



Finger Lakes Riesling (and other delicious wines)



The Finger Lakes region has definitely grown up. Not that it wasn't before, but on a recent visit, just as I noted on Long Island, the growers and wine makers are very mature and wise with their many years of experience. They seem to know so much more about their sites and how to cope with the changeable Eastern conditions. Case in point is Sheldrake Point, where Bob Madill, Dave Weimann, and Dave Breeden have worked hard to ameliorate a flaw in the vineyard site. SPV is on a lovely site, right on the western shore, about halfway

up Cayuga Lake. The vineyard slopes gracefully down to the lake and the surface is peppered with stones. The first impression is that this must be a fine wine site. It took them a decade or more to learn that a geological anomaly had placed a subterranean aquifer right below their vineyard and that water, not just the kind that appears from above, was creating viticultural issues for the vines. Most soil pits are dug to 4-5', which is perfectly reasonable, but they had to dig to 20' to make this discovery. As a result, a complex system of French drains has been installed to mitigate this situation. If it is possible to discern nuance in wines as a result of differences in terroir, then the 2011 Rieslings that we tasted are a fine example – the dry coming from a well-drained section of the vineyard and a semi-dry from a blend of blocks in more watery sections. The dry is a stunning wine of classic Riesling flavor, with the bracing raciness and verve that one expects from the best from the Mosel or Nahe. My socks were definitely knocked off my feet while tasting this beauty. The Daves sort of shrug at the 10" of rain they took at harvest. This speaks to the maturity I have witnessed here and on Long Island. Clearly, white wines have demonstrated a versatility and durability in the vineyard that helps us survive these conditions. As to whether or not the drainage project will work, only time will tell. It is instructive in the sense that things are not often as they appear, and digging deeper, literally and figuratively, is often a good idea. With the additional vine vigor, the



Bob Madill, Dave Breeden and Dave Weimann

vines have been trained to Scott Henry and they appear to be nicely in balance (shoot length, diameter, and spacing) and Riesling at 6t/a delivers very good quality. This may be a lesson in the virtues of vine balance and that preconceived ideas of vine size and spacing may be best tailored to the realities of the site. Bob shared some observations learned over the years that should be of value to other wine growers, “we have learned that vineyard preparation must be thorough for best results. There are no shortcuts. For example, at Sheldrake Point we will go the extent of reshaping the landscape to at least some degree. We are beginning to understand (for our specific locations), which varieties work and the appropriate trellis system. For example, at Sheldrake Point we have only one block of Merlot left - it is thriving in the one block and the others died. We are beginning to understand the importance of clones. For example, the foundation for our Gewurztraminer's stunning character can be attributed to a blend of clones based on a selection massal.” It is amazing what some years of experience and perspective can bring to a wine.



Ah, a person with a passion for Pinot Noir. That takes me back to my days in Oregon. We met Tom Higgins (<<) at Heart and Hands on the eastside of Cayuga Lake and it was clear that he has the bug. There is a look that Pinot people have that is unlike any other. The search for limestone is a clear indicator of Pinot insanity, and he found some in a steep and rocky outcrop of Onondaga limestone, on top of which he planted 3.5 acres of seven Pinot Noir clones, notably including Swan and Calera, and Dijon 828. Tom worked a harvest at Calera with Josh Jensen so it's easy to see

where the desire for limestone came from. I, for one, am convinced of the prominence of Pinot by the lakes. In the early 2000s the Eastern Pinot Noir Conference (imagine Steamboat in Oregon), brought producers together to talk, taste, and often commiserate about Pinot Noir, and we tasted enough fine examples of the grape to understand its potential. That it has somewhat faded from the Finger Lakes consciousness is a bit of a mystery, suffice it to say it is a hard and expensive grape and wine to cultivate, and not for the faint of heart or mind. Tom and Susan may be the only winery committed to the Oregon and Burgundy model of Pinot excellence – one grape, one wine, meaning a singular pursuit of the grape. His analogy was trying to raise 2 children vs. 20. The vines are still young; at 3 years they are still being trained. Normally one might be concerned at this lack of vigor but for his goals, and 3' spacing, I think this is a good thing. His model is Calera, where it takes 7-8 years to establish a vine, and they are lucky to tweak more than 2 t/a from them, often less, so it's a bit of a different paradigm that is being followed here. As is tradition in the area, rows are north-south across the slope as it falls to the lake, which makes almost all vineyard operations more complicated. Slope is up to 20% near the top and the rows are already beginning to terrace themselves. The air and water drainage benefits from this degree of slope are not measurable but almost certain. The west aspect should help to pick up warmth in the afternoon, something the grapes will surely need. A stone wall at the top, made from rocks gathered on the fields, is testament to the nature of the soil here, and perhaps foreshadows what Tom and Susan can expect from their wines. The vineyard design

