# VERAISON TO HARVEST

Statewide Vineyard Crop Development Update #7



Cornell University Cooperative Extension October 11, 2013 Edited by Tim Martinson and Chris Gerling

# Around New York ...

#### Statewide (Tim Martinson).

Leaves are starting to senesce (see photos, this page), turning yellow from the base of the shoot outward. Senescing leaves may partially explain the numbers this week (fruit maturation table p. 5-7). Despite warm temperatures and (mostly) sunny days, sugars changed little (0.2 °brix in Cabernet franc; no change across many Riesling and remaining Merlot blocks), but titratable acidity dropped by close to 1 g/l in the same varieties. Sugar accumulation is driven by phosynthesis; but acidity reduction is driven more by respiration – and vines respire more at higher temperatures. So with the warm weather, acids still dropped. The three Concord blocks showed no change in sugars or acids – suggesting that further gains in maturity are unlikely. There is no Concord update (Terry Bates' article), as the blocks have been harvested.

#### Finger Lakes (Hans Walter-Peterson).

Much of the harvest over the past several days has been focused on the two most widely planted varieties in the Finger Lakes - Concord and Riesling. After taking a week off in hopes of getting higher sugar levels in their loads, the region's largest Concord processor, Constellation Brands, is open again. While we haven't heard about specific results from them, we have been seeing sugar levels in Concords moving up into a better range for the processors (14-15 Brix).

Sugar levels in Riesling continue to hover in the high teens according to a few winemakers we have spoken with this week, and in some cases have not moved up much at all over the past couple of weeks, although acidity continues to drop. Drought symptoms have started to appear in some blocks planted on shallow and lighter textured soils due to the dry weather in September. The area received about 1.5" of rain from the storms that passed through on Sunday and Monday, which hopefully helped to alleviate some of that stress. In addition to Riesling, we are seeing the very tail end of Pinot harvest this week, along with Corot noir, Lemberger, Merlot and Grüner Veltliner coming to the crush pads now.

Sour rot continues to be the main concern with fruit at this point – levels are highly variable around the region. The worst of it looked to be in earlier varieties like Pinot noir and Pinot gris, Vignoles and Chardonnay, so hopefully there is a need for less sorting from this point forward.



Basal leaves senescing at an East Seneca Lake Riesling vineyard. Photos by Tim Martinson

#### Hudson Valley (Steve Hoying).

Grape growers are now working frantically to wrap things up now and the wine makers are up to their eyeballs. All in all it has been a great season here in the Hudson valley – at least much better than the past few years!

This past week the weather has generally been good for harvest and the high winds and rain earlier this week did not disrupt things much except to make things a little muddy in the vineyard.

The year's first Nor'easter is predicted for the weekend but may not have too much effect on the Hudson Valley since most of the precipitation is predicted to be more toward the south.

Here at the lab, we are still waiting on Riesling and Vidal

trying to give them as much time as possible on the vine. With brix at 19 and 17.5 in our block at the Hudson Valley Lab, we may reach acceptable levels next week although as noted by others Brix has moved slowly and appears to have begun to plateau.

As noted by several people, sour rot and bees did not seem to be nearly the problem as in past years, however, for us animal damage (not sure whether I have been correct blaming everything on turkeys!) continues to be a big problem especially where vineyards are surrounded by woods. I guess I will have to invest in a "CritterCam" to really find out what is going on. The latest variety to be slammed is our Corot noir which has been almost completely consumed despite side doubled side netting!

#### Lake Erie (Luke Haggerty).

The Lake Eire region finished last week and started this week with day long rain showers. There is currently standing water in many of the area vineyards, but with the past few days of sunshine things are drying out again. The extended forecast is calling for more rain next week and growers are trying to stay ahead of the weather by picking earlier than they would like.

Going into the third week of Concord harvest we are seeing sugar accumulation slowing down... but still on the rise. Here at the Cornell Lake Erie Research and Extension Laboratory in Portland, NY Concord harvest is underway. Last Wednesday we harvested half of a Concord research vineyard block and sugar numbers came in at 16.2°Brix. The other half of that block was harvested this Tuesday (Oct. 8th) and the sugars were at 17.1°Brix.

