



Growing Wine and an Industry in Nova Scotia

Two years ago a delegation of wine growers from Nova Scotia attended Wineries Unlimited and I had a chance to meet with them and talk about their wines and industry. People mostly think about Ontario and British Columbia when considering wine in Canada but after a recent visit to Nova Scotia I think this province will soon be added to the list of serious wine regions in our northern neighbor. Being from New England I felt immediately at home near the water, forests, hills and villages of this tranquil and beautiful province of one million people. The wine industry is a bit scattered but a concentration of wineries can be found near the town of Wolfville, about an hour northwest of the capitol city of Halifax.

The climate is maritime and at 45 degrees north latitude it is cool in the summer and cold in the winter. A short season of 150 frost-free days with about 1000 growing degree days (base 10C) defines the growing season and they have adopted hybrid varieties for their wines to suit these conditions. Winter temperatures can dip to minus 13F/25C which places most *vinifera* varieties in harm's way. In almost every aspect of viticulture the use of hybrid varieties appears to be the correct decision. L'Acadie Blanc (pronounced "LACK-uh-dee") is a white hybrid developed at the Vineland Station in Ontario and was imported into Nova Scotia and has taken root as the primary white variety. It makes a dry to off-dry white that is fragrant, clean, vibrant and fresh, moderately fruity and compliments the white fish and shellfish cuisine of the region perfectly. It doesn't need to get to 23 brix to make a stylish wine and the versions we tried were very balanced in their acidity, often tempered by a touch of residual sugar. Some were blended with other varieties, notably Chardonnay and Pinot Grigio at Jost Vineyards that added more complexity and body.

This is very clearly an aromatic white wine region and they can excel in this category. Other whites include New York Muscat, which has muscat aromas and can be spicy on the palate, Seyval, Vidal, and the expected attempts at Riesling and Chardonnay, we even tried a Sauvignon blanc. The red and white *vinifera* varieties struggle a bit to express their varietal character, which need more than the 150 day allotment of growing season to fully develop. German hybrids like Siegerrebe and Optima are being planted. The Siegerrebe was balanced and delicious with the racy, mineral character so often associated with Riesling. Optima is being used to make true ice wine. Other sweet wines are made from maple syrup (try it on ice cream), fruits, and distilled eau de vie products.

The red wines include the tried and true Marechal Foch, Leon Millot and Baco Noir. A hybrid called Lucie Kuhlman is sometimes blended for color and depth. They all make very pleasant wines with a bit of a tart edge. We tried a Cabernet Foch that was ripe and very *vinifera*-like in its flavors and phenolic structure. Blending is a very important part of wine making here where

mixing and matching wines can help to build a better wine. But I would argue that reds will always be a sideshow to the excellent white wine potential in Nova Scotia.

The vineyards are large and for the most part managed by professional vineyard managers. There are 13 wineries and they, too, have professional wine makers. Their training and skills are reflected in the quality of the wines we tasted over four days. Other than a red wine that may have had a touch of VA, every wine was at minimum technically correct and at best, highlighting the varietal character and delicate terroir of a cool region.

There aren't many serious problems in the vineyard. Growing hybrid grapes has its own built-in advantages. Most growers said they spray 3-6 times a season and while it appears that NS receives less rain during the growing season than the Mid-Atlantic, it is still a distinctly maritime climate subject to the whims of the Atlantic Ocean. The same fungal diseases known to the Mid-Atlantic are present in the vineyards but at a much lower level of pressure. Insect pests are also very moderate with only erineum mite and aerial phylloxera suggested as problems in the vineyard. We spend a lot of time pulling our hair out in the Mid-Atlantic region trying to keep *vinifera* varieties clean. It was a lesson to see how hybrid and native varieties lend themselves to sustainable farming with a lot less fuss and worry and still make delicious wines.

Everything is grown on the vertical shoot positioned trellis using mainly cane pruning but there is a movement towards cordon-spur to lower pruning and tying costs. Spacing is quite close between vines, from meter to 1.5m on average, even with the L'Acadie. Vines are own-rooted except for the *vinifera* and they have not yet discovered hilling up as a practice. Winter injury can be a problem and the hybrids can be quickly retrained. Vines are hedged 2-3x per year. 2" tile drains are installed every row in all new vineyards. The soils are clay-based and need drainage assistance even on slopes, much like the Niagara Peninsula. Cover crops are planted every row or alternating rows and mostly consist of native plants. I have never seen more or bigger dandelions anywhere. It was hard to determine vine vigor and balance but it appears that soils are moderately fertile and the vines keep under control. Yields for most varieties are from 2-4 tons/acre. True ice wine and sparkling wines are specialty products.

