

# VERAISON TO HARVEST

Statewide Vineyard Crop Development update #1

August 29, 2014

Edited by Tim Martinson and Chris Gerling



Cornell University  
Cooperative Extension

## Welcome to Veraison to Harvest



This marks the eighth season of Veraison to Harvest, a joint project of the Lake Erie, Finger Lakes, Eastern NY (Hudson valley), Long Island grape extension programs and the statewide viticulture and enology extension pro-

grams. Each week we collect fruit samples from commercial vineyards around New York and post maturity indicators (brix, pH, titratable acidity and YAN in a summary table. We also provide weekly updates from each region, and post additional articles and photos from ongoing projects – and relevant winemaking and viticulture articles based on this years' conditions.

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- Tim Martinson and Chris Gerling, Co-editors

## Around New York...

### Statewide (Tim Martinson)

For the last 8 years, we've started our sampling the week before Labor Day. Two years ago (the warm 2012 season), vineyards were already in the middle of post-*véraison* ripening phase, and harvest ended in September, even for late varieties. 2013 was a more 'average' year, and we reported in last years' [Issue 1](#) that brix were running 3-6° behind 2012, and acids were 4-5 g/l higher than 2012. With many blocks still on the verge of *véraison*, we can say the same for 2014 compared to 2013. Again (see fruit maturation table, p 4-6), brix are 3-6° behind 2013, and titratable acidity is 2-6 g/l (!) higher than last year at this time. In fact, some of our samples were 'off the charts' and other berries were too hard to crush and express juice. Long Island is the exception, with fruit composition closer to last year's, thanks to an abundance of sunny weather. Extreme cold this winter and heavy ice packs on the great lakes (see photos), coupled with very moderate spring and summer temperatures, have slowed development, and some forecasters are predicting a return visit of the 'arctic vortex' (associated with low January and February temperatures) in the middle of September. While these long-term predictions can be iffy, prospects suggest a slow pace of ripening this year. We'll see, but un-



**March 10 Snow cover in the Finger Lakes (Top). April 10 Ice pack on Lake Erie (Bottom).** The arctic vortex provided colder than average winter temperatures, setting the stage for a slightly late start and cool season in central and western NY. Long Island escaped the arctic blasts and has had a sunny and dry season.

Top: Aerial Image from internet. Bottom: Photo by Tim Martinson

less you grow Aurore or another very early variety, harvest is still a ways in the future.

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

The 2014 season on Long Island can be summed up as follows: sunny and dry. Growing degree days are just a bit behind 2013, which was perhaps one of Long Island's best vintages. With less than 8" of rainfall June-July-August,

many growers have turned on the drip irrigation this summer particularly on drier sites. From a vineyard worker standpoint, this has undoubtedly been the most comfortable season in years – warm but not hot and low humidity. The cooperative weather has moderated disease pressure so that spray schedules can be relaxed a bit. Grape berry moth has been a slight thorn in the side of growers and European red mites have plagued a few blocks. But overall this has been an easier-than-average season. If the weather continues to behave, this will be another satisfying harvest. However, it is too early to make any firm predictions.

We are expecting harvest in the not too distant future for Marquette and Auxerrois (a white *vinifera* cultivar). Marquette is currently at 22° Brix but a pH of 2.71 and acids at 18.9 g/L. We also left several clusters/vine on Aromella and NY 81— hybrid varieties we planted on Long Island as part of our reduced spray program. Chardonnay crops are moderate but the Merlot crop is large and required some thinning. The goal now is to maintain a healthy canopy so that ripening is optimal in September and October.

### **Lake Erie (Luke Haggerty)**

Despite the cold winter last year, some Concord growers in Lake Erie Region are looking at a fairly large crop. Early Concord estimations from across the belt were higher than expected with reports from 5 to 15 tons/acre. Heavy, timely rains and heat during cell division has contributed to 12-17% larger than average berry size. Here at the Cornell Lake Erie Research and Extension Laboratory (CLEREL) in Portland, NY we have received over 12" of rain since June 1.

