

# VERAISON TO HARVEST

## Statewide Vineyard Crop Development Update #4



Cornell University  
Cooperative Extension

September 26, 2008

Edited by Tim Martinson and Chris Gerling

### Around New York...

#### STATEWIDE - TIM MARTINSON

We've had a favorable week for fruit ripening throughout New York, with lots of sunshine, moderate days and cool nights. That's about to change, with intermittent rain forecast through next Thursday. Fruit chemistry (See fruit maturation table, p. 5-7) showed a gain in 0.5 (merlot on long island) to 1.8 (Pinot noir) in ° Brix; and acids continuing to drop by 0.5 to 1.0 g/liter. Varieties at or near harvest (Seyval blanc, Cayuga White, Marachel Foch) showed little change in the numbers. Wet weather next week may prompt some advances in harvest for some varieties prone to fruit rots.

#### LONG ISLAND - ALICE WISE AND LIBBY TARLETON

Harvest of whites began this past week with Sauvignon Blanc, Chardonnay and Gewürztraminer. Acids are slightly higher than normal which balances nicely with good fruit flavors. At the research vineyard 3 clones of Sauvignon Blanc, a new Chardonnay muscat clone and two red vinifera hybrids from France were picked. We're encouraged by the fruit quality of these new selections. The red hybrids, Semebat and Segalin, were recommended to us as early ripening reds with good fruit quality.



Qun Sun, graduate student in the Dept. of Food Science and Technology at Geneva helped harvest Marachel Foch at Prejean Vineyards, near Penn Yan this past Tuesday. Qun is working to characterize hybrid aromas as part of the 'Canopy Management for Hybrids' project with wine chemist Gavin Sacks and viticulturist Justine Vanden Heuvel.

Photo by Tim Martinson

Vineyards are showing some downy mildew, stoked undoubtedly by early morning dew. It hasn't rained in 2 weeks though we are due for a good soaking 9-26 and 9-27. Birds and deer continue to be an issue though pressure varies widely from farm to farm.

#### FINGER LAKES - TIM MARTINSON FOR HANS WALTER-PETERSON.

Harvest is in full swing in the Finger Lakes, with beautiful harvest weather (dry, 70s during day and 40s to 50s at night) contributing. Constellation has taken in most of the hybrids and Niagara, and will be starting ConCORDs shortly. Tonnage is running on the heavy side, with Aurore coming in at around 3200 tons. Some vineyards that had had significant frost injury to primary buds yielded up to 6 T - presumably with a good share of that coming from fruitful secondary buds. Elviras also came in strongly, with one grower reporting a 12 T crop. Early Elviras had appropriate acids, and ripe Elviras came in clean. Red hybrids came in with good color and moderate acids. National Grape Cooperative is wrapping up the Niagara harvest this week, and the crop is at least average. Some Niagara blocks had significant phomopsis infections and associated shelling.

Among the *vinifera*, Pinot noir, Pinot gris, and some Chardonnay were harvested this week, with good ripeness and flavor development. Some *botrytis* and a little sour rot (pinot gris) was evident, but presumably held in check by the dry weather. Bulk of the Chardonnay, and Gewurztraminer are likely to be harvested next week. Valvin Muscat was harvested at one vineyard this week, with good flavor and Muscat character evident - and a 6 T crop. Wetter, cloudier weather is forecast through next Thursday, which may exacerbate any latent fruit rots out there.

#### LAKE ERIE - JODI CREASAP GEE

It seems as though most folks in the Lake Erie region made it through the frost warning last week, and the forecast is looking rather promising for the next week, so we are hoping for a dry weather and sunshine for the rest of the season. Most of the vineyards I've been in this week are looking good, save for some powdery or downy mildew infections, although I have seen defoliation due to downy mildew infections. This reinforces the importance of early sprays to control the disease, especially in wet years such as

this. The Niagara harvest started Friday (9/19) for National Grape and continues through the end of this week, and the Concord harvest will begin by the end of this month. Many of the hybrids are being harvested for the wineries, such as Seyval and Foch, while wine makers are waiting for others – e.g., Noiret, Corot Noir, Traminette – to ripen to the optimal quality desired. Most growers are optimistic about fruit quality this year; however, bunch rot is appearing as a nasty intruder this late in the season, and many are battling the fungus to preserve as much fruit as possible for harvest within the next few weeks. In some cases, disease, bird pressure, or weather may be larger factors in actual harvest date rather than fruit ripeness.