The area continues to see grape berry moth (GBM) damage which is now causing secondary problems in the vineyards. The edges of the vineyards seem to the where GBM has caused the most damage. Opening



Grape berry moth damage on Concord grapes in the Lake Erie region this past week.

Photo by Luke Haggerty

left by the GBM allows easy access for fruit flies to lay eggs and fill the grape berries with larvae. The wet weather paired with GBM damage has also caused an increase of secondary rots. It's important scout and determine whether GBM is in your vineyard so you can adjust your harvest plan.

If you do identify GBM problems there is very little you can do this year. However, it is IMPORTANT that you follow the GBM Degree Day Model on the NEWA website (http://newa.cornell.edu/) in order to accurately time insecticides applications next growing season.

#### Long Island (Alice Wise and Libby Tarleton).

The pace of harvest on Long Island has been steady, sometimes rushed but not frantic. The sunny, dry weather has given growers the flexibility to contemplate the optimum time to pick. In white varieties, low levels of pure botrytis meant that minimal or no sorting was required. This has been great and has allowed very fast picking. A few white variety blocks remain but many vineyards have progressed into harvest of reds.

The first blocks of Merlot, Malbec and Syrah were picked this week. Bird depredation has been surprisingly low. Usually by mid-harvest there is increasing pressure on remaining blocks. While a few flocks of starlings are bouncing from block to block, overall there is just not the bird pressure that we traditionally endure. The week is ending with a few days of showers, the first rainy period of harvest. We actually need the rain as vines on drier sites are showing drought stress. Given the advanced stage of ripeness of many blocks, this may precipitate another surge in harvest next week.



**Cover crop Experiment on Long Island.** Caroline Deans, field assistant harvests the under-vine cover crop trial at the Long Island Horticultural Research and Extension Center, "Sponsored by Northeast SARE, we are evaluating vine performance and management with seeded clover and no mow fescue. Since hilling up is not practiced on Long Island, we have the ability to seed permanent rather than annual covers." - Alice Wise

Photo by Alice Wise

### PROJECT FOCUS: FIRST HARVEST AT THE TEACHING AND DEMONSTRATION VINEYARD

#### Hans Walter-Peterson

Students from the <u>Viticulture & Wine Technology program</u> at Finger Lakes Community College (FLCC) have started to bring in the first grapes to be harvested from the Teaching & Demonstration Vineyard established by Cornell's <u>Finger Lakes Grape Program</u> (FLGP) and FLCC.

The teaching and demonstration vineyard, planted in 2012, is located at Anthony Road Wine Cellars, off Route 14 just North of Dresden. John and Ann Martini & family, owners of Anthony Road, donated the land and provide basic maintenance for the vineyard.

Despite the vines being only in their second year, small crops were left to hang on most of the fifteen varieties this year in order to balance out the vigorous growth that we got from them.

Students from FLCC have been collecting fruit samples to monitor sugar and acid levels in order to determine when to harvest. Fruit is taken to the program's facility at Cornell's Agriculture and Food Technology Park in Geneva for processing and final fruit chemistry measurements.

The students have picked Chardonnay, Zweigelt, Riesling (on Riparia rootstock), Corot noir and Grüner Veltliner so far, with more Riesling, Cabernet Franc, Lemberger, Vidal and a couple of other varieties still hanging.



Students from Finger Lakes Community College's Viticulture and Wine Technology program harvest fruit this week at the Teaching and Demonstration vineyard near Dresden.

Photo by Hans Walter-Peterson

Variety list for Finger Lakes Teaching & Demonstration Vineyard

North Block	South Block
Catawba	Riesling
Cayuga White	Chardonnay
Vidal	Cabernet Franc
Corot noir	Lemberger
NY81.0315.17	Grüner Veltliner
Marquette	Zweigelt
	Chenin Blanc (planted 2013)
	Marquis / Jupiter (seedless table varieties)

We would have picked our first crop of Marquette a few weeks ago as well, but we learned a fast lesson about just how much bird and mammal pressure there is at the site. We'll be investing in some netting next year for the Marquette, along with our two seedless table grapes, Marquis and Jupiter.

