



The Atlantic Canada Wine Symposium in Nova Scotia



There was a particularly good vibe at the 2012 Atlantic Canada Wine Symposium (<http://atlanticwinesymposium.ca/>) in Halifax, Nova Scotia, a conference that takes place every 3-4 years and includes wine producers from Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland. Yup, they grow wine in these northern areas, there are fruit wine and the wine grape cultivars are predominantly hybrid varieties, but very tasty ones. It's the excitement of a young wine industry that feels it has a bright future. After a chance encounter with a NS wine delegation at Wineries Unlimited in 2008 this is my third visit here to try to impart some of the wisdom I may have learned in 30 years of working in emerging wine regions. The enthusiasm is justified. While the industry is still small with 15 wineries in NS and 30

among the Atlantic provinces the level of professionalism and cooperation, quality of product, and even something as simple but essential as the quality of their wine labels, demonstrates that serious thought, effort and capital has been invested here.

Particular attention on this visit was directed at the launch of the Tidal Bay appellation wines (<http://www.tidalbay.ca/>), an effort by NS wineries to identify and define the style of wine they do best, codify its production into law, and then market it to the world. It's interesting from our perspective because instead of promoting freedom and individualism in wine making it requires participants to adhere to a strict set of standards, including yields and even the type of wine press used, to produce an aromatic wine that compliments, well, lobster (see the Wines of Nova Scotia logo to understand the importance of this crustacean to the local food identity). During a press meeting we tasted 12 different Tidal Bay wines and each was very impressive, full of citrusy fruit, lively acidity, great freshness and crying out for scallops or halibut to accompany it. I was reminded of Oregon in that a single type or style of wine could define a region, and in some ways, it makes it easier for an industry to make fine wines and sell them, thus creating a vinous identity. By contrast the varietal diversity in Pennsylvania is both a blessing and a curse. I worried about the wine makers being hemmed in by production requirements but these were generated by consensus by most of the best and most respected winemakers in NS, and actually with quite little controversy. The hardest part of the entire process, which was began in April, 2010 with a meeting between Peter Gamble, a wine bon vivant from Ontario and Janice

Ruddock, the executive director of Wines of Nova Scotia (<http://www.winesofnovascotia.ca/>), was choosing a name for the wines. Tidal Bay refers to one of the great natural features of the area, the Bay of Fundy, known for its dramatic tidal flows. There is a bit of risk in branding a wine region in this fashion, but I believe these wine growers have done their homework and identified the cultivars that perform the best and the style of wine that best represents the terroir. If it demonstrates anything to me, it is that fine wines and a viable wine industry can be built on the backs of hybrid varieties such as L'Acadie, Seyval, Vidal and Geisenheim 318, the core varieties in Tidal Bay wines.

The conference organizing committee chaired by Hans Christian Jost (<http://www.jostwine.com/>) put together a stellar program including names familiar to Eastern wine growers like Wayne Wilcox, Andrew Landers and Sigrid Gertsen-Briand (who was here with her new baby daughter!), but I was mainly interested in hearing what speakers from Ontario and British Columbia had to say, and we were not disappointed.

Wes Wiens is owner of VineTech (<http://www.vinotechcanada.com/>), one of the largest grapevine nurseries in Canada and his family farms 600 acres of grapes on the Niagara Peninsula. At that level of production, it's not surprising that they are trying to mechanize as many vineyard operations as possible. In fact, Kevin Ker told me that as little as a percent of wine grapes among 14,000 acres on the peninsula are hand harvested, a statistic that both surprised and pleased me. Wes described the farm labor issues that growers in Canada face and the need to mechanize, and then he described how many practices began with a hand method and evolved into sophisticated machinery. His first example was planting vines with a shovel, which is now done with laser/gps planting machines. Wes did plenty of hoeing as a kid growing up in the vineyard but now over the row boom sprayers apply herbicides on two rows and grape hoes and sunflowers offer a tillage option. Multi-row tools and tillage are now commonplace with over-the-row, multi-purpose tractors such as the Gregoire and Korvan being widely used. In order for these mechanical devices to be effective rows must be uniform and vines planted in line, which is where laser planting excels. Cover crops are used both to feed the soil and remove water and aerating devices help to reduce compaction in the clay soils. Mechanical pre-pruning significantly reduces time and costs, allowing growers to prune later in the winter, which is helpful in a freeze-prone region. Leaf removal is done by a variety of devices and mechanical harvesting and sorting has become extremely sophisticated.