**HUDSON VALLEY - STEVE HOYING AND STEVE MCKAY**

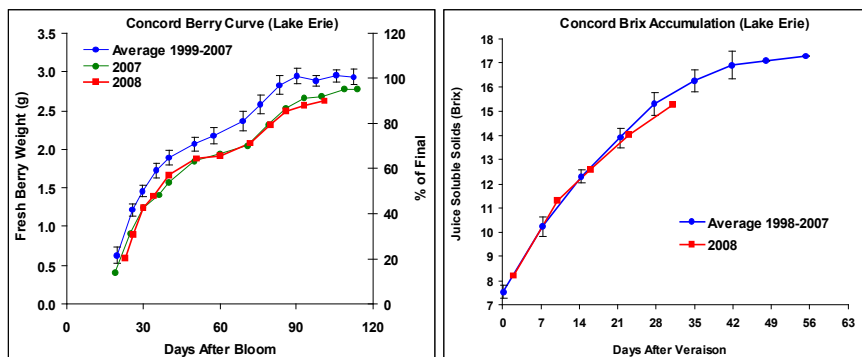
We have had outstanding weather in the Hudson Valley this past week. Conditions for the continued development of grapes and for harvest could not have been better. The rain that started Friday morning is predicted to be significant and should continue through the weekend. In anticipation of this rain event, the ‘Chardonnay’ harvest started a few days earlier than desired. Sugars appear to be lower than desired and the possibility of dilution by the rain is a concern. To this point in the season, the crop has been quite clean and disease free. Last week’s ‘Pinot Noir’ harvest has been outstanding and equivalent to last year in terms of yield and quality.

Some blocks of ‘Gamay Noir’ and ‘Foch’ will likely be picked in the coming week, with ‘Frontenac’ the following week. This season appears to be compressed, with whites ripening on time, and reds as much as 1-2 weeks early.

**CONCORD RIPENING PROFILE AT FREDONIA - SEPTEMBER 23RD**

*Terry Bates  
Research Associate  
Horticultural Sciences  
Fredonia Vineyard Laboratory*

Concord berry weight and juice soluble solids were taken on 9/23/2008 from 120 node vines with 100% crop (around 10 tons/acre) at the Portland, NY laboratory. 2008 berry is into the second lag phase with only minor berry weight increase (avg = 2.63 g) from last week. Juice soluble solids averaged 15.3 Brix and the sugar accumulation rate is slowing down compared to the 10-year average Brix accumulation curve. Despite several days of sunny and dry conditions, the juice soluble solids accumulation rate was only 0.16 Brix/day over the past week.



*Pinot gris harvest at a Cayuga Lake vineyard on September 24 (left). Sour rot and Botrytis, both evident in this photo (right) affected a small portion of the clusters. Selective hand harvest minimized the amount ending up at the press deck.*

Photos by Tim Martinson



# Sampling Focus:

## COROT NOIR, CANOPY MANAGEMENT AND DIFFERENCES IN VINE SIZE

Tim Martinson - Statewide Viticulture Extension Program

Justine Vanden Heuvel - Assistant Professor, Dept. Horticulture and Horticultural Sciences

Variations in vine size and cropping levels lead to differences in fruit chemistry at harvest. Cluster exposure to sunlight also affects fruit chemistry. We found ample evidence of all of these effects in fruit samples collected from a Corot noir vineyard, one site in Justine Vanden Heuvel's [Canopy Management for Hybrids](#) project.

**The issue:** The experiment is meant to test effects of 1) early shoot thinning, 2) post fruit-set cluster thinning, and 3) both shoot and cluster thinning on canopy density, fruit chemistry at harvest, and wine quality and flavors. Shoot thinning should open the canopy to increased sunlight penetration (and reduce crop slightly), and cluster thinning directly reduces cropping level, which should hasten ripening.

The experiment's layout, however, posed some issues. Cluster and shoot thinning treatments were applied to half-row plots in each row - and the north end of each row had small vines (low to moderate vigor), while the north end of each row had large vines (moderate to excessive vigor), often with dense canopies. Would these large differences in vine size overwhelm the effects of treatments we were trying to test? We collected samples on Wednesday, Sept 24 and measured berry weight, brix, pH and TA. The vineyard is still a few weeks from harvest:

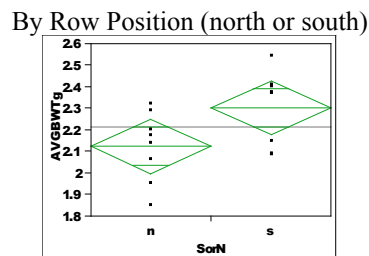
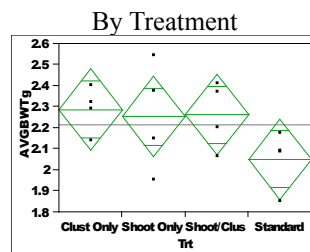
**Sampling results:** The following graphs show sampling results two ways: 1) based on treatments (shoot-thinned, cluster-thinned, both or none) and 2) based on which end (north or south) of the rows from which the samples were collected. Diamonds on the graph indicate the range of variation in the samples.