Besides just harvesting the fruit, students from the FLCC program have assisted in much of the development of the site, including site prepara-

	Harvest Date	Brix	рН	ТА
Chardonnay	9/18/13	23.0	3.15	7.2
Corot Noir	9/30/13	20.3	3.29	7.57
Grüner Veltliner	9/30 & 10/2/13	24.1	3.30	5.20
Riesling/Riparia	10/2/13	22.6	2.99	7.3
Zweigelt	10/2/13	20.8		5.9

Table 1. Final chemistry of varieties picked to date

tion activities like soil sampling and mapping the new drain tile lines using GPS technology. The students were also involved in planting the vineyard, installing the trellis system, weed control, training the young vines, and pruning last winter.

We are anticipating that we will be able to hang close to full crops in most of the varieties in the vineyard next year. The students from FLCC will once again be responsible for much of the hand labor that is needed in the vineyard, including pruning, shoot positioning, shoot and leaf thinning, and harvest once again. The FLGP will be collecting data related to phenology and productivity of these varieties over the coming years, as well as conducting some applied research projects.



Student wine from the teaching and demonstration vineyard is being vinified at the Ag Tech park adjacent to the NYS Agricultural Experiment Station in Geneva. A new facility at the site is slated to start construction in November.

Photo by Hans Walter-Peterson

Funding for the development of the Teaching & Demonstration Vineyard has been provided through a grant from the Genesee Valley Regional Market Authority. We thank them for their ongoing support of this project.

#### PROJECT FOCUS: UNDER-TRELLIS COVER CROPS AT LANSING *Tim Martinson*

Graduate student **Lindsay Jordan** (bottom left) harvested Riesling from her under-vine cover crop experiment in a Riesling block at Cornell's Lansing Fruit Farm. **Steve Lerch** (center) advised a worker on harvesting techniques.

The experiment is comparing three under-the-row cover crop treatments (right). Glyphosate (top right) treatment is the standard; Chicory (middle) was chosen as a deep-rooted plant to provide competition with the vine. Buckwheat (bottom) is easy to establish, and an annual.

Under-the-row cover crops are being investigated as a tool for moderating excess vigor, a common issue with wine grapes in humid Eastern climates. Jordan, advised by associate professor **Justine Vanden Heuvel**, is looking at the impact of these cover crops on productivity, fruit composition, and wine quality.

*This project is funded by the Ronni Lacrout Deans' discretionary fund for viticulture and enology.* 





Photos by Tim Martinson







## Fruit Maturation Report - 10/11/2013

Samples reported here were collected on **Monday**, **October 7**. Where appropriate, sample data from 2012, averaged over all sites is included. Tables from 2012 are archived at <u>http://grapesandwine.cals.cornell.edu/cals/grapesandwine/veraison-to-harvest/2012.cfm</u>.

We are again reporting berry weight, brix, titratable acidity and pH, and yeast assimilable nitrogen (YAN), as part of a joint project with Anna Katharine Mansfield and Lailiang Cheng. Graduate student Mark Nisbit is running the YAN assays as part of his Ph D project, and other students from the Enology lab are running samples . - TEM