The main concern this season has been winter damage on all varieties. We have seen extensive damage in most *vinifera* and some hybrid vineyards. In the Lake Erie region, crown gall is commonly found on wine grape cultivars and 'Niagara'. Trunk cracking and splitting (trunk injury) from winter injury is the most common cause of infections. New gall formations have also been found in Concord blocks, especially in new plantings, low or wet spots, and on dippers.

Here at CLEREL, Concord véraison occurred on August 27th which is three days later than the 50 year average for the region. However, véraison has not been called in the phenology block in Fredonia. We are all hoping the forecast calls for "sunshine and heat" for the next month. With cooperation from Mother Nature, the Concord harvest is projected to start the last week of September.

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

Vineyards in the Finger Lakes are pushing through various stages of véraison at this point in the year. Early varieties like Marquette, Baco noir, Foch and Geneva Red are fully colored up. Cayuga White, Chardonnay, Pinot noir, Vidal and Lemberger are almost through the process, with some lagging berries still softening up. Concord berries on the Keuka Bluff have been developing color this week, and Catawba berries are just starting to soften as well. Of the *vinifera* varieties we have seen over the past week, Cabernet Franc looks to be bringing up the rear right now as far as changing color, but there seems to be a fair bit of variation between locations as to how far along the variety is. Riesling seems to be in a similar boat right now, with some vineyards having softer, less green berries than others. The return of some heat this coming weekend will hopefully push the remaining berries and clusters along fairly quickly.

### **Hudson Valley (Jim O'Connell)**

**Weather.** The Hudson Valley has been dry and warm. The last several days have been hot with day time temperatures reaching the upper 80s into the low 90s. A temporary break in the heat and humidity came to the Hudson Valley late this week, with 10 degree cooler temps over the next few days. High temperatures, though, will return early next week. Total growing degree days (base 50) so far this year are behind last year (2231 in 2013 vs 2127 in 2014 for August 27).

**Disease.** Downy mildew is still a concern here in the Hudson Valley. Disease pressure from DM was low in the previous few weeks, but has been steadily building in the vineyard at the Hudson Valley Lab. Some growers had severe enough pressure early in the season to warrant an application of Ridomil. Powdery mildew though less severe is still a concern for some growers. *Botrytis* has found its way into the vineyard here at the HVL, as well as many growers with whom I have spoken. Much of it has been associated with damage from birds, but some may also be from earlier latent infections.

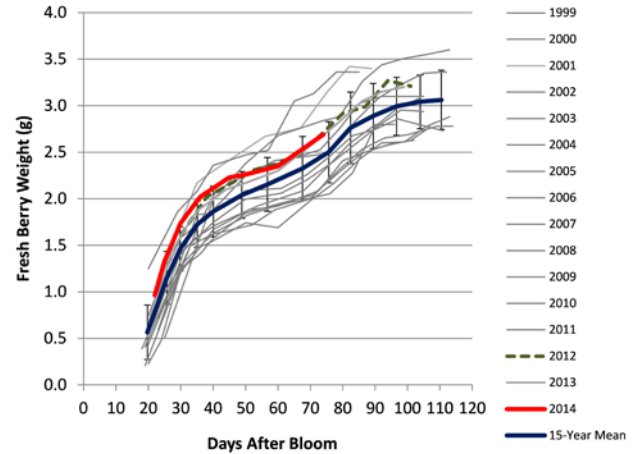
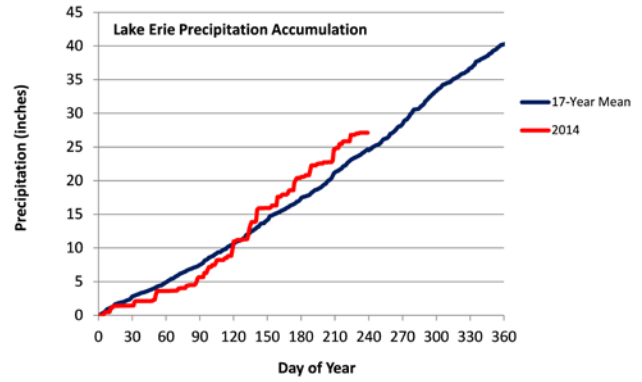
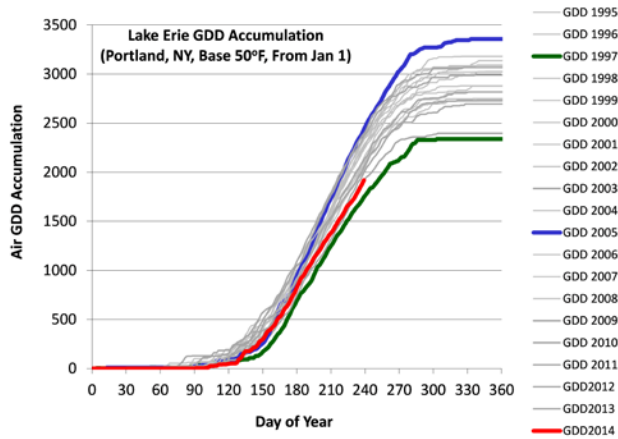
**Birds.** No harvest season would be complete without the presence of birds! At this time of year, it is likely the number one complaint I hear. Pressure has definitely been on the rise. At the HVL, with many different varieties planted together, the birds have started on the earlier maturing varieties and are making their way onto the later varieties as they mature.

