Glen Vineyards, their inimitable wine maker Galen Troxell, mused openly about the lack of viticulture and enology information available to wine growers in Pennsylvania. Galen's mind is a thought factory churning out ideas and questions so his observation didn't exactly surprise me. It is also an information black hole, sucking in any useful knowledge that will help him to grow better grapes. There is hardly a more cerebral wine grower in the region, and the quality of his wines reflect this thoughtfulness. I believe that his thirst for knowledge that will help him to be a better grower and wine maker is a core requirement to making fine wines, especially in a region as challenging as the hills of eastern Schuylkill County. The question is, where does he go to get the information he needs or how can we get it to him?

Galen was excited to have Volker Schneider, a consultant from Germany, visit their vineyard and winery and give an infusion of new ideas and practices. It certainly helps to get an outside opinion about your vines and wines. It is all too easy to develop a bunker mentality about one's wines and eventually even the best ideas and methods become stale. To get ahead and improve quality you have to find the right person, someone who can inspire and shares similar goals and philosophy but has wider experience. This is a critical element of any emerging wine region, the importation of expertise. Someone like Herr Schneider helps to fill a knowledge and experience gap but also brings an alternate view to the vineyard and cellar. Until we can fill that void ourselves, we will continue to rely on outsiders to bring information to us. At the same time, we have generate knowledge and experience ourselves and go out into the wine world to find it and bring it home.

As an extension educator, I am all about information, not so much its creation but the collection, analysis, packaging and dissemination of information from near and far to the local wine industry. I also try to bring in outside experts who can present alternate and expert perspectives on growing fine wine. Yet all of this is clearly not enough for a serious grower like Galen to achieve the level of quality he wants for his wines.

After pondering this on the way home (I drive a lot so I have plenty of pondering time), I came to the conclusion that the process of information gathering is a multi-faceted mission that includes many methods and sources. We are very fortunate to have very capable local research assets in pathology and entomology and if the field is extended to other regional universities, source information in viticulture and enology is amazingly dense and strong. It is, to some extent, your obligation to access it. Are you taking full advantages of these amazing resources?

- Have you read the 2007 research final reports from the USDA Viticulture Consortium East that reports on just about every researchable viticulture problem known to Eastern grape growers?

- Do you regularly attend the plethora of grape grower meetings in and around your area?
- Do you receive and read the amazingly informative regional extension newsletters from Alice Wise on Long Island, Hans Walter-Peterson in the Finger Lakes, the Lake Erie Regional Grape Program, and Tony Wolf in Virginia?
- Do you have the most recent copy of the NY-PA Pest Management Guidelines for Grapes and do you use it? Do you read Dr. Wayne Wilcox's annual disease magnum opus update? How about the new winter injury book?
- What industry trade magazines do you take? Are you willing to go down under where some of the best and most practical research is being done to mine for viticulture information?
- Who are the sources of answers for your questions? If you never have questions then you are not advancing your knowledge, practices and quality.

Growing fine wine is all about having the knowledge to convert to best practices and the tools to execute. I often wonder about the relative importance and balance of these inputs. In my travels I see (and taste) wines grown with a lack of knowledge, or good equipment, or insufficient capital, or a lack of passion, or any combination of these. If any component is missing the wine suffers. Why are wines at one winery, for example, with ample funding and a good site, lacking in quality compared to another with lesser facilities and capital yet surprisingly delicious wine? I don't pretend to know all of the reasons why but it usually comes down to passion, knowledge and the ability put viticulture knowledge into practice. If these variables merge, under almost any conditions the wine has a chance to succeed.

I believe that the best wine growers are naturally curious and creative and they view making wine as an intellectual challenge, in some ways even as a game of cat and mouse or detective in an attempt to solve the vintage. Great wine growers crave more knowledge about their art and constantly.

As important as knowledge is to making fine wine, I do not want to ignore site selection, which is the single most important factor in determining the outcome of the wine. Viticulture is a close second and in any given year can determine the quality of grapes from any site, no matter how powerful its virtues or problems.

The most useful information often will not manage to find its way to you. In most cases you have to go out and get it. It means you have to know what you need, where to seek it out, get it and use it. Black Ankle Vineyard in Maryland, Karamoor Vineyard in Pennsylvania and RdV in Virginia are a few remarkable contemporary examples of knowledge seekers who have found early success in making wine in our challenging region. They are among a growing group of what I call "Lucie Vineyards" or vineyards whose guiding viticulture principles and practices have brought smaller vine, higher density, modern clone and rootstock and a more French-style of viticulture to the East. It is not to say that this is, or will be, the best brand of viticulture for the region but early results are very promising as we continue to explore site selection and viticulture. What Lucie Morton brings to the game for these owners is international knowledge and experience. She scours the planet for viticulture ideas and then translates them thoughtfully into an Eastern application. However, these owners are not passive recipients of her expertise. They, too, are out there, visiting great estates in California, chateau in Bordeaux and working at

wineries on Long Island or Sonoma to gain their own ideas and experience. This is how information and technology is experienced, realized, integrated, synthesized, distilled and regurgitated.