and viticulture are nothing unusual – multiple trunks, cane pruning, hilling up, etc. This is a vineyard I would definitely like to see in August with a full canopy. Since 2006 they have been purchasing fruit from carefully selected growers around the region, including Hobbit Hill on Skaneateles and Jimmy Hazlitt on the east side of Seneca. They are using acreage contracts, which is not yet commonly done in the area. The 2008 reserve Pinot Noir offers a hint of the potential for Pinot in the right hands. This is a fine example of the necessary devotion to site selection to make a fine wine and the application of focused knowledge to design and develop the vineyard in complete devotion to the intended wine. If it works, it will surely be a model for future Pinot producers. If it doesn't, it's back to the drawing board. But I'm wagering I'll be returning to try their wines again.

The soils and climate are paramount by the lakes. Driving around Seneca for a day with state viticulturist Tim Martinson, who was the Cornell extension agent for the Finger Lakes Grape Program for many years, allowed us to gain a particular understanding of the lake dynamics from a real pro. It's no surprise that Tim considers the meso-climate to be paramount when it comes to natural features that affect wine quality. First of all, the vine needs to survive the winter. We saw plenty of evidence of the difficulties. There are so many subtleties of climate around the lakes that it is a veritable shell game for grape growing. Which is better, east side or west, north end of the lake or south end, close to the lake or above the railroad tracks on the east side of Seneca? I think wine growers have been asking these questions for decades in this region but only now beginning to pay attention to the finer details of location. Dr. Alan Lakso at Cornell has been busy mapping the region's wine climate, but attentive growers like John Santos, John Wagner, Dave Weimann and others have been experiencing it for decades. If you look at other great Riesling areas, like the Mosel or Rheingau, this is how the process goes.



Sarah, Tricia, and Peter Bell at Fox Run

Then there is the soil, which is even more complex than the climate. The Finger Lakes are all about the effects of the glaciers, and the results they have left behind. There are distinctly different soils here, from the clay-loam Honeoye and the very gravelly Howard, that should, at least in theory, have some impact on wine quality. Of course, talking to Peter Bell, one of the lakes finest and most experienced wine makers, and tasting 11 Rieslings from 2011, gives the terroirist pause, and an opportunity to ponder the influence of choice of yeast on the character of a wine. The VIN13 was super expressive of the grapefruit quality of the grape, and the Epernay 2 completely brought out the orange accents of the grape. The wines absolutely have a common Riesling thread that ties all of them together, but the finer points, according to Peter, are heavily influenced by the wine maker. I pretty much believe anything Peter tells me so this puts terroir at risk. He noted Johannes Reinhardt at Anthony Road, who is making zesty Rieslings using native yeast fermentations. Peter sources Riesling from no fewer than 7 different vineyard blocks and says that hydrology, aka soil moisture, in any given year, is the key to success or failure. This observation is not at odds with the essence of terroir, since water is at the root of all good and evil in viticulture, and when we talk about climate we are talking mostly about what falls from the sky, how much and when; and when contemplating the

soil, what matters is how the moisture gets into and ultimately exits it. I am convinced that the secret to the best wines by the lakes is in the soil, with as warm and dry a climate as possible. Without missing a beat this conversation led to a discussion of vine density and the impact of close spacing on quality. Fox Run Vineyard owner Scott Osborn is quite sure that more vines makes better wine, so spacing in the vineyard has been getting tighter. I think the jury is still out in Peter's mind there is not quite enough evidence to pass a verdict. I have always felt that the only way to settle the matter is to look to other regions with great Riesling, i.e. Germany, Austria and, Alsace, learn from their viticulture, and then test it in a strictly controlled experiment – such as the well-drained, low fertility Howard soils, on Riparia Gloire, 3-4' spacing on single or double guyot. Is the wine any better?