**Insects.** According to NEWA, for grape berry moth, there is reduced egg-laying after this time, and most pupae enter diapause (overwintering stage) after 1700 DD. Unless we have an unusually warm fall, no further treatment is necessary.

# LAKE ERIE CONCORD REPORT

Terry Bates

The 2014 season in the Lake Erie region started late because of the cold winter and extended ice cover on Lake Erie late into the spring. Official bloom, however, was only one day later than the long term average due to some warm temperatures in early June. The growing season has been relatively cool and wet compared to the long term averages. The wet conditions, especially during the cell division phase of berry growth, have also led to higher than average berry weights. Also typical of a cool wet season, véraison was delayed by a few days and juice titratable acidity appears to be higher than average in our early Concord samples.



Historical growing degree-day accumulations, 1997-2014 (left), this year's precipitation (top) and Concord berry weight (bottom) compared to long term averages.

## ANNA WALLIS JOINS EASTERN NY HORTICULTURE PROGRAM

Tim Martinson



We welcome Anna Wallis, regional tree fruit and grape specialist with the Eastern New York Horticulture Program. Anna covers Northeastern NY (Champlain and Albany area) region, and is based at Cornell Cooperative Extension of Clinton County, in Plattsburgh, NY. Anna recently completed her Master's degree at the University of Maryland, where she worked on a number of horticultural projects and taught several plant science classes with her advisor Dr. Chris Walsh. Anna is already involved with the Willsboro grape variety trial on the western shore of Lake Champlain, and will be working with the apple growers and nascent grape producers in the region.

Wallis, who started in mid July, expressed enthusiasm at getting to know the region and its growers. "I am absolutely thrilled to be in the beautiful North Country, and part of such a wonderful community of farmers and educators. I look forward to meeting many more of you at upcoming programs and events."

## FRUIT MATURATION REPORT - 8/29/2014

Samples reported here were collected on **Monday, August 25** Where appropriate, sample data from 2013, averaged over all sites is included. Tables from 2013 are archived at <http://grapesandwine.cals.cornell.edu/newsletters/veraison-harvest>

We are again reporting berry weight, brix, titratable acidity and pH, and yeast assimilable nitrogen (YAN). Graduate students Alex Frederickson and Camila Martin Tahim and Ben Gavitt are running the fruit composition and YAN assays . - TEM

### **Cabernet Franc** \* indicates out of range

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	E. Seneca	1.05	10.9	2.61	22.8	66
Finger Lakes	8/25/2014	W. Seneca	0.96	7.0	2.51	*	78
Finger Lakes	8/25/2014	Cayuga	0.91	14.5	2.65	24.4	36
Finger Lakes	8/25/2014	3309/Teaching Vyd	0.97	11.5	2.66	22.7	86
Finger Lakes	8/25/2014	Riparia/Teaching Vyd	1.09	11.6	2.68	22.0	76
Hudson Valley	8/25/2014	HV Lab	1.44	8.2	2.78	22.0	125
Long Island	8/25/2014	LI-05	2.00	14.2	2.92	13.2	72
Long Island	8/25/2014	LI-07	1.33	12.4	2.75	18.5	26
<b>Average</b>	<b>8/25/2014</b>		<b>1.22</b>	<b>11.3</b>	<b>2.70</b>	<b>20.8</b>	<b>71</b>
<i>Prev. Sample</i>							
<i>'13 Average</i>	<i>8/28/2013</i>		<i>1.24</i>	<i>13.2</i>	<i>2.82</i>	<i>17.0</i>	<i>92</i>