To appreciate the need for outstanding viticulture and wine making in the region it helps to understand the challenges first. Untimely rain at harvest and the potential for cold injury in the winter top the list. They are the proverbial tip of the iceberg with warm, humid, wet summers making disease, insects and other pests, and overly vigorous vines ever present, and the threat of a late spring or early fall frost threatening the quality and quantity of the vintage. 2008 was a classic Eastern vintage. A wet early summer created vigor and disease problems that would linger into late summer and even into harvest. A dry August brought optimism and hope to the vineyards. Then Hanna dumped 3-6" of rain in various parts of the state but was followed by intermittent rains with warm, ripening weather for the white and early red varieties. The 3-4 day low pressure around the last weekend of September could have been a spoiler but it was followed by 8-9 days of warm Indian summer then another streak of cooler but dry days. One wine maker, comparing '07 to '08 said that anyone could make good wine in '07 but in '08 you had to know what you were doing. There are not many wine regions in the world that would be expected to make fine wine in a vintage with 5-10" of rain. For this reason we have to be more creative, patient, decisive, and just all around better and smarter than most wine growers. You can slack in a sun-driven, dry climate and still make excellent wine. You'll pay a stiff price if you do here.

Remember the viticulture principles that Kees van Leuween of Chateau Cheval Blanc left us with in 2004? To make great red wine you need small berries and shoot tip termination prior to veraison. How can we achieve those two paramount objectives in our conditions? What knowledge, practices and conditions will allow us to get there? Kees says we have to control vigor through regulation of water and exchangeable nitrogen. What we need to do is to get smart viticulturists like Kees to interact with our industry to share their knowledge with us. This is a good example of where knowledge and physical and environmental realities combine to make really good wine possible.

I have believed that the most successful wine growers create balance in wines through a blend of traditional and modern ideas and technology. New world wine regions like California, Oregon and Australia used science and technology to close the quality gap with France, Germany and Italy quite rapidly in the 60s to 80s but then hit a wall in the evolution of their wine quality and styles and actually went back in time to seek traditional methods that added more art and craft to the process. Eastern wines are improving dramatically in their technical quality and consistency but eventually must integrate the art into wine growing. Adoption of technology is easy. Learning the subtlety and nuance of wine blending and crop management is not. It takes considerable thought and imagination, as well as effort to learn those tried and true practices that will push the wine to higher levels of quality.

It's not necessary to be rich to make great wine but it sure helps if you are. Unfortunately, there is a pretty strong correlation between quality and wealth in this business with the rare exception of site and knowledge that can overcome the benefits of ample capital. We all have to work within our budgets so it is necessary to prioritize the information inputs we receive. But if every

great winery you see sorts the fruit before the destemmer, then you should figure out a way to do it. Perhaps not with an expensive conveyor system but even a jury-rigged device can have a positive impact.

One of the most important things to do early on is to decide on the wine style you want to create. In the Finger Lakes, it might be great Riesling, Ontario is making some amazing Pinot Noir, Maryland and Virginia the Bordeaux blends might be the signature wines. The tendency of wineries here is to try to be all things to all people which makes it very difficult to excel in any given area. In Oregon, it took the undivided attention of the entire industry over a period of two decades to finally get a grasp of Pinot Noir. Focus is necessary for the best quality, if for no other reason than any given vineyard site has a narrow range of qualities that are best adapted to certain varieties. This is the viticultural argument. I understand that there is a compelling marketing imperative as well.

It probably is not wise to gather and utilize information indiscriminately. The source should always be considered. In the case of Eastern viticulture, California knowledge has less utility than information from Europe. That said, I believe that 3/4ths of viticulture is basically the same no matter where you go, for example, VSP even with minor variations, is pretty much the same trellis and training in Chile as it is in Germany. The principles are the same with some difference in execution. Care about sources also extends to people and publications you encounter. There is a lot of bad and inaccurate information available and it is your job to avoid it. If you don't have the experience to avoid bad information, you need to find someone who does.