Joe Pillitteri, of Lakeview Vineyard Equipment (<http://www.lakeviewvineyardequipment.com/>) an equipment supplier on the Niagara Peninsula, provided economic justification for the use of these often expensive devices in the vineyard. Wind machines save your crop, and sometimes the vines themselves. In the case of a high value-added crop like wine grapes, they makes sense. Automated pruners and tying guns can save 20-30% on labor hours and reduce repetitive injury to workers. A mechanical pre-pruner can save 40-80% of labor time on a VSP system, however it doesn't work well on a top-wire trellis, although combers and sickle bar cutters have been adapted to this system. Cane shredders with row sweepers allow prunings to drop under the vines, then be swept into the row and mulched and can save 10-20% on pruning labor by reducing brush pulling effort. A tunnel sprayer can reduce or even eliminate drift and saves a seasonal average of 35% of the spray material applied to a vineyard (up to 85% early in the season). An electric spray rate control system operates by a wheel sensor and flow meters to

adjust for only the target rate of spray material being delivered to the vines, so as a sprayer empties or climbs or descends a hill, the exact volume will be sprayed. This can reduce excess spray material by 7-20%. Multi-row sprayers can reduce fuel costs by 50-70% and cover up to 12 ac/hr. They offer the benefit of getting the crop off fast as the next storm looms or labor vanishes. Double row hedgers can cover up to 7 ac/hr and reduce worker injury. Leaf removal machines have as little as a 1.5 year payback period on 20 acres, and in their trials do a better job than hand removal with less berry damage and better juice quality. Yes, grape harvesters are expensive but used, tow-behinds can be found for as little as \$7000. Harvesters can pick 10-15 t/hr vs. the standard \$200/t by hand or \$55/t charged by custom harvesters. Very effective on-board sorting systems improve greatly on the standard blowers to remove as much as 96% of all MOG. So, if you can afford these machines, with all of these savings added up, it sounds like you can farm for free. The equipment is out there. Of course, scale has a lot to say about the economics.

Matthew Speck from Henry of Pelham Family Estate in Ontario (<http://henryofpelham.com/>) has a philosophy degree from St John's University in Annapolis, the perfect preparation to be a vineyard manager! In case you didn't know, the curriculum at SJU is to pretty much read only the great classics of literature for four years. He began with a quote from Machiavelli, "Entrepreneurs are simply those who understand that there is little difference between obstacle and opportunity and are able to turn both to their advantage."

Now, along with brothers Paul and Daniel, he farms 150 acres at Henry of Pelham in Ontario, which supplies about half of the 90,000 case annual production. Matt spoke about wine growing from a risk management perspective, which is really what agriculture is all about in its essence, more specifically how to mitigate climate extremes. Challenges include excessive rainfall, cold temperatures that can cause frost events in spring and fall and winter injury in winter, crop management, vintage variation. Basically, the cooler a wine region is, the more climate variability it will experience and the greater the challenges will be to preserve and ripen fruit, and maintain vine and vineyard uniformity. Matt stated emphatically that in Ontario temperature extremes were the biggest challenge to growers. Cold injury induced by soil moisture and topography (cold air ponds) could cause damage at any scale, from a single vine to entire vineyard blocks. Cultivar positioning is very important, even on the relatively flat terrain of the bench or plain - Baco noir is planted in low spots, Merlot gets the high ground. The most important piece of equipment in the vineyard is a weather station, in the case of Henry of Pelham, a weather innovations 20m tower that constantly monitors weather conditions. The \$15,000 device pays for itself in two ways, it tells Matt when to turn on the wind machines and when NOT to have them running. The former saves the crop, the latter saves the expense of running the machines (fuel, wear and tear, aggravation to neighbors, loss of sleep, etc.). He said when the region first started using machines, growers would turn them on at the slightest hint of danger. Matt has learned to track temperature descent rate and balance with dew point to know within a fraction of degree when he needs to turn on his fans. He stresses that wine machines are not a panacea but they help in specific situations. In their vineyard operations that mechanical pre-pruning compresses the pruning season and allows them to delay final pruning cuts until late in the winter. Vines are pruned from most hardy to least and they leave twice the assigned bud count until frost season is over. Vines are trained with two trunks of different ages because winter injury will affect trunks of different size and age. He advises not to oversucker vines to

the point that they will no longer throw suckers, which are needed at the crown and head of vines to renew. In his experience replants in a mature vineyard will rarely reach even half of full production, and after a time it is better just to replant a vineyard block. They prune to 12-16 buds/m or 4-eight bud canes, removing two kicker canes. Vines rows are alternately planted with cover crop, his way of balancing dry and wet years – we never know from one year to the next if we'll have a monsoon season or drought, or some of both, or neither, so this practice is a reasonable compromise. Every row is tile drained at 30", a practice that is essential in the clay soils of the peninsula. They usually leave extra crop on the vines and thin, if necessary, according to vintage conditions and the type of wine being made.

Adaptability is essential to smooth out variability in the vineyard. Growers have to adjust according the conditions of the growing season.