Corot noir canopies at the South end (Large canopy, Top) and the North end (Small vine size and canopy, bottom)

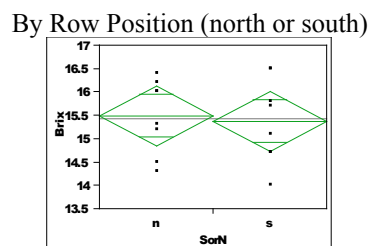
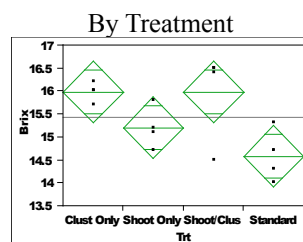
Photos by Tim Martinson

### 1. Berry Weight



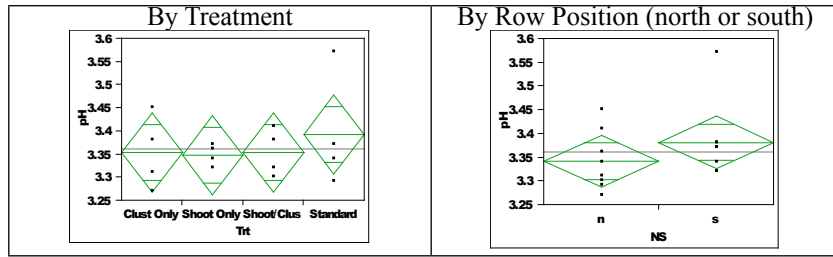
Berry weight was higher in the shoot-thinned and cluster-thinned vines. Berries were smaller in the N (small vines) than in the south (large vines)

### 2. Brix



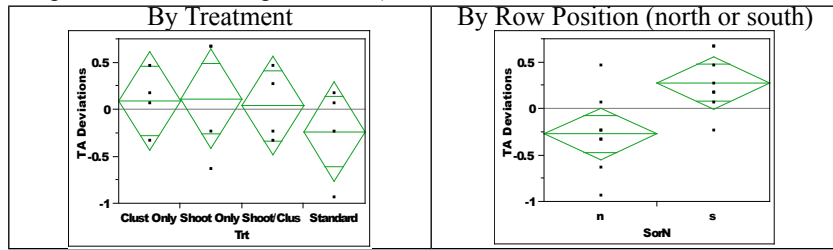
Both cluster thinning and shoot thinning increased brix above the 'standard' treatment. Averaged over all treatments, brix was in the same range (14.5 to 16.5, roughly) on the N (small vines) and S (large vines).

### 3. pH



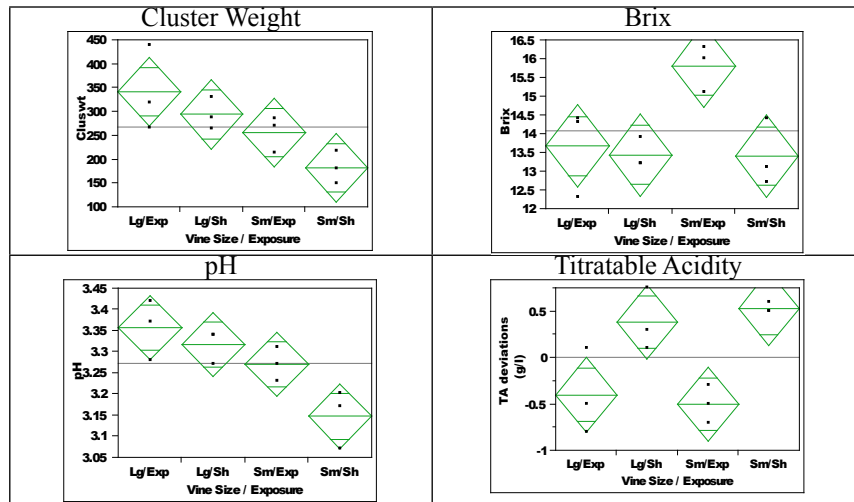
Fruit pH was in the same range for all treatments; and slightly lower (but with a bigger spread - note individual points) in the N (small vines) end.

### 4. Titratable Acidity. (Here we report differences in g/liter rather than actual TA - hand-squeezing of large-berried cultivars often underestimates TA levels, compared to fruit at the press deck.)