#### Cabernet Franc

Region	Harvest Date	Description	Ber. Wt.	g. °Brix	c pH	TA g/L	YAN (ppm)
Finger Lakes	10/7/2013	E. Seneca	1.79	21.8	3.23	6.4	57
Finger Lakes	10/7/2013	W. Seneca	1.35	21.1	3.28	6.4	58
Finger Lakes	10/7/2013	Cayuga	1.70	19.9	3.35	5.3	31
Finger Lakes	10/7/2013	W. Seneca	1.63	20.5	3.39	6.1	90
Hudson Valley	9/30/2013	HVL	HARVES	ST			
Lake Erie	10/7/2013	Portland	1.62	17.7	3.47	7.0	189
Long Island	10/7/2013	LI-05	1.94	22.1	3.67	4.9	99
Long Island	10/7/2013	LI-07	1.38	21.7	3.58	5.0	67
Average Prev Sample	10/7/2013		1.63	20.7	3.42	5.9	84
12 Average	9/30/2013		1.62	20.5	3.31	7.2	//
Catawba	10/1/2012		1.63	21.5	3.38	5.9	(1
Region	Harvest Date	Description	Ber. Wt. g.	°Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	10/7/2013	Keuka	2 30	16.4	2.08	11 0	28
Prev Sample	9/30/2013	Keuka	2.39	16.5	2.90	12.7	102
'12 at Harvest	10/1/12	Keuka	2.24	19.5	3.02	9.0	77
Cayuga White							
Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
Finger Lakes	9/23/2013	Keuka	HARVEST				
Finger Lakes	9/23/2013	Cayuga	HARVEST				
Final sample	9/23/2013	HARVEST	2.98	16.6	2.98	11.4	219
'12 at Harvest	9/5/2012	HARVEST	2.52	18.8	3.18	8.7	284
Chardonnay							
Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
Finger Lakes	10/7/2013	Cayuga	HARVEST				
Finger Lakes	9/30/2013	W. Seneca	HARVEST				
Finger Lakes	10/7/2013	W. Seneca	HARVEST				
Long Island	10/7/2013	LI-03	HARVEST				
Final. Sample	9/30/2013		1.61	20.4	3.35	7.4	135
12 at Harvest	9/17/2012	HARVEST	1.40	20.7	3.00	0.1	240
Concord							
Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
Finger Lakes	10/7/2013	Keuka	2.97	15.0	3.30	8.3	236
Finger Lakes	10/7/2013	W. Canandaigua	3.75	16.5	3.28	8.1	224
Lake Erie	10/7/2013	Portland	3.41	16.1	3.45	9.8	499
Average	10/7/2013		3.38	15.9	3.34	8.7	319
Prev Sample	9/30/2013	Koules	3.06	16.1	3.28	8.3	252
12 at Harvest	10/8/2012	кеика	3.09	C. 11	3.40	0.0	242

### Lemberger

	Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
	Finger Lakes	10/7/2013	Keuka	1.83	22.7	3.32	5.5	86
	Prev Sample	9/30/2013	Keuka	1.83	22.1	3.13	7.6	42
	'12 at Harvest	9/24/2012	HARVEST 2012	1.79	23.6	3.20	7.2	40
N	lalbec							
	Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
	Long Island	10/7/2013	LI-06	2.33	22.1	3.70	6.4	149
	Prev Sample	9/30/2013	LI-06	2.33	<b>21.2</b>	<b>3.46</b>	<b>7.8</b>	<b>134</b>
R		10/1/12		2.03	19.9	3.01	1.2	231
IV	leriot							
	Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
	Hudson Valley	9/30/2012	HARVEST					
	Long Island	10/7/2013	LI-04	1.92	21.6	3.87	4.2	120
	Long Island	10/7/2013	LI-08	1.66	20.1	3.64	4.8	112
	Average Prov. Sample	10/7/2013		1.79	20.9	3.76	4.5	116
	'12 Average	9/30/2013 10/8/2012		1.76 2.08	21.1 19.8	3.46 3.66	6.0 4 9	87 101
N	liagara	10/0/2012		2.00	10.0	0.00	1.0	
	Region	Harvest Date	Description	Ber Wt a	°Brix	nH	TA a/l	YAN (nnm)
	Lake Erie		HARVEST	Bon Ma g.	DIIX		in gre	in it (ppiii)
	Final Sample	9/23/2013	Portland	4.01	14.8	3.28	6.8	335
	'12 at Harvest	9/5/2012	HARVEST 2012	3.84	16.6	3.26	7.2	205
N	loiret							
	Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
	Hudson Valley	10/7/2013	HVL	1.63	17.7	3.53	7.8	251
	Lake Erie	10/7/2013	Fredonia	2.00	16.7	3.35	9.9	282
	Average	10/7/2013		1.82	17.2	3.44	8.8	267
	Prev Sample	9/30/2013		1.78	17.9	3.49	9.6	252
		10/1/2012		1.01	19.2	3.40	0.9	200
Ρ	inot Noir							
	Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
	Finger Lakes	9/30/2013	HARVEST					
	Final Sample '12at Harvest	<b>9/23/2013</b> 9/10/2012	E. Seneca HARVEST 2012	<b>1.58</b> 1.46	<b>20.6</b> 20.9	<b>3.13</b> 3.52	<b>8.0</b> 6.4	<b>94</b> 222

