Arguably, after the relatively easy vintages of 2009 and 2010, the French were due a year that is already being called ‘complicated’, ‘challenging’, (mathematically incorrectly) ‘average’ and, with superbly inventive hyperbole from the St-Émilion growers organisation, ‘the master craftsmen’s vintage’.

-Jancis Robinson, “2011 - a crazy year for growers,” jancis-robinson.com

California’s 2011 vintage: the good, the bad and the ugly.
California’s 2011 vintage poses key dilemmas.
-Jon Bonné, San Francisco Chronicle headlines, SFGate.com

Oregon growers trying several tricks to salvage wine grape growing season.
-Salem Statesman Journal headline, statesmanjournal.com

Mother Nature May Not Be a Wine Fan.
-Unfiltered Blog headline at winespectator.com

I think that before we get into this discussion of the 2011 growing season, we should remember that a lot of people thought the world was going to end in May. If you think about the year from the perspective of life on Earth continuing, things really aren’t so bad. Bad isn’t the right word though, because for a lot of people the season was not bad, or at least the tangible results aren’t bad.

The grapes in many places are wonderful, but the thing is, even the growers and winemakers who are happy with the grapes still don’t look relaxed and satisfied. They look like they’ve just stepped off of a roller coaster—a metaphor for agricultural seasons that is used frequently but more apt in this year than most. And even the people who enjoyed the ride can’t help but notice that repair personnel are scurrying onto the track and muttering things like “I’ve been here 20 years and I’ve never seen it do that.”

Let the record show that as of October 25, Geneva, NY had 2834 growing degree days (GDD) and 20.9 inches of rain.

We Want your Feedback

Please participate in brief online survey

This is our fifth season of Veraison to Harvest, and we’d like to know what you think about this publication.

We’ve put together a brief (10 question) online survey that should take no more than 10 minutes to complete.

Whether you are a grower, winemaker, field person, academic, interested consumer, or wine writer, we’d like to know what you think about V to H, how you use it and how we can improve it in the future.

Please click here to complete this simple survey.

Or follow this link:

https://cornell.qualtrics.com/SE/?SID=SV_ etaMerRueXX3hsww

All survey results confidential and anonymous.
It’s worth mentioning that Geneva was not hit by any hurricanes, tropical storms, earthquakes or rains of brown marmorated stinkbugs. In many parts of the northeast, April and May were the wettest on record. In many of those same parts of the northeast, June and July set or tied records for dryness. In the 57 days between September 1 and October 27, 42 had measurable rainfall. Quite frankly, a lot of the farmers out there may be asking why we’re so sure the world didn’t end.

**Yields Up.** 2010 was an exceptional year in many ways, but fruit set was one area that was less than exceptional, especially for juice grape growers. In 2011 the set deficiency was corrected, and for those who could hit their targets the year was a success. Pretty much everybody I’ve heard from, with the notable exception of those who have had to drop or sort out large amounts of rot-affected fruit, have reported higher tonnages and higher juice yields.

Whether or not this is a good thing is a matter of perspective. If the quality is good and the inventory is low, bring it on. If the higher juice yields are a product of rain dilution and the flavors are also diluted, however, more is not necessarily better. I’ve heard reports of both cases so far, but keep in mind juice flavors and wine flavors are only loosely related, and at least one person who was not as happy about his juice is much more hopeful after primary fermentation.

**Where’s the Brix?** Sugar levels have mostly been slightly lower to a lot lower than would be expected for a high GDD year. What’s noteworthy is that acids are not particularly high either. The rain and dilution may be at least partly to blame for this phenomenon, but there are probably other culprits as well: clouds.

While it can be easy to view acid degradation and sugar accumulation as two sides of a see-saw— one rising as the other falls and vice-versa—there are actually separate mechanisms at work. Acid metabolism is primarily a product of heat, which we had, while the photosynthetic engine driving sugar accumulation needs sunlight, which was tougher to come by. For a detailed description, see Tim Martinson’s statewide update in this year’s V to H #7.

In a vacuum, low sugar means only low alcohol, so this situation does not bode ill or well by itself. I’ve heard reports of certain hybrids with particularly low soluble solids, while notable exceptions seem to be aforementioned *labrusca* varieties and Bordeaux reds in some vineyards. Suffice to say that when a winemaker adds both acid and sugar to the same tank, the season has been a little strange.

**B-O-T-R…OK, enough of that word.** The early season moisture laid a foundation for disease, and if overly wet conditions returned, there was the potential for trouble. The situation resembled a parched western forest at a high risk of fire. One errant spark could trigger a chain reaction that would engulf the entire area.