Because of a general lack of agricultural labor grapes are machine harvested and the wine industry has a widely accepted and used seasonal agricultural worker program. A 50-acre vineyard we visited uses six Jamaican workers and claim that the program is extremely effective for them. It works much the same as the H2A program in the U.S. They get the same workers each year, pay minimum wage, provide housing and transportation and the people go home every year in the winter to see their families. They are skilled, trustworthy, responsible and very hard workers.

The wines are mostly sold in the province in winery tasting rooms and at NSLC stores, which last year significantly lowered their mark up for local wines in order to help the wine industry. Their mandate is to promote economic development, not to make the most money possible, which is yet another example of Canadian enlightenment. This has really helped to boost awareness and sales of NS wines in the local wine market.

I was invited to a wine industry and research forum that seeks to bring the issues of the wine industry to the local research community at Acadia University, Nova Scotia Community College, and the Nova Scotia Agricultural College. We were all surprised by the amount of potential

viticulture and enology research and education assets available in the area in the form of 15 scientists from many disciplines including horticulture, entomology, bio-technology, biochemistry, business, engineering, environmental sciences, extension and outreach. Federal and provincial funding agencies had an opportunity to present their programs to the audience and I was a bit struck by the variety and volume of funding opportunities that exist for provincial agriculture. In one case, a development officer was all but begging the industry and researchers to submit proposals. Another enterprise opportunity agency said that 13 of 14 submitted grants had been funded. These are not conditions that are evident in the U.S. research community. The forum was an opportunity for the wine industry to survey the landscape and create partnerships with academic assets that can help them to solve problems, improve quality and grow the industry. There is the recognition among leaders inside and out of the ivory tower that the wine industry has significant growth potential and they are reaching out to each other to make things happen. I greatly admire and encourage this dialogue and process.

Dr. Debbie Inglis, the director of the Cool Climate Oenology and Viticulture Institute at Brock University in Ontario explained how CCOVI achieved a leadership role in that wine industry of 12,000 acres of *vinifera* wine grapes, the largest in Eastern N. America. She offered partnership opportunities to the ag college in Nova Scotia and advice for building their own vit/enol research infrastructure. <http://www.brocku.ca/ccovi/>

Canada does not have the type of land grant based extension education system that exists in the U.S. Instead provincial departments of agriculture collaborate with private consulting firms to provide extension services to agriculture industries. It is a system that appears to work quite well. In Ontario, Kevin Ker provides viticulture services and Wendy McFadden-Smith covers the IPM needs of the wine industry. They are both tops in their field. Nova Scotia will develop similar resources through a company called AgraPoint.

This is an exciting time to be a wine producer or consumer in Nova Scotia. Since Roger Dial planted the first vineyard at Grand Pre in 1980 and thus launching the modern wine industry in Nova Scotia, other pioneers such as Hans Christian Jost and his father have paved the way for many new entries. That's the way it always happens. I got the same sense of camaraderie that was evident in developing wine regions that I have been a part of on Long Island, in Oregon and now Pennsylvania. I am also reminded of Missouri, a wine industry that has successfully developed a regional hybrid wine industry. Nova Scotia has done the same thing and it is up to them to decide if they want to chase the international varieties on that particular stage. It was clear that the European varieties are a much greater challenge to grow and vinify and maybe it's better to stick to what you know and do well.

Nova Scotia is one of the Canadian Atlantic provinces and is dominated by the ocean and the Bay of Fundy. It is a beautiful place with small scale agriculture, pretty villages and coastline and very friendly people, and it is cool in the summer! By choice I had seafood for every meal and loved every bite. The local wines pair with the bounty of the ocean perfectly. Nova Scotia would be a great place for a summer vacation. I know I plan to go back and the next time to play.

I would like to thank my hosts, Leigh Huestis from Acadia University, David Fullerton from the Nova Scotia Agricultural College and Janice Ruddock, the director of Winery Association of Nova Scotia for their invitation to the forum and amazing hospitality during my visit. My special appreciation goes to John and Ann Warner who spent a day with us touring vineyards and wineries including their own meticulously managed 50-acre vineyard. I would like to thank all of our winery and vineyard hosts who spent time and shared their wines with us. It was one of the best visits I have ever had to a wine region.

You can find more information about the wine industry in Nova Scotia at <http://www.winesofnovascotia.ca/> .

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