# Riesling

Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
Finger Lakes	10/7/2013	E. Seneca	1.47	18.0	3.06	8.3	68
Finger Lakes	10/7/2013	E. Seneca	1.69	18.7	3.06	8.0	49
Finger Lakes	10/7/2013	W. Seneca	1.27	19.2	3.10	9.0	58
Finger Lakes	10/7/2013	E. Seneca	1.56	18.2	3.17	9.3	140
Finger Lakes	10/7/2013	CL 90 Cayuga	1.61	16.7	3.11	9.1	119
Finger Lakes	10/7/2013	Keuka	1.64	18.4	3.12	7.6	82
Finger Lakes	10/7/2013	W. Seneca	1.53	18.5	3.21	7.5	142
Finger Lakes	10/7/2013	W. Seneca	1.62	18.4	3.20	7.8	117
Finger Lakes	10/7/2013	W. Canandaigua	1.60	16.3	3.27	9.2	259
Hudson Valley	10/7/2013	HVL	1.66	16.6	3.48	7.4	201
Lake Erie	10/7/2013	Fredonia	1.70	16.1	3.20	7.6	137
Long Island	9/23/2013	LI-01					
Average Broy Sample	10/7/2013		1.58	17.7	3.18	8.3	125
'12 at Harvest	9/30/2013		1.52	17.9	3.08	9.2	97 59
			1.47	19.0	5.10	1.1	
Sauvignon B	lanc						
Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
Long Island	9/16/2013	HARVESTED					
Final Sample	9/9/2013	HARVESTED	1.23	22.1	3.23	8.1	141
'12 at Harvest	9/10/2012	HARVESTED	1.70	20.2	3.40	7.5	141
Seyval Blanc	;						
Seyval Blanc Region	Harvest Date	Description	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
Seyval Blanc Region Finger Lakes	Harvest Date 9/16/2013	Description Harvested	Ber. Wt. g.	°Brix	рН	TA g/L	YAN (ppm)
Seyval Blanc Region Finger Lakes Final Sample	Harvest Date 9/16/2013 9/9/2013	Description Harvested HARVESTED	Ber. Wt. g.	°Brix	рН 3.22	TA g/L 6.4	YAN (ppm)
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest	Harvest Date 9/16/2013 9/9/2013 9/10/2012	Description Harvested HARVESTED HARVESTED	Ber. Wt. g. 1.77 1.71	°Brix 19.9 19.4	<b>рН</b> <b>3.22</b> 3.39	<b>TA g/L</b> <b>6.4</b> 6.3	<b>YAN (ppm)</b> <b>126</b> 194
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette	Harvest Date 9/16/2013 9/9/2013 9/10/2012	Description Harvested HARVESTED HARVESTED	Ber. Wt. g. 1.77 1.71	°Brix 19.9 19.4	<b>рН</b> <b>3.22</b> 3.39	<b>TA g/L</b> <b>6.4</b> 6.3	<b>YAN (ppm)</b> <b>126</b> 194
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date	Description Harvested HARVESTED HARVESTED	Ber. Wt. g. 1.77 1.71 Ber. Wt. g.	°Brix 19.9 19.4 °Brix	рН 3.22 3.39 рН	TA g/L 6.4 6.3 TA g/L	YAN (ppm) 126 194 YAN (ppm)
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013	Description Harvested HARVESTED HARVESTED	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09	°Brix 19.9 19.4 °Brix 21.9	рН 3.22 3.39 рН 3.17	<b>TA g/L</b> 6.4 6.3 <b>TA g/L</b> 8.7	<b>YAN (ppm)</b> <b>126</b> 194 <b>YAN (ppm)</b> 197
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013	Description Harvested HARVESTED HARVESTED Description Keuka HARVEST	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09	°Brix 19.9 19.4 °Brix 21.9	рН 3.22 3.39 рН 3.17	TA g/L 6.4 6.3 TA g/L 8.7	<b>YAN (ppm)</b> <b>126</b> 194 <b>YAN (ppm)</b> 197
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley Lake Erie	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013 10/7/2013	Description Harvested HARVESTED HARVESTED Description Keuka HARVEST Fredonia	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09 1.89	*Brix 19.9 19.4 *Brix 21.9 20.5	<b>pH</b> <b>3.22</b> 3.39 <b>pH</b> 3.17 3.21	TA g/L 6.4 6.3 TA g/L 8.7 8.2	YAN (ppm) 126 194 YAN (ppm) 197 119
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley Lake Erie Average	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013 10/7/2013 10/7/2013	Description Harvested HARVESTED HARVESTED Description Keuka HARVEST Fredonia	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09 1.89 1.99	*Brix 19.9 19.4 *Brix 21.9 20.5 21.2	<b>pH</b> <b>3.22</b> 3.39 <b>pH</b> 3.17 3.21 <b>3.21</b> <b>3.19</b>	<b>TA g/L</b> 6.4 6.3 <b>TA g/L</b> 8.7 8.2 8.4	<b>YAN (ppm)</b> <b>126</b> 194 <b>YAN (ppm)</b> 197 119 119 <b>158</b>
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley Lake Erie Average Prev Sample	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013 10/7/2013 9/30/2013 9/30/2013	Description Harvested HARVESTED HARVESTED Description Keuka HARVEST Fredonia	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09 1.89 1.99 1.91	*Brix 19.9 19.4 *Brix 21.9 20.5 21.2 20.6	<b>pH</b> <b>3.22</b> 3.39 <b>pH</b> 3.17 3.21 <b>3.19</b> 3.15	TA g/L 6.4 6.3 TA g/L 8.7 8.2 8.4 8.8	YAN (ppm) 126 194 YAN (ppm) 197 119 158 109