### **Catawba** \* indicates out of range

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Keuka	2.28	6.1	2.44	*	172
<i>Prev Sample</i>							
<i>'13 Sample</i>	<i>8/28/2013</i>	<i>Keuka</i>	<i>1.70</i>	<i>7.4</i>	<i>2.44</i>	<i>41.7</i>	<i>112</i>

### **Cayuga White**

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Keuka	2.44	11.0	2.63	22.1	94
Finger Lakes	8/25/2014	Cayuga	2.43	12.6	2.76	15.7	146
Finger Lakes	8/25/2014	Teaching Vyd	2.07	13.7	2.71	15.0	85
<b>Average</b>	<b>8/25/2014</b>		<b>2.32</b>	<b>12.4</b>	<b>2.70</b>	<b>17.6</b>	<b>108</b>
<i>Prev Sample</i>							
<i>'13 Average</i>	<i>8/28/2013</i>		<i>2.47</i>	<i>15.0</i>	<i>2.85</i>	<i>15.1</i>	<i>174</i>

### **Chardonnay**

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Cayuga	1.15	11.8	2.70	22.7	150
Finger Lakes	8/25/2014	W. Seneca	1.39	12.2	2.74	19.9	83
Long Island	8/25/2014	LI-03	1.53	14.2	3.06	12.2	171
Finger Lakes	8/25/2014	Cl 76/Teaching Vyd	1.13	14.3	2.80	16.3	97
Finger Lakes	8/25/2014	Cl 96/Teaching Vyd	1.14	13.8	2.84	14.3	81
<b>Average</b>	<b>8/25/2014</b>		<b>1.27</b>	<b>13.3</b>	<b>2.83</b>	<b>17.1</b>	<b>116</b>
<i>Prev. Sample</i>							
<i>'13 Average</i>	<i>8/28/2013</i>		<i>1.33</i>	<i>14.6</i>	<i>2.98</i>	<i>13.6</i>	<i>166</i>

### **Concord** \* indicates out of range or juice not expressed.

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Keuka	2.72	*	*	*	*
Finger Lakes	8/25/2014	W. Canandaigua	2.74	8.7	2.58	23.0	123
Lake Erie	8/25/2014	Portland	2.77	9.0	2.66	23.3	200
<b>Average</b>	<b>8/25/2014</b>		<b>2.75</b>	<b>8.9</b>	<b>2.62</b>	<b>23.2</b>	<b>162</b>
<i>Prev Sample</i>							
<i>'13 Sample</i>	<i>8/28/2013</i>		<i>2.60</i>	<i>10.3</i>	<i>2.73</i>	<i>21.0</i>	<i>176</i>



## Corot Noir

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Teaching Vyd	1.51	11.5	2.70	19.7	41
<i>Prev Sample</i>							

## Gruner Veltliner

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Teaching Vyd	1.31	13.0	2.88	13.9	223
<i>Prev Sample</i>							

## Lemberger

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Keuka	1.29	11.6	2.70	20.8	47
Finger Lakes	8/25/2014	Teaching Vyd	1.42	14.1	2.85	17.5	245
<b>Average</b>	<b>8/25/2014</b>		<b>1.36</b>	<b>12.9</b>	<b>2.78</b>	<b>19.2</b>	<b>146</b>
<i>Prev. Average</i>							
<i>'13 Sample</i>	8/28/2013	Keuka	1.67	16.7	2.85	12.4	45

## Malbec

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Long Island	8/25/2014	LI-06	2.06	12.1	2.81	19.6	122
<i>Prev Sample</i>							
<i>'12 Sample</i>	8/28/2013	North Fork	2.12	13.8	2.93	21.1	209