I do not think we encountered a vineyard better developed and maintained than Red Tail Ridge on the north end/west side of Seneca. They may be best known for their elegantly functional LEED winery but the vineyard is equally impressive – straight rows and trunks, uniformity, stout trellis and good balance on the four-cane system. What is so instructive here is the importance of subtle variations in topography and soil, and how it can affect vine performance and winter injury. This is essentially a large research vineyard



Mike Schnelle, Jim Law and Tim Martinson

because Mike and Nancy monitor just about every vineyard metric possible. They are on closer spacing than most, so this is a good example of the impact of spacing on wine quality.

Seeing some of the vineyard brought into focus the matter of viticultural neatness (or “fussy” viticulture, as Tim doesn't like me to say), and how it may affect wine quality. We briefly visited a vineyard on the south end of the banana belt, a bit higher than most (probably around 900 to 1000') where the very well respected wine maker Morten Hallgren from Ravines sources some of his best grapes. Of course, driving up to it one expects to see a well manicured, Napaesque sort of vineyard but, no, it's rough around the edges but at least so far as we could determine, the vines were in good balance. Could this be the argument for terroir that could be used the next time I talk to Peter? I trust Morten, I have tasted his wines and they are brilliant. I have seen the vineyard, now we need to connect the dots and determine cause and effect. I think these kinds of relationships can be defined and quantified if some very smart people put their minds and effort behind it



Nathan and Morten Hallgren

(see Dr. Andy Reynolds terroir research on the Niagara Peninsula). But we'll never understand, or know where the best places are, if the local industry and ivory tower are not willing to examine it. There is always the nagging question, “Just how good can the wines be if all of these relationships are better understood and documented?” We are tasting really, really good wines now, such as the 2009 Tierce Riesling (a collaboration between Red Newt, Fox Run and

Anthony Road) and 2008 Red Newt Curry Creek Vineyard (John Santos) Gewürztraminer, but are they realizing their full potential? Maybe it's too much work to care so much, or it just really doesn't matter. Sometimes I wish I had a magic research wand that I could wave around and get answers to these questions.

In general, I think the vineyards by the lakes are still pretty vigorous, at least by the best wine possible standards. But this must all be determined in the context of the wine being made, particularly the price point of the wine. At current FL wine prices, anything less than 3-4 t/a is probably not very economical for the grower or winery.



The perfect cane

John Santos is definitely one of the smartest wine growers I know. If you were at Wineries Unlimited about ten years ago (remember, when it was at the Lancaster Host:-), he once gave a talk about the Scott Henry training system? He spent all winter cutting out paper vine leaves, then built a model vine using a real trunk with cordons and shoots, attached the leaves, and used pipe cleaners as tendrils, and demonstrated as clearly as the light of day, what happens when you have a crowded single canopy and how it magically opens up when you fold half of the canopy into a downward position. I knew I had to get to know this guy and he is still one of the most likeable and respected growers I know. This time John took us out on a cold and drizzly afternoon into his Cabernet Franc and Gewürztraminer vineyards with his little scale, and asks some

very experienced growers to select canes that represent a balanced vine. Hmm. Is this a trick? I pick one and it's too

heavy. Jim Law and John's assistant Robert each pick one and they are spot on, at least as defined by Dr. Richard Smart, the ideal cane weight is 20-40 grams. And lo and behold if you look at vines with canes of this particular length and diameter, the vines are visually in balance.

John enlightened us with other viticultural tales of woe and intrigue. We asked everyone about the 2011 vintage, which was a hard one up here, from 10-20" of rain during harvest depending on location. It's easy to forget that the mid-summer was extremely dry, and Tim showed us a vineyard on the north end/west side of Seneca that defoliated due to lack of water. As a reminder, I believe that high-end viticulture in our region, which is subject to drought and deluge, requires drip irrigation for exactly this situation. The winery owner should calculate the cost of the lost fruit in wine value, which surely would pay for an irrigation system and much more. In response to the dry conditions, and a concern for atypical aging (ATA) and low yeast assimilable nitrogen (YAN) in the grapes, John applied foliar nitrogen. Of course, as Murphy's Law states, it must start raining the moment after the last drop of fertilizer is applied, which, of course, it did. This, according to John, led to greater disease problems in the treated vineyards. Boy, is this business tricky. You could say that Mother Nature has a bit of a mean streak in her.

