



## Tents, Tunnels and White Wines

Grape growers are by their nature innovators, it's an aspect of wine growing that attracts the intellectually curious and besides that it's a lot of fun. So it's no surprise that during my travels this year I have seen lots of different ideas in action. I wrote earlier about cool climate viticulture and a recent visit to Tamanend Winery (<http://www.tamanendwinery.com/>) in Lancaster got me pondering how growers cope with marginal conditions of either their own doing or Mother Nature's.

Richard Carey is a bit of a mad scientist. For those of you who know him, he is always thinking and that process takes him to places most of us don't even know exist. His main business is wine making and Richard has never met a gadget or gizmo or new technology that he couldn't love and experiment with his cellar. He runs Vitis Research as well as making the wine at Tamanend and he does a lot of custom work for other wineries, including one of the first bag-in-the-box machines I know of in Pennsylvania.

Like myself, Richard ponders fine wine (probably more than we should), and in particular, how to get the Bordeaux red varieties fully mature, and even more specifically Cabernet Sauvignon, in a climate that in any give year may not offer the necessary conditions. The sensible viticulturist says don't plant Cabernet Sauvignon. Plan A is to move to Napa or plant Marechal Foch. But when has making wine ever yielded to good sense? So, we are always compelled to try Plan B.

Even in Lancaster winter injury is a constant threat. Many vineyards suffered varying degrees of damage this winter, which was steadily but not frightfully cold, except cold spikes on the nights of 22-24 January. In Lancaster, the mercury hit 1°F, enough to certainly scare cold tender *vinifera* varieties. In 04/05 Cabernet Sauvignon at Waltz Vineyard in Manheim sustained serious injury and demonstrated that above the Mason-Dixon line, winter is still very much a factor in wine growing.

Summers can be uncooperative as well. Force yourself to remember '03, '04 and '09. In these years a little push or bump to late season varieties could really help wine quality. In some years we just don't get the heat necessary to get grapes fully mature, which is necessary to make fine wines.

I noted the use of vine tents in the Wine Islands area of BC and Haygrove high tunnels (<http://www.haygrove.co.uk/growing-systems/polytunnels/?language=eng>) in northern Michigan. These vineyard accessories appear to have a real impact on the quality of wine they are applied to. At Tamanend, Richard showed me his high tunnel placed over Cabernet Sauvignon, Petit Verdot and Viognier and the visual effects early in the season are quite dramatic. If making consistently high quality wine has anything to do with getting to the finish line before hurricanes, birds, frost, hail, rain, disease, etc. arrive and compromise the quality of the grapes, then getting an early jump on the competition or a bit of a turbo-charged boost during the growing season may make some sense. The advantages of earlier ripening extend into the winter if the fruit is removed sooner allowing the vine more time to acclimate to the coming winter. All of a sudden it sounds reasonable but does it make sense?

The rational viticulturist in me says grow what the climate allows: Piedmont/Nebbiolo, Napa/Cab, Burgundy/Pinot, Bordeaux/red blends, Mosel/Riesling but we tend as a discipline to wander away from

the strict boundaries of varietal suitability. Personally, I have always used burying vines as outside the limits of what is viticulturally reasonable. For many, tents and tunnels may also be outside. As usual, it will probably boil down to economics. In BC and Michigan, only the highest value varieties get covered but I have yet to see any data that supports the economics of this brand of viticulture. I have, however, tasted wines from covered vines, while not from controlled trials, indicate that there is some, maybe a great advantage to pushing the vines artificially. I'm not sure how this differs from breeding or genetically engineering a faster ripening and-or more cold hardy Cabernet Sauvignon, but if the economics pencil out and the customers are happy, it's hard to see the downside.

Richard is taking this nice and slow because so little is known about viticulture under cover. How much heat is enough or too much? What is the impact on humidity? How does the high tunnel environment affect vine acclimation? There are about a zillion questions that need to be answered, including the economics of the whole thing.



I apologize for the poor quality of this photo, it was taken in the morning into the sun but it was the only angle that I could display the variable growth between Cabernet Sauvignon 337 on 101-14 vines in the foreground out of the tunnel and the vines inside the tunnel, which were displaying advanced growth and bloom. Uncovered vines are still in training while covered vines have almost filled the trellis in the second year.



In the very cool wine islands of coastal British Columbia growers use poly tents over their high value varieties to warm the soil and air around the vine to encourage earlier bud break and more rapid early growth. When the vines hit the top of the tent the plastic is removed. Protects vines from frost and critters, too. But it's a lot of work. These vines are at Alderlea Vineyards (<http://www.alderlea.com/>) in the Cowichan Valley north of Victoria. The photos were taken on May 13<sup>th</sup>.

I have often made the statement that cool and wet years can make decent wines and warm and dry ones have the potential for very fine wines. A delicate balance in the vineyard must be achieved to produce expressive and harmonious wines in anything but the most ideal conditions (whatever those are, they seem to occur very rarely in most wine regions, especially cooler ones). In a recent conversation with Galen and Sarah Troxell I was reminded that in viticulture such generalizations are made with great peril. Galen Glen Vineyards (<http://www.galenglen.com/>) specializes in aromatic white wines and their Riesling, Gewurztraminer, Gruner Veltliner and Vidal are among the best I have tasted. They expressed in no uncertain terms that 2010, a warm year in our area, presented many challenges in white wine production for them, primarily finding the right balance in their wines and making sure they were not overripe and preserved the freshness and fruitiness of the variety. Suffice to say, a vintage can be too hot for reds (and therefore for whites) in some years and too cool for whites in others (and certainly for reds). I think that's why the most established and reputable wine regions usually specialize in either a particular red(s) or white(s) variety. The distinguished exception may be Burgundy with its ability to excel in Pinot Noir and Chardonnay. We have lots of varieties to mix and match and can find red and white varieties that will ripen in almost any climate area of Pennsylvania. As our conversation extended to establishing a regional identity it would be difficult to stick a label to Pennsylvania wine because of our diversity, as much as it would be for California or Oregon, although in those two states Napa Cab and Willamette Pinot respectively, to the chagrin of other areas in each state, define their fame and fortune in the minds of wine consumers. Sarah listed a number of white wine making challenges that she faced in the cellar in 2010 and Galen recounted how he worried as acids dropped and sugar rose, slowly tipping the balance of the wines. In the end, it was a close collaboration between the vineyard and winery that allowed for an exceptional 2010 Gruner Veltliner to be made (I tasted it this week). Juice clarification and alcohol reduction are two of the key wine making techniques that Sarah mentioned could improve their wines in warm vintages. So I qualify all of my generalizations and leave it to wine growers like Sarah and Galen to apply their creativity, ingenuity, and passion to the wines they make no matter what kind of vintage gets thrown at them.

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