## Marquette

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Teaching Vyd	0.98	19.1	2.91	17.5	253
Finger Lakes	8/25/2014	Teaching Vyd	1.13	20.5	2.91	14.1	109
<b>Average</b>	<b>8/25/2014</b>		<b>1.05</b>	<b>19.8</b>	<b>2.91</b>	<b>15.8</b>	<b>181</b>
<i>Prev. Average</i>							

## Merlot

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Hudson Valley	8/25/2014	HV Lab	1.59	12.2	2.93	16.1	180
Long Island	8/25/2014	LI-04	1.75	8.0	2.89	14.4	62
Long Island	8/25/2014	LI-08	1.54	12.8	2.83	15.9	67
<b>Average</b>	<b>8/25/2014</b>		<b>1.63</b>	<b>11.0</b>	<b>2.88</b>	<b>15.5</b>	<b>103</b>
<i>'13Average</i>	8/28/2013		1.50	14.2	3.08	11.7	125

## Niagara

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Lake Erie	8/25/2014	Portland	3.56	9.5	2.70	20.7	164
<i>Prev Sample</i>							
<i>'13 Sample</i>	8/28/2013	Portland	3.56	11.2	2.88	17.1	272

## Noiret

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Hudson Valley	8/25/2014	HV Lab	1.75	12.7	2.88	16.4	162
Lake Erie	8/25/2014	Fredonia	1.56	12.3	2.90	21.7	347
<b>Average</b>	<b>8/25/2014</b>		<b>1.65</b>	<b>12.5</b>	<b>2.89</b>	<b>19.0</b>	<b>255</b>
<i>Prev Sample</i>							
<i>'13 Sample</i>	8/28/2013		1.51	11.9	2.91	18.3	300

## Pinot Noir

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	E. Seneca	1.17	14.0	2.87	16.5	108
<i>Prev Sample</i>							
<i>'13 Sample</i>	8/28/2013	E. Seneca	1.17	17.6	3.00	10.2	114

## Riesling

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	E. Seneca	1.02	6.6	2.59	27.4	108
Finger Lakes	8/25/2014	E. Seneca	1.14	8.7	2.61	26.4	84
Finger Lakes	8/25/2014	W. Seneca	0.77	8.4	2.58	28.0	127
Finger Lakes	8/25/2014	E. Seneca	1.17	7.7	2.66	26.7	208
Finger Lakes	8/25/2014	CL 90 Cayuga	1.03	8.8	2.63	26.3	137
Finger Lakes	8/25/2014	Keuka	0.95	9.0	2.64	25.6	143
Finger Lakes	8/25/2014	W. Seneca	1.18	8.4	2.68	*	*
Finger Lakes	8/25/2014	W. Canandaigua	1.03	7.3	2.60	26.6	136
Finger Lakes	8/25/2014	3309/Teaching Vyd	0.93	11.4	2.64	22.4	93
Finger Lakes	8/25/2014	Riparia/Teaching Vyd	0.93	10.6	2.70	22.1	111
Hudson Valley	8/25/2014	HV Lab	1.48	10.9	2.86	18.4	211
Lake Erie	8/25/2014	Portland	1.17	9.4	2.72	25.9	226
Long Island	8/25/2014	LI-01	0.98	11.3	2.70	20.7	120
<b>Average</b>	<b>8/25/2014</b>		<b>1.06</b>	<b>9.1</b>	<b>2.66</b>	<b>24.7</b>	<b>142</b>
<i>Prev Sample</i>							
<i>'12 Sample</i>	<i>8/28/2013</i>		<i>1.14</i>	<i>12.5</i>	<i>2.79</i>	<i>18.5</i>	<i>132</i>

## Sauvignon Blanc

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Long Island	8/25/2014	LI-02	1.08	14.7	2.81	16.0	79
<i>Prev Sample</i>							
<i>'12 Sample</i>	<i>8/28/2013</i>	<i>North Fork</i>	<i>1.19</i>	<i>18.6</i>	<i>3.04</i>	<i>12.1</i>	<i>173</i>