When Matt looks at a vine he sees bottles of wines hanging in the fruit zone, not clusters. He adjusts his vineyard management according the value of the bottles, for example, how many grape clusters are need to produce a bottle of \$18 varietal Pinot noir (7kg/vine) vs. a \$25 estate Pinot (3 kg/vine). Wine price points allow the quality of grapes to find their way into a style of wine or wine category and therefore offer adaptability to a vintage. For example, in 2010, a fine vintage, most a lot of top tier family reserve wines were made. In a lesser vintage more lower tier wines are produced. They bottle according to demand for each wine, holding wines in storage until a particular wine is needed. This gives them flexibility in having more wines to blend – in tank a wine has options, in the bottle it doesn't.

While I tried to explain how to achieve vine balance before a vine is planted Dr. Kevin Ker from KCMS Consulting (<http://www.kcms.ca/default.asp>) talked about canopy management and how bend with the wind during an unpredictable growing season. Water is the key and no one knows how much rain will fall, but it's important to know how the soil will affect water retention and the only way to understand this is to dig holes and look at the physical profile into and below the B horizon to the subsoil layers. Water does not respect gravity and will move any which way depending on the nature of the soil and how it is organized. The regional climate has become unstable and growers need to be prepared for anything, and the shrewd ones farm according to a worst case scenario because they know that viticulture only works forward, not backwards. Canopy management is a stepwise process practiced in measured amounts throughout the season with adjustments according to vintage conditions. In the end, hopefully the weather will cooperate enough to allow for the production of high quality grapes. Just to be clear, Kevin is a consultant and makes his vast knowledge and experience available to just about anyone. I cannot imagine even the best winegrower not benefiting from his input about vineyard management.

Kevin and Ken Slingerland, retired tender fruit specialist at the Ontario Ministry for Agriculture, Food and Rural Affairs, talked about winter injury and prevention. The cold acclimation process is different each season as is bud hardiness. Slope and elevation are important topo features for cold protection and inversion layers can vary dramatically. The volume of warm air on top of an inversion is not infinite and at some point the mixing of air with wind machines will lose its warming effect. Wind machines cover about 10 acres, the fans are tilted up six degrees to pull in the warmer air and rotate on a 4-6 minute cycle to prevent cold air from settling. All fans operate independently and are on temperature sensors. Weather stations are essential but they are not

predictive, so the skill of the grower is the key to success. Accurate site mapping is important to placement and manufacturers provide this service. Fans provide protection in spring, fall and winter and protected vineyards have more consistent crops. Why use frost protection? In 2005 Ontario lost half of its Chardonnay crop in one night. Ken offered some compelling economic data for frost mitigation which is probably why hundreds of fans have sprouted in the Niagara region in the past 5-6 years. At the value of Chardonnay in 2005 at 4.5 t/a the loss on a 15 acre vineyard was \$95,175, and that's just the value of the grapes, not the wine. A wind machine costs about \$34,000 installed. A grower can save \$504,000 over 20 years at the normal rate of Ontario freeze events. Average fuel cost for a wind machine is \$804/yr.

Finally, I stumbled upon a talk by Morgen McLaughlin from the Finger Lakes Wine Country (<http://www.fingerlakeswinecountry.com/>) and was enormously impressed by what they are doing to promote and create a brand for Finger Lakes wines. I don't pretend to understand the intricacies of establishing a new wine region in the minds of the consumer, but here is a no-nonsense promoter who could probably convince kids to like vegetables. She spoke frankly and openly about the efforts they have put forth in the lakes, from getting the Wine Spectator to review their wines to using social media to create a buzz about Finger Lakes wines. I am all about the wine and during three visits so far this year to the lakes I can state emphatically that the wine quality is present, the really hard part is notifying and convincing the wine world that you exist. They are taking a serious crack at it.

Most of my readers know that there is inevitably a wine part to everything I write because I believe strongly that everything said above makes no sense if we don't understand how it impacts wine production and quality. On this trip, I had along with me one of the most savvy wine critics I know, my wife, Judi. I tasted 23 wines during the visit and she tried about half of these and our overall impressions especially the whites, was very positive. The Tidal Bay wines, in particular, seemed true to their origin and the stated intentions of the appellation organizers.

As I often do, I'll add a travel note to my observations. Judi and I enjoyed a few days among the scenic splendor of Atlantic Canada. It is place that almost demands calm and relaxation of its visitors. The wines have evolved to compliment the fresh and diverse foods from the sea (and of the land too!), and there is a high developed farm/sea to table movement in the region. We dined in restaurants as good as anywhere we have been before. The natives are ultra-friendly, the traffic is light (at least in late May), and there is the splendor of agriculture and nature in abundance around every corner. It is a region well worth visiting.

I would like to thank Sandie Currie, the conference organizer, for her tireless efforts to assist the speakers and organize a great conference, and Hans Christian Jost, the chair of the conference committee, and Janice Ruddock from Wines of Nova Scotia for the invitation to come to Nova Scotia and hospitality once we arrived.

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