It is so important to taste wines critically and with other people who have better palates than you. They do not have to be enologists. In fact, I would argue that enologists, except at the beginner to intermediate level of wine making, may hamper your efforts to learn and create because of the narrowness of their technical palates. Nor would I taste with only consumers or trade representatives because they bring their own particular bias to the wines. Too many of our wine makers just taste their own wines and, even more restrictive, they taste in their own cellars. Benchmark wines are necessary to establish targets, big and small, so that knowledge can be acquired to move towards the wine goals. In Oregon, the focus was always Burgundy and there was a tremendous amount of interaction with growers in Burgundy. The Steamboat Pinot Noir Conference started out as an opportunity for Oregon wine makers to discuss their problems and taste their wines critically but it evolved into a global gathering of PN producers, sharing ideas, information, practices and, perhaps most importantly, their wines. Galen Glen Vineyards in the rolling hills northwest of Allentown in a cool climate with intensely shale soils needs to explore aromatic white wines. To get the information to make great wines,

Winemakers: please taste outside of your cellar. Do not develop cellar palate, only knowing your own wines without a quality reference point to measure them. We want to make wines that meet international quality standards. For native wines, we are the standard and that's fine. For high end hybrids and vinifera the standards are both recognizable and achievable. Understand what they are and then map out how you are going to get there. It will probably mean replanting a section or all of your vineyard.

The answers to our viticulture questions require traveling east. Consider which wine regions have similar climates to the diverse wine regions from Ontario to Georgia. If you think about it, there are not many wine regions in the world with a climate similar to ours and we are the only one that suffers from hurricanes during the harvest season. Fortunately, those regions that share similarities to us are among the greatest in the world. For reds we match up nicely with Bordeaux and northern Italy. For whites, Burgundy, Germany and Austria are in our ballpark. Another significant difference is the incidence of winter injury where we are at a disadvantage to other areas. The common denominator between us and Europe is rainfall during the growing season. That leaves out California, Australia, South America and other arid regions. For growers in Pennsylvania, traveling to other wine areas in our region, like Long Island, Ontario, Finger Lakes and northern Virginia is a good start to building information bridges and collaborations. Go to where the varieties you are interested in are grown the best. While something valuable can be learned from any vineyard at any time of year, it is best to travel in August and September (but beware of the holiday season in Europe) so you can see a full vine canopy and how the fruit zone is managed. Make appointments well in advance. The larger wineries will assign a marketing person to your visit. This is useless. You must insist that you see the principal, or wine maker or viticulturist (often called an agronomist). Explain to them that you are seeking technical viticulture information. Plan two visits per day, three maximum. When you are there, the vineyard supersedes the winery in time and interest. Most of the secrets, and answers, lie in the vineyard. The beauty of this industry is its camaraderie. We are among the most cooperative industries of any kind. I have never been to a winery that has refused to share information with me. Before you arrive, study the region's viticulture to the greatest level of detail that publications, contacts and the internet can provide. When you visit, arrive prepared with good questions and observe everything critically and openly. Make sure you are prepared to deal with the language issue. There is little to learn if there is no communication. You are the visitor, it's up to you to accommodate any communication challenges. In my experience there is more to be learned in 3-4 days of intensive viticulture immersion in a great wine region like the Medoc or Mosel than a year or more in any formal program or reading journals. The key is being able to observe and process information and then translate it for application to your vineyard.

As an industry we need to work harder to bring the best viticulture and enology information into the area. Great speakers, honest and knowledgeable vendors, informative publications and internet information all contribute to the knowledge base. But we also need to venture out into the wine world to seek the information that can be helpful to us. For Galen at Galen Glen, a trip to Austria to investigate best wine growing practices for Gruner Veltliner would help his quality immensely. Rich Blair at Blair Vineyard has already been to Burgundy and Oregon to learn how to grow great Pinot Noir and his new vineyards demonstrate how well he has learned. Hauser Estate in the heart of the fruited hills will help to demonstrate the potential of the soil and climate in Adams County.

I don't want to ignore the winery. Most new regions are able to close the quality gap with their more experienced counterparts by applying technology in the winery but this can only take you 1/2 to 2/3rds the way to a great wine. A sincere effort must be derived from the vineyard. Yet, in our challenging climate, when 5-10" of rain fall on a vintage, there is no price that can be placed on a wine maker's skill in the cellar. He or she has to be the person who squeezes out every ounce

or milliliter of goodness out of a grape that has had a tough life and then find a way to bring balance to a wine when the numbers are simply inexplicable.

There is no set formula for making great wine yet there are certain similar components to any great wine made anywhere in the world. But finding the best benchmarks in the bottle and then examining their practices in the vineyard and cellar are sure to help you get closer to their quality.

Some of the things needed to make great wine:

1. Knowledge and experience – the ability to acquire information from multiple sources and synthesize and integrate them into practices. If not you, then who?
2. A good to great vineyard site
3. \$ - good, \$\$ better, \$\$\$ best
4. Character: passion, patience, perseverance, curiosity, creativity, organization, problem solving, open mind
5. A well-tuned, critical, knowledgeable palate
6. The right equipment, tools and people to get the job done right and on-time.

Take home message: Taste benchmark wines critically in a group setting with experienced and broad palates. Explore other wine regions with the same critical intent to learn best practices and integrate them into your own vineyard and cellar.

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