It was at this point that nature dropped the equivalent of an exploding petrochemical factory into the middle of our little forest and the rot machine was activated. Who got nailed and how badly they were hit had to do with rainfall timing and location. General trends seem to point to Lake Erie and Long Island being better off with the Finger Lakes and Hudson Valley seeing more problems, but everybody had challenges and your mileage may vary. Late season moisture and associated disease problems were not unique to New York (no tongue-twister intended), or even the northeast, however. When both Scott Labs and Vinquiry have posted tips for handling rot on their websites, you can bet that other coasts are also struggling.

If I had to choose three words—or two words and one contraction—to describe how New York winemakers feel about the 2011 harvest, those words would be: glad it’s over. Some people are pleased with what they’ve seen so far; others less so; some producers are excited about the yields and the flavors, others concerned— but pretty much everybody is tired.

Tired is a natural state for growers and winemakers after harvest, so this news should come as no surprise, but there is tired and there is tired, and after 2011, everyone is tired. We are accustomed to the vagaries of weather, and we are used to being ready for everything and anything. It’s a darn good thing, because this year not only tested all of that preparation, it redefined “anything and everything.”
Project Focus: Two Years of Yeast Assimilable Nitrogen (YAN) Data

Mark Nisbet, Anna Katharine Mansfield
Cornell Enology Extension Lab
Tim Martinson & Lailiang Cheng
Dept of Horticulture

After two years of YAN analysis for Veraison to Harvest, having analyzed over 2,000 samples we are starting to see some interesting trends. These trends cannot be considered fundamental laws of nature yet, but in some cases they do give us enough information that we can begin generating hypotheses that can be further tested. The prudent thing for a scientist to do is wait until the hypotheses have been tested, the data fully analyzed, and conclusions drawn before sharing the results.

But because we are all friends here I am going to throw caution to the wind and share some trends and speculate on what they might mean. Think of this as a football analyst predicting his super bowl teams in October. Right now I’d pick Green Bay vs New England to play in the super bowl, but there is a good chance after they play all the games I might have a different answer for you.

DISCLAIMER: The rest of this article is full of untested hypotheses, speculation, and guess work.

Top YAN Trends:

1. Certain varieties are more susceptible to low YAN. Figure 1 shows the average YAN in 2010 and 2011 for varieties where we had at least 3 data points. Cabernet Franc, Riesling, and Traminette exhibited significantly lower YAN than other varieties, and I suspect Lemberger (average YAN = 83.31, n=2) would have fallen in that group if we had more data points.

This is interesting because Cabernet Franc, Riesling, and Lemberger are some of the most cold hardy Vitis vinifera varieties. One theory why these varieties might have lower YAN is proline accumulation. If you remember from last year proline is the only amino acid found in grapes that yeast cannot use as a nitrogen source and is not included in our YAN calculation. In grape vines proline may function as a natural cryoprotectant. Cold hardy varieties may accumulate more proline at the expense of ammonia and other assimilable amino acids at the end of the growing season leading to lower YAN.

2. Red varieties and white varieties react differently to yearly variation. If you look closely at figure 1 you will see an interesting trend the YAN in white wine varieties at harvest decreased in 2011 from their values in 2010, however in red wine varieties the opposite is true. The opposite trends for red wine varieties and white wine varieties can be seen in the interaction plot in Figure 2. The difference in trends for red and white varieties could be attributed to different harvest times or incidence of disease. The red varieties are generally harvested later in the season, so it could be the impact of late season weather or a process that occurs as the fruit hangs on the vine. White wine varieties are often more prone to infections of mildew and rot on the vine and 2011 was a challenging year for fruit rot so it is possible that the YAN in white varieties is lower because some of the nitrogen was utilized by fungus and/or bacteria on rotting fruit.

News You Can Use. It appears that certain varieties can be classified as high or low YAN producers. If you are making wine from Riesling, Cabernet Franc, Traminette, and possibly Lemberger you will more than likely need to make a nitrogen addition to ensure you have enough to avoid any stuck or sluggish fermen-
tations or H₂S production so a prophylactic nitrogen addition of 200 mg/L would not be a bad idea. If you are minimalist and don’t want to add nitrogen or want to minimize your additions, you might be able to get away with little to no nitrogen addition in varieties like Chardonnay, Pinot Noir, and Vignoles which have an average YAN concentration of 200 mg/L. As always because there is such high variability among samples it is always best if you can take a YAN measurement and plan your additions accordingly.

I hope I have been able to make some sense of the YAN trends and that some of these hypotheses will pan out in the future. Here in the lab we will spend the winter conducting experiments, testing hypotheses, and analyzing data so that next year we will have something more concrete to share.

**LAKE ERIE CONCORD UPDATE/SUMMARY**

*Terry Bates*
Dept of Horticulture
Cornell Lake Erie
Research and Extension Laboratory

2011 turned out to be another good vine and fruit development season with respect to heat accumulation and precipitation. Heat accumulation at the CLEREL weather station measured 2700 GDD by September 15th, nearly identical to 2010 and just behind 2005 (Figure 1).