At Linden Vineyards Jim is about to plant a section of vineyard with variable soils. This led to a good discussion about how to achieve a balanced vine. If the soils vary within a vine row, is the best way to achieve balance to vary vine spacing, manipulate vine size with rootstock choice, or

to adopt the best suited training and trellis system? Mark Greenspan from Advanced Viticulture in Sonoma has written about vineyards that are now using a standard rootstock, like 3309, and varying vine spacing according to soil capacity. John Santos took us to a block of Gewürztraminer, just below the road, where soil vigor oddly increases as the vines descend the hill towards the lake. In this situation, John used Scott Henry on the vigorous upper section and VSP below. The differences in vine vigor were striking and easily discernable. These are all good methods to cope with the issue of varying soil capacities, but as is always the case, the treatment depends at least in part on what the goals for the wine are.

It appears that the four cane system with yields in the 3-6 t/a range is excellent for mid-to very good quality Riesling by the lakes. It produces very sound and attractive wines. If the best quality is sought, then the gravelly veins must be found, or the right situation of Howard, Aurora, Honeoye or other soils so that a smaller vine with lower yields can prevail. It's really up to the winery and the type, style, and price point that is determined for any particular wine. At the top end, which we saw around \$40 a bottle, the quality probably needs to be pushed by harsher site requirement. Above all, a balanced vine needs to be achieved that is closely correlated to site capacity. These are fundamentals of viticulture, and the Finger Lakes appears to be at ease with them.

John Wagner is an amazing vineyard manager. If you ever want to see the word innovative in action, go to see him on the east side of Seneca Lake. An engineer by training, a walk through his equipment shed is like falling into the rabbit hole in Alice in Wonderland. On a very dreary, rainy afternoon, it may have been unfortunate that we had to spend more time in his shed than in the vineyard, but I sure wasn't disappointed. . .

- In 2004 a big freeze hit the lakes and lots of vines died. John ended up replanting thousands of vines. For anyone who has ever done spot replanting (not entire fields), this is one of the least desirable jobs in the vineyard repertoire. It's a lot of painstaking work – pull out the vine, prep the soil, replant in May, nurture the new vine among a forest of giants. John designed an implement, called the Sabretooth, and if you saw it you would understand exactly why it is named that, that in one motion removes a vine, creates a planting furrow so a new vine can be inserted and then closes the furrow. Yes, it requires fine tractor skills of backing in and out of tight spaces, but it's an amazing machine.
- Since 2004, hilling up and taking down to protect graft unions has been an essential chore in vineyards, with the emphasis on the word “chore” (is anything in vineyard ops fun anymore?). John has a gigantic Gregoire over the row tractor that is promoted as multi-task but used mostly as a harvester. He wanted to put the multi into the machine so he adapted it to hill up and take down. I can hardly begin to describe the contraption he designed, built and installed to fit in the picking bay – it has two discs on either side with multiple adjustments up-down, sideways



John Wagner and his take down tool

(that also complements the tractor's ability to self-level), and so he can hill up at a remarkable 2x the speed as with the traditional side mounted blades. He said that this has allowed them to plant more *vinifera*, because in the past, the time it took to make the berm and remove it was a limiting factor in the number of acres he could manage (which is a whopping 240). The take-down device is equally ingenious, a blade with a hydraulic actuator that allows it to move in and out and kick out if it encounters a trunk that is out of place, thus not removing the vine. It does so to such a fine degree of accuracy that no follow up hoe work is needed. How you can do this sitting six feet above the tool and not being able to see it is beyond me to imagine. John says he's the only driver to take-down and has mounted a wide-angle mirror that extends to the front of the cab to be able to see below into the belly of the beast. It's clever beyond belief!

- Imagine being able to spray 240 acres in four days instead of eight? No one likes spraying (at least no one I have met). John has a lot of acres to cover. He could hire more drivers and get more tractors out there, but instead he asked Rears Mfg to modify a 400 gallon Pul-tank with giant wings that fold forward and back and extend over a row so he can do two rows at a time with no reduction in coverage. It is an amazing device to look at. If I saw it coming down a row, fully extended with a plume of mist I would run very fast in the opposite direction. He is considering having another made that incorporates the modifications he has done on the original. He would like to add a water tank so he can rinse the sprayer in the field, cutting 30 minutes of travel and clean up time from the spray routine.
- A new technique that is being used a lot in high quality vineyards in California is the vibrating winged- ripping tool. It gently lifts the soil, loosens it (but does not shatter it), and lays it back down in the same place. It helps to create uniformity in the subsoil. John rips new fields in multiple directions. He is also considering using root pruning as a method to control vine vigor.