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley Lake Erie Average Prev Sample '12 at Harvest	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013 10/7/2013 10/7/2013 9/30/2013 10/1/2012	Description Harvested HARVESTED HARVESTED Description Keuka HARVEST Fredonia	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09 1.89 1.99 1.91 1.80	°Brix 19.9 19.4 °Brix 21.9 20.5 21.2 20.6 21.8	<b>pH</b> <b>3.22</b> 3.39 <b>pH</b> 3.17 3.21 <b>3.19</b> 3.15 3.18	TA g/L 6.4 6.3 TA g/L 8.7 8.2 8.4 8.4 8.8 7.2	YAN (ppm) 126 194 YAN (ppm) 197 119 158 109 109
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley Lake Erie Average Prev Sample '12 at Harvest Vignoles	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013 10/7/2013 9/30/2013 10/7/2013 9/30/2013 10/1/2012	Description Harvested HARVESTED HARVESTED Description Keuka HARVEST Fredonia	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09 1.89 1.99 1.91 1.80	°Brix 19.9 19.4 °Brix 21.9 20.5 21.2 20.6 21.8	<b>pH</b> <b>3.22</b> 3.39 <b>pH</b> 3.17 <b>3.21</b> <b>3.19</b> 3.15 3.18	TA g/L 6.4 6.3 TA g/L 8.7 8.2 8.4 8.8 7.2	YAN (ppm) 126 194 YAN (ppm) 197 119 158 109 109
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley Lake Erie Average Prev Sample '12 at Harvest Vignoles Region	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013 10/7/2013 10/7/2013 9/30/2013 10/1/2012 Harvest Date	Description Harvested HARVESTED HARVESTED Nescription Fredonia	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09 1.89 1.99 1.91 1.80 Ber. Wt. g.	°Brix 19.9 19.4 °Brix 21.9 20.5 21.2 20.6 21.8	<b>pH</b> <b>3.22</b> 3.39 <b>pH</b> 3.17 3.21 <b>3.19</b> 3.15 3.18 <b>pH</b>	TA g/L 6.4 6.3 TA g/L 8.7 8.2 8.4 8.8 7.2 TA g/L	YAN (ppm) 126 194 YAN (ppm) 197 119 158 109 109
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley Lake Erie Average Prev Sample '12 at Harvest Vignoles Region Finger Lakes	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013 10/7/2013 9/30/2013 10/7/2013 9/30/2013 10/1/2012 Harvest Date 9/23/2013	Description Harvested HARVESTED HARVESTED Description Keuka HARVEST Fredonia	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09 1.89 1.99 1.91 1.80 Ber. Wt. g. HARVEST	*Brix 19.9 19.4 21.9 20.5 21.2 20.6 21.8	<b>pH</b> <b>3.22</b> 3.39 <b>pH</b> 3.17 3.21 <b>3.19</b> 3.15 3.18 <b>pH</b>	TA g/L 6.4 6.3 TA g/L 8.7 8.2 8.4 8.8 7.2 TA g/L	YAN (ppm) 126 194 YAN (ppm) 197 119 158 109 109 YAN (ppm)
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley Lake Erie Average Prev Sample '12 at Harvest Vignoles Region Finger Lakes Finger Lakes Finger Lakes	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013 10/7/2013 10/7/2013 9/30/2013 10/1/2012 Harvest Date 9/23/2013 9/30/2013	Description Harvested HARVESTED HARVESTED Description Keuka HARVEST Fredonia	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09 1.89 1.99 1.91 1.80 Ber. Wt. g. HARVEST HARVEST	°Brix 19.9 19.4 °Brix 21.9 20.5 21.2 20.6 21.8 °Brix	<b>pH</b> <b>3.22</b> 3.39 <b>pH</b> 3.17 <b>3.21</b> <b>3.19</b> 3.15 3.18 <b>pH</b>	TA g/L 6.4 6.3 TA g/L 8.7 8.2 8.4 8.8 7.2 TA g/L	YAN (ppm) 126 194 YAN (ppm) 197 119 158 109 109 YAN (ppm)
Seyval Blanc Region Finger Lakes Final Sample '12 at Harvest Traminette Region Finger Lakes Hudson Valley Lake Erie Average Prev Sample '12 at Harvest Vignoles Region Finger Lakes Finger Lakes Finger Lakes	Harvest Date 9/16/2013 9/9/2013 9/10/2012 Harvest Date 10/7/2013 9/30/2013 10/7/2013 10/7/2013 10/7/2013 9/30/2013 9/30/2013 9/30/2013 9/30/2013 9/30/2013 9/30/2013	Description Harvested HARVESTED HARVESTED Description Keuka HARVEST Fredonia	Ber. Wt. g. 1.77 1.71 Ber. Wt. g. 2.09 1.89 1.91 1.91 1.80 Ber. Wt. g. Ber. Wt. g.	°Brix 19.9 19.4 21.9 20.5 21.2 20.6 21.8 °Brix	pH 3.22 3.39 pH 3.17 3.21 3.19 3.15 3.18 pH 3.16	TA g/L 6.4 6.3 TA g/L 8.7 8.2 8.4 8.8 7.2 TA g/L 12.9	YAN (ppm) 126 194 YAN (ppm) 197 119 158 109 109 YAN (ppm) YAN (ppm)