## Seyval Blanc

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Cayuga	1.60	14.2	2.87	15.0	103
Lake Erie	8/25/2014	Portland	1.56	13.5	2.84	14.7	153
<b>Average</b>	<b>8/25/2014</b>		<b>1.58</b>	<b>13.9</b>	<b>2.86</b>	<b>14.9</b>	<b>128</b>
<i>'13 Sample</i>	<i>8/28/2013</i>	<i>Cayuga</i>	<i>1.52</i>	<i>17.2</i>	<i>2.98</i>	<i>10.7</i>	<i>109</i>

## Traminette

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Hudson Valley	8/25/2014	HV Lab	1.67	9.9	2.70	22.0	62
Lake Erie	8/25/2014	Portland	1.48	9.2	2.64	*	199
<b>Average</b>	<b>8/25/2014</b>		<b>1.57</b>	<b>9.6</b>	<b>2.67</b>	<b>22.0</b>	<b>131</b>
<i>Prev Sample</i>							
<i>'13 Sample</i>	<i>8/28/2013</i>		<i>1.47</i>	<i>12.1</i>	<i>2.80</i>	<i>18.1</i>	<i>88</i>

## Vidal Blanc

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	Teaching Vyd	1.76	12.5	2.78	18.6	118
<i>Prev Sample</i>							

## Vignoles

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/25/2014	High Wire Keuka	1.44	11.3	2.65	27.3	164
Finger Lakes	8/25/2014	W. Seneca	1.50	13.3	2.71	22.3	145
<b>Average</b>	<b>8/25/2014</b>		<b>1.47</b>	<b>12.3</b>	<b>2.68</b>	<b>24.8</b>	<b>155</b>
<i>Prev Sample</i>							
<i>'13 Sample</i>	<i>8/28/2013</i>		<i>1.64</i>	<i>17.2</i>	<i>2.87</i>	<i>18.5</i>	<i>184</i>

# FRUIT SAMPLES FOR THE NORTHERN

## GRAPES PROJECT

Chrislyn Particka and Tim Martinson



As part of the USDA-Specialty Crops Research Initiative *Northern Grapes Project*, we have training trials (Top Wire Cordon, Vertical Shoot Positioning, and Umbrella Kniffin) in Marquette and Frontenac located at Coyote Moon Vineyards in Clayton, NY.

The first set of samples were taken at the completion of veraison; another set will be taken in a couple of weeks, and a final sample at harvest. Note that TA's are still very high, ~33 g/L in Frontenac and ~27 g/L in Marquette, and that brix are still relatively low, given the high sugar content of the cold-hardy cultivars at harvest. Brix readings for the Willsboro variety trial range from 8° for Niagara to a high of 17° for Marquette, Frontenac, and MN 1200.

Variety	Date	Training system	Berry wt. (g)	pH	°Brix	TA (g/L)
Frontenac	8/20	TWC	1.38	2.65	14.2	33.2
		VSP	1.30	2.65	12.2	33.0
		UK	1.31	2.54	13.5	33.4
Marquette	8/20	TWC	1.47	2.68	16.3	27.5
		VSP	1.22	2.73	14.8	27.9
		UK	1.51	2.69	16.1	27.2

# BRIX MEASUREMENTS AT WILLSBORO

Anna Wallis and Lindsay Pashow

Grapes at the Willsboro farm (Champlain Region) have all reached veraison and we are now monitoring sugar content. Sugar content, measured as °Brix, is used to determine ripeness and harvest maturity. Harvest time will differ by variety based on the target reading. We anticipate harvest of most of the varieties mid to late September.

Below is a table of current and target brix readings for the varieties at the Willsboro farm:

### Sugar Content (°Brix) of Varieties at Willsboro

Variety	27-Aug	Target
Aromella	11	17
Baco noir	13	19
Cayuga white	9	18
Edelweiss	12	Max 15
MarechalFoch	14	20
Frontenac gris	15	21
Frontenac	17	21
Geneva Red (GR-7)	13	19
La Crescent	14	22
La Crosse	11	19
Landot noir	11	18
Leon Millot	16	21
Louise Swenson	12	19
Marquette	17	23
MN 1200	17	21
Niagara	8	15
Noiret	11	16
Not-Ravat 34	9	18
Petite Amie	12	18
Praire Star	13	18
Sabrevois	13	18
St. Croix	11	19
St. Pepin	14	20
Vignoles	11	19



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