I think it is hard to imagine how difficult it is to manage a vineyard that must be hilled up each year. Not only does it take a lot of time and skill, but it inevitably affects many areas of vineyard operations and management, in particular vineyard floor management. For example, where excess vine vigor is an issue, there is not the option to plant cover crop under the vines. A flat and smooth vineyard floor is what every manager dreams of and it's virtually impossible to achieve here.

For any FLX aficionado, there is the strange case of Rob and Kate Thomas, that cannot be easily dismissed. They are red wine makers in a white wine region, but it comes as no surprise when you get to know Rob, who probably doesn't have the word "conventional" in his vocabulary. This is taking on a particular, some might argue unreasonable, challenge in wine making. Yet tasting his Merlot and Cabernet Franc opened our eyes to the possibilities, certainly in warmer vintages. They were much more than just charming, they were, well, real red wines! Rob, along with son Seth, grow and make the wines. I think his singular devotion to red wine production helps him to overcome obstacles, in the same way that is necessary if Pinot Noir is to be successful.



World's tallest extension enologist by his still

There is nothing quite like Cornell University's Vinification and Brewing Lab at New York State Agricultural Experiment Station in Geneva. The first thing the eye is drawn to is 30 or so 30-gallon jacketed stainless steel fermenters designed for experimental wine lots. We met Chris Gerling (<<), the extension enologist, who told us that they are doing much smaller micro-fermentations for the grape breeding program, as little as a liter of wine, that will help Dr. Bruce Reisch decide if a cross has a future or not.

Besides all of the wine making equipment there is replicated brewing equipment and a column still. Micro-vinification is a very challenging process – to make commercial grade wine samples on a very small scale. Much of the equipment used to do this looks and works just like the tools in a winery, but it is much smaller. At Oregon State University, Barney Watson was a master at small lot wine making that allowed the wine industry to decide which Pinot Noir clones to adopt. Chris and enologist Anna Katherine Mansfield make wines from enology and viticulture experiments.



World's smallest temperature controlled stainless steel fermenters

Their goal is to make representative wines, not necessarily good wines, for which they may be criticized by wine makers. A standard wine making procedure is used to make these wines so that they may reflect the intent of the experiment. Oxidation is the biggest problem in micro-vinification. Wines are often compared to internal standards, such as Cayuga for white hybrid wines, or Marechal Foch for red hybrids. Their preference is to work with at least 3 gallons of wine to achieve a representative sample for the trial. Our favorite quote from Chris was his imitation of a German still manufacturer named Alexander who tasted a distilled spirit and observed, "The wine is clean, but it is not beautiful." I believe the wine trials have helped to push the quality of wine in the Finger Lakes dramatically forward. Getting answers to complicated issues such as atypical aging, yeast assimilable nitrogen, methoxypyrazines, Riesling clones, and other important concerns greatly enhances the wine industry's ability to make better wines. Chris and Anna Katherine also provide excellent outreach services, offering practical workshops, on-line seminars, and other information to the wine industry.

If you read the national wine press you probably have heard about Morten Hallgren. He was the wine maker at Dr. Frank for many years and now makes his own wines under the Ravines label. We met him, and cellar assistants Nathan and Fred at White Springs Vineyard, but we were not able to meet vineyard manager Doug Davis.



4 cane vertical shoot position

is the Scott Henry training system, which vertically divides the canopy into a single plane with canopies trained up and down. That, too, appeared to help the vine achieve balance, even though it tends to devigorate the lower panel (crop thinning may be necessary). A third variation was a modified lyre system at Chris Verrill's vineyard, which spreads the canopy but is not as wide at the top as most lyre trellises. We discussed the relative quality of wine we tasted and the soils they came from, and size of vine and crop. There seemed to be consistency of lower

yields offering more sap and concentration to Riesling. It would be interesting to look at the qualitative and quantitative difference between wines from 2 canes or 4 canes. Would it help quality to plant vines further apart on a single canopy? This might be at odds with limiting cane/cordon length.

Many vineyards by the lakes are using a four cane VSP system trained to two vertical wires about 4-6" apart. Fruit wire height was mostly about 36" with some as high as 40". The effect of this is to double the number of shoots per linear distance with all of them being trained into a single canopy. One has to wonder about the potential for crowding but many of the vines we saw appeared to be in reasonable balance.