# PRELIMINARY RESULTS: SHADED FRONTENAC CLUSTERS HAVE HIGHER ACIDITY, LOWER BRIX

#### Tim Martinson and Chrislyn Particka



Viticulture, enology and for cold-hardy grapes



While harvesting Frontenac at our Northern Grapes Project plots in Clayton a week ago monday, we also used the 'guard vines' at the ends of the plots to collect 5 'exposed' clusters (visible on the south side of the row, well-exposed) and five 'shaded' clusters (interior clusters, generally near the head area of the vine) and ran the fruit chemistry on them.

Across all the treatments we found that brix trended higher (p=0.04) and titratable acidity (p=0.04) was significantly lower on exposed clusters

In this trial we compared three training systems: VSP, with basal leaf removal (twice) and shoot tipping; Top wire cordon (TWC), with spur pruning and subsequent 'combing' to provide more exposure to the fruiting zone. The other treatment was cane-pruned Umbrella Kniffen (arched canes), with no followup to the canopy.

Differences in shaded vs. exposed clusters were more muted in the TWC treatment than in the UK or VSP. Note that the mean of brix and pH appear to have less of a spread than is the case with UK or VSP.

For me, the big news here was that the exposed clusters had 2 to 3 g/l *lower* TA across training systems than did the shaded clusters.

**Take home message:** If you are trying to minimize acidity, make sure your clusters are well exposed. It may make the difference between 19 and 16 g/l of titratable acidity. Shoot 'combing' may help.



www.newyorkwines.org







This newsletter was made possible with support from the New York Wine and Grape Foundation, the J. M. Kaplan Fund, and USDA Federal Formula funding through the Cornell and New York State Agricultural Experiment Stations.

Veraison to Harvest is a joint publication of:

Cornell Enology Extension Program

Statewide Viticulture Extension Program

Long Island Grape Program

Finger Lakes Grape Program

Lake Erie Regional Grape Program

Eastern New York Fruit and Vegetable Program

Copyright 2013 © Cornell University

Cornell University Cooperative Extension Coo