Wet spring conditions provided enough soil moisture to sustain good canopy growth and function through the warm and dry mid-season conditions.

The Lake Erie region was largely unaffected by the remnants of hurricanes Irene and Lee when compared to the rest of New York’s grape growing regions. In fact, warm and sunny conditions in the two to three week period following veraison led to high rates of fruit sugar accumulation.

**Concord Crop Development in Three Lake Erie Zones.** Nine Concord sites were selected across the Lake Erie region and three crop levels were adjusted at each site. Berry weight and juice soluble solids information was recorded and fruit samples have been frozen for further analysis this winter. Vines were also hand harvested at each side to determine overall crop yield.

The chart shows the juice soluble solids accumulation in the three Lake zone, three Escarpment zone, and three Bench zone Concord vineyards. Eight of the nine JSS curves shown all have comparable yields (mean = 7.5 tons/acre±0.5). The ninth vineyard suffered cold damage and did not have a crop treatment in the same yield range.

In general, bench zone vineyards increased sugar concentration faster than escarpment or lake vineyards at the same yield. However, one Lake zone vineyard did not follow this trend with °Brix similar to other Bench zone vineyards. There was a three week difference between the earliest site reaching 16°Brix and the latest site reaching 16°Brix.

As further juice analysis is conducted this winter, it will be interesting to measure the effect of those three weeks on other fruit attributes at the same juice soluble solids concentration.
FRUIT CHEMISTRY TRENDS: 2008-2011

Timothy E Martinson
Statewide Viticulture Extension

The 2011 growing season, though challenging in a number of ways, produced ripe fruit with comparable acidity – but lower brix and pH – than the landmark 2010 season.

On the following three pages, we show comparative trends in berry size, brix, pH, and TA for five varieties (Cabernet franc, Merlot, Noiret, Riesling and Traminette) for which we collected berry samples from at three to ten vineyards for Veraison to Harvest. Each year’s data, from 2008 to 2011 is plotted (2011 is blue and 2010 is green), along with an average (black line) over the four years.

Weekly samples span September and October for 8 weeks this year, although most varieties ran for seven weeks. Some general trends:

**Berry weights** were comparable to 2009 and 2010, and lower than 2008

**Brix** accumulations lagged last year’s rapid and early rise–reds (Cab franc, Merlot, Noiret) ended up 2-3 °brix lower at harvest, but whites (Riesling and Traminette)–almost caught up by harvest.

**Juice pH** mirrored 2008 and 2009, and was much lower than 2010.

**Titratable acidity** after a ‘slower start’ dropped to levels comparable to 2010.

**YAN.** Our two years of data (see figures on p 8) show Merlot and Noiret having consistently higher YAN (140-170 ppm in 2011; 180-220 in 2010) than Cabernet franc and Riesling (60-100 ppm, both years).

To sum up, last year I wrote the following:

*Across varieties, fruit from 2010 should have a very different balance of sugars and acidity than in typical years - and more reminiscent of warmer climate regions than what is typical for our cool-climate region in NY*

This year was different, but didn’t follow either the typical ‘warm and dry’ (2010) or ‘cool and wet’ (2009) scenarios. It was a ‘warm, wet’ year, with heat unit accumulations (GDD) equivalent to the very warm 2010, but much less sunshine during the ripening period. Thus, we see a harvest with somewhat lower sugars, but also low to moderate acid levels–and fruit composition more typical of cool climate regions than the 2010 vintage was.

Our thanks to all the commercial growers and wineries across New York that have allowed us to sample fruit in their vineyards since we started *Veraison to Harvest* in 2007.
Riesling
Top to Bottom: Berry Wt, Brix, pH, TA

Traminette
Top to Bottom: Berry Wt, Brix, pH, TA
THANKS AND ACKNOWLEDGEMENTS

Tim Martinson

As in previous years, we’d like to acknowledge all of the people that contribute to bringing Veraison to Harvest to your in-box every week. Compiling fruit composition information involves sampling, shipping, a long day of sample analysis, and data entry.

Enology Lab at Geneva (left to right): Ben Gavitt, Extension Associate and manager of the NYS Wine Analytical Lab oversaw sample prep and analysis, and graduate students Celine Coquard Lenerz, Diane Schmitt, and Mark Nisbet

Finger Lakes. Hans Walter-Peterson, Mike Collizi, and Bill Wilsey (not shown) collected samples in the Finger Lakes.

Lake Erie: Paula Joy and Madonna Martin (below left) collected samples. Jodi Creasap Gee and Terry Bates (not shown) provided updates.

Hudson Valley: Steve Hoying (l) and Joe Whalon (r) sampled vineyards in the Hudson valley, and Steven McKay (not shown) wrote the Hudson Valley updates.

Long Island: Alice Wise (l) and Libby Tarleton collected samples from Long Island and provided the Long Island updates.

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