The alternative to this



Verrill Vineyard narrow lyre system

The White Springs Vineyard is one of the furthest north vineyards on Seneca Lake. Morten says it is a warm site and 2011 was a perfect test of its capabilities. Cabernet Sauvignon got to 23 brix. The 40 acre vineyard is about a mile from the lake and slopes gently towards the lake, rows are north-south, 8x4 VSP, tile drained, and production is 3-4 t/a. Morten said it was one of the cleanest vineyards he saw in the difficult 2011 harvest. It is a well designed and developed vineyard. We noted the exceptional uniformity among the vines and within the vineyard, something that can be difficult to achieve in this winter injury prone region. The 2011 White Springs semi-dry Riesling from the tank had wonderful length and depth, racy, fruity, and delicious. The 2011 Argetsinger Vineyard Riesling was a bit more austere than the others but had laser-like fruit focus and significant acid structure, a wine that will last forever.



The Argetsinger Vineyard (<< upper vineyard as seen from across the lake) has gained fame recently because Sam supplies grapes to some of the lake's best wine makers. The vineyard is on the far south end of the east side of Seneca, at a higher elevation (above the railroad tracks) which may explain the bracing acidity. It is a bit rough

but clearly a powerful site, capable of producing intense fruit. It is a site worthy of further study to understand its terroir features.

Morten also barrel fermented and is aging on the gross lees in seven-year-old barrels. The Argetsinger Riesling has already acquired a smoother, softer, rounder texture, more in the Alsatian style. It is a gorgeous wine in its infancy. I asked why more wine makers do not use neutral oak ovals or foudres and the reply was they are simply not available.

The 2011 White Springs Vineyard Gewürztraminer displayed all of the ripeness and spiciness you would ever want in a Gewürz. The grapes achieved almost 24 brix in mid-October and accidentally got additional skin contact time when a fully loaded press broke down during harvest.

The 2011 Verrill Vineyard Pinot Noir was lighter, but with bright fruit, good depth and length. We also tasted the 2008 Ravines Pinot (also from Chris Verrill's vineyard), a gorgeous, ripe, elegant wine with focused Pinot fruit and fine acidity, made from a blend of clones 113, 115, 667, 777, 828, and Dr. Frank. This wine reminds me of a soft and silky Santenay or Volnay.

Riesling clones matter to the wine growers here. The most widely used are 239 and 198, both from Geisenheim; 96 is an ENTAV clone, and N90 is the recently released Dr. Frank clone.



Chris Stamp at Lakewood Vineyards

Chris and Liz Stamp, and Chris' brother Dave may be one of the best examples of native grape growers turned wine makers by the lakes. They occupy a unique position furthest south on the west side before you get to Watkins Glen. The Gewürztraminer here really captivates me with its spicy fruit and beautiful balance. Dave is using mostly Scott Henry, and as on the other side of the lake, soils are less vigorous as the vineyard descends to the lake. I appreciate Chris for his long-time devotion to the eastern section of the

American Society for Enology and Viticulture, whose board we have served on together. Liz was one of the founders of the Seneca Lake Wine Trail, which is still the gold standard for wine trails.

I have been drinking the wines of Hermann J. Wiemer for many years and they have always been an enigma to me. How does Hermann get so much sap and concentration into his wines? They were the most German of Rieslings. There is, of course, his heritage. But heritage informs a wine, it doesn't make a wine. I puzzle about the vineyards, above Rt 414 and away from the lake, on Honeoye silt loam and Aurora silt loam, and how these soils impart such a distinct character to the wines. I wonder why Magdalena and Josef, ten miles further north of HJW, are 2-3 degrees warmer – and why, in general, meso-climate warms as sites move north along the west side of the lake. There is a lot to be curious about, yet I always return to the wines and their unique character. Tasting with Fred Merwarth is like going back to winemaking school. He is the perfect blend of technical and intuitive. He understands the chemistry and equipment, yet he can discard all of it and rely fully on his palate to determine when the acidity of the grape is in balance and picking should commence. They don't teach you that in school. The three

vineyards have unique features, variants of clay and shale with low pH (around 5.8) that seem perfectly adapted to Riesling. I wish I knew what Hermann saw in those sites when he decided to plant them, or maybe intuition at this level can't be explained. The HJW vineyard (>>) by the winery with its old vines dating to 1974 has taken a beating from winters, but it is always gently nurtured back into production. It's remarkable that the 42 acres at Magdalena and Josef are 2-3 degrees warmer and consistently ripen 7-10 days earlier than HJW. Riesling clones include 239 and 198, ENTAV 98 and 49 (the St



Urbanshof clone) grafted on SO4 (planted on shallow soils, it is more vigorous and drought tolerant), and 3309 (less vigorous and allows the fruit to hang longer). Row spacing is 2.5m x 1m with either single or double guyot or Pendlebogen training. New vineyards are planted east-west, up and down the hill, a response to the erosive effects they incur due to hilling up across a field. There appears to be no impact of this orientation on fruit ripeness. Fred is quite adamant about the impact of yield on wine quality, and 2-2.5 t/a (HJW) and 3-3.5 (Magdalena and Josef) offers fruit that gives the wines depth and concentration, qualities that are never achieved in the cellar. Fred also feels that the lower crop load helps to reduce disease pressure in the vineyard. Acidity is the key to the wine and the balance can alter a wine's aroma and mouthfeel. It affects the "flow" of the wine, which is how the taster perceives it. Fred's wines also have what was described as "sap" or viscosity that has always been signature at HJW – it's something I find also in the best German Rieslings, like a JJ Prum Spatlese or Auslese. A key process in the production stream is "sorting to the nth degree" which in years like 2009 and 11 is a task of monumental effort. Imagine how difficult the past two vintages have been for Finger Lakes wine makers – first a historically warm and dry vintage with ultra-ripe fruit (not always good for whites), then the complete opposite – cool, wet and late (perhaps preferred over heat but no less challenging). In assessing fruit maturity Fred relies on his first impression of tasting – how does it taste and tries to get a consensus of ripeness in a particular field. He says that Riesling is difficult and Gewürztraminer is easy. He carefully monitors the condition of the fruit, especially botrytis. In 2011, sour rot was a problem for the first time. Grapes are picked in multiple passes through the vineyard – Fred referred to wines as "first, second, third, or fourth" picking, a remarkable effort in itself. Botrytis as noble rot or edelfaule is a key feature of Wiemer wines and a unique occurrence in their vineyard. I'm not sure if noble rot can be cultivated, but Fred seems to achieve it to varying degrees each year. It takes just the right amount of moisture, warmth, and humidity to get it to happen, and there is a very fine balance between noble rot and grey mold.

The wine making is, in his terms, "simple," which I really don't believe for a moment. Perhaps that means more intuitive. It all takes place in stainless steel, fermentations are slow and steady, sometimes lasting into the summer, wines are cross-flow filtered and bottled without concern for CO₂, which many wine makers feel helps to keep their wines lively and fresh. He was quick to note that the cross-flow is only as good as its user, and it requires particular care not to let it



Fred Merwarth at Hermann J Wiemer

always looks for how the weight of a wine presents itself. He also likes the wines of Koehly from Alsace. Hermann's benchmark is the great J.J. Prum (Mosel). We tasted the 2008 and 2009 Individual Selected Berries late harvest wines and they are beyond description, but everything one would expect from a great TBA from a great estate in Germany. In 2008 6 tons of grapes were reduced to 100 gallons of nectar. In the chill of November, Fred's parents, family and friends sort berry by berry. What struck me was the acidity, even at such ripeness, which allowed even so unctuous a wine to retain its Riesling raciness.

overheat and damage the wine. 17 tanks are blended into 5 different wines, and in most years the component parts fit together like a puzzle. Fred views each tank as a piece of a blend, not an individual wine. For example, at Magdalena there are changes in the soil, rootstock, and clone that offer different characteristics that will lend themselves to the blend.

We asked Fred what his benchmark wines are and he told us Gunderloch (Rheinhessen) and Muller-Catoir (Rheinpfalz), producers noted for Rieslings with viscosity as a textural feature; he said he

It dawned on me afterwards that in 3-days of non-stop talking about Riesling the term "minerality" was never used in any conversation with the wine makers. This is a term that has attracted a lot of attention recently (see the article by Jordan Ross in the Winter/2012 *Practical Winery and Vineyard*: "Minerality: Rigorous or Romantic?"). Nor did we taste very much petrol or kerosene, although we mostly tasted young or new wines. The common thread was a purity of fruit, often a blend of citrus fruits, great aromatics, very well-balanced acidity that gave wines structure and definition. After this visit I am thoroughly convinced that balanced acidity is the key to a great aromatic white wine. We talked with Fred Merwarth about the balance of malate and tartaric, especially under diverse vintage conditions like 2009/11 and 2010. He tastes and picks almost entirely on acidity in the juice, sampling berries and knowing just when the balance is right. Once that moment has arrived it must be acted upon very quickly. Since he will never acidify a wine, balance must be achieved in the vineyard.

I think what is most unique about the Finger Lakes wine industry is its sense of community. I have been to a lot of wine regions but none of them have people more devoted to each other than this place. They work and play together very well. The wine industry is very fortunate to have that agricultural research station right in its backyard. It's hard to measure the difference that makes in pushing wine quality, but by sheer size and inertia it must make some, probably a lot. Wine growers in states like Pennsylvania envy the resources at NYSAES. They also get a lot of support from the Jim Trezise and the New York Wine and Grape Foundation. It's impossible not to make progress, or lose enthusiasm, as long as Jim is out there promoting for them. When I consider all of the resources that New York has and how few there are in Pennsylvania, I am just glad for the generosity of neighbors, and that they are willing to share their goodies with us. If you want to get a sense of the personalities and *esprit de corp* by the lakes, I would recommend

reading Evan Dawson's excellent book *Summer in a Glass*. It's not a technical book, but it will give you a clear sense of who is making the wine in the Finger Lakes.

There are still big challenges ahead for the Finger Lakes wine industry. While it's not really my area, I get the feeling that marketing and economic sustainability is not where it should be. In the medium to long term what needs to be better understood are the soil and climate dynamics of the lakes, a task that probably only Cornell is able to do. Particular areas can be assigned vine size designations and potential wine quality.

I was really impressed, but not surprised, by the overall quality of the wines we tasted on our visit, not just in the cellars but everywhere, and tank and bottle. Morten said that 2011 was a test for both vineyard and cellar and I think he's right, and most of the tank samples were delicious. It goes to show how the industry has matured and how professionals have figured out the FLX conditions. I think it was an important moment in Oregon when we were able to manage vintage variability and still make decent, if not fine wines in lesser years. It seems like the wine growers in the Finger Lakes are there, if not beyond. Thank goodness for a malleable grape like Riesling, that seems to display goodness and virtue in multi-faceted ways. A few years ago Lettie Teague wrote a nice article about her visit to the lakes and said that she preferred the gewurztes over Riesling, and, in all honesty, that was my opinion, too. But I've change my tune and now believe the Rieslings offer the quality and character of their best German and Austrian counterparts, although the Gewürztraminers are still lovely wines!

We tasted a lot of wines on this trip, thanks to the generosity of our hosts, and among them I cannot recall a single flawed wine. The FLX wine makers have probably long achieved technical correctness in their wines and are now chasing artistry. That means the wines will almost certainly get even better. I'm excited for the lakes, and their cool climate cousins in Ontario, because as Germany, Austria, and Alsace have run into warmer weather, their Riesling will inevitably lose the essential natural acidity of a truly great Riesling that can be gained in cool regions. This opens an opportunity for the lakes to present itself to the world.

I traveled to the Finger Lakes with Jim Law (Linden Vineyards) and his interns, Jonathan and Craig, to learn about wine growing by the lakes. Jim and I believe in viticultural travel as a way of learning from the best and brightest. It is amazing the benefits of knowledge, friendship, culinary delights and more that you find on the wine road. We were extremely well received at each of our visits with generous donations of time and knowledge, as well as wines and delicious food. I would like to thank Bob Madill, Dave Weimann, Dave Breeden, Tom Higgins, Kate and Rob Thomas, Mike Schnelle, Peter Bell, Tricia Renshaw, and Sarah Gummoe, John Santos, John Wagner, Morten Hallgren, Chris Gerling, Chris, Liz and Dave Stamp, Fred Merwarth, and Tim Martinson and Chrislyn Particka, who drove us all around the lake. These are wine growers and educators of the highest order. I am convinced that the advantage that wine regions like the Finger Lakes, Long Island, and Ontario have over the rest of us is the number and quality of their wine making professionals. In odd vintages like 2010 and 2011, it is they who make the difference in wine quality. Only through experience can you have any chance of knowing what to do.

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January, 2012