Average titratable acidity was similar across all treatments (one low value strongly affected the 'standard' treatment). Small vines on the north end averaged 0.5 g/l lower than the overall average, while large vines at the N end averaged 0.5 g higher.

**Small vine, Large Vine:** We also took samples from exposed and shaded clusters on 'Large' and 'Small' vines without any of the treatments.



'Exposed' clusters weighed more than 'Shaded' clusters, and the difference was more dramatic on small vines. On large vines, brix was similar for 'exposed' and 'shaded' clusters, but on small vines, 'exposed' clusters had a large brix advantage. Shaded clusters on small vines also had lower pH than exposed clusters. Titratable acidity dropped faster on 'exposed' clusters than in 'shaded' clusters - on both 'large' and 'small' vines.

**The bottom line:** Clusters in the cluster-thinned and shoot-thinned treatments (and the combination) were more advanced in ripening (as evidenced by the increased Brix) compared to the standard treatment. Exposed clusters may have higher brix, higher pH, and especially lower titratable acidity than 'shaded' clusters.

*Thanks to Swedish Hill Vineyards for cooperating with this experiment. Chris Gerling, Enology Extension, completed part of the sample analysis. This project is supported by the NY Farm Viability Institute.*



## FRUIT MATURATION REPORT

Samples reported here were collected on **Monday, September 22, 2008**. Where appropriate, sample data from 2006, averaged over all sites (mostly Finger Lakes), is included. Tables from 2007 are archived at : <http://blogs.cce.cornell.edu/grapes/07-veraison-to-harvest-archive/> Next samples will be collected **Monday, September 29**.

### *Cabernet Franc*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Finger Lakes	9/22/2008	FL-9	1.60	17.7	2.96	10.1	5.6	3.3	0.1
Finger Lakes	9/22/2008	FL-10	1.39	17.9	3.05	10.3	5.3	3.8	0.3
Finger Lakes	9/22/2008	FL-11	1.72	17.4	3.16	10.5	5.7	4.5	0.8
Hudson Valley	9/22/2008	11-HV-CF-4	1.31	19.6	3.08	9.3	5.1	2.4	0.7
Lake Erie	9/22/2008	12-LE-CF-X-5-4	1.80	19.3	3.17	9.7	4.6	4.3	0.3
Long Island	9/22/2008	LI-CF-1	1.67	18.3	3.33	8.5	4.6	3.7	0.5
Long Island	9/22/2008	LI-CF-5	1.76	19.7	3.37	9.1	4.9	4.3	0.6
<i>Average</i>	<i>9/22/2008</i>		<i>1.61</i>	<i>18.6</i>	<i>3.16</i>	<i>9.6</i>	<i>5.1</i>	<i>3.8</i>	<i>0.5</i>
Previous sample	9/15/2008		1.69	17.8	3.11	10.0	5.2	3.8	0.5
07 Average	9/23/07		1.49	19.4	3.21	9.2	5.0	3.3	*
'06 Average	9/25/06		1.66	17.8	3.13	11.0	4.4	5.8	*

### *Cabernet Sauvignon*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Lake Erie	9/22/2008	9-LE-CS-Not Thinned	1.39	17.0	3.03	14.6	6.7	7.1	0.8
Lake Erie	9/22/2008	9B-LE-Late Clus Thin	1.58	17.6	3.04	13.5	6.3	6.2	0.7
Long Island	9/22/2008	LI-CS-2	1.34	17.8	3.16	11.4	5.9	4.9	0.6
<i>Average</i>	<i>9/22/2008</i>		<i>1.44</i>	<i>17.5</i>	<i>3.08</i>	<i>13.2</i>	<i>6.3</i>	<i>6.1</i>	<i>0.7</i>
Previous sample	9/15/2008		1.47	16.5	3.02	13.4	6.1	5.9	0.6
07 Average	9/23/07		no data	20.5	3.1	12.1	5.9	4.5	*

### *Chardonnay*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Finger Lakes	9/22/2008	FL-21	1.49	18.9	3.09	10.2	4.7	4.2	0.2
Hudson Valley	9/22/2008	12-HV-C-4	1.52	21.8	3.06	9.5	4.6	2.7	0.7
Long Island	9/22/2008	LI-CH-7	1.48	20.8	3.26	10.1	5.0	4.6	0.5
<i>Average</i>	<i>9/22/2008</i>		<i>1.50</i>	<i>20.5</i>	<i>3.14</i>	<i>9.9</i>	<i>4.8</i>	<i>3.8</i>	<i>0.5</i>
Previous sample	9/15/2008		1.63	19.5	3.10	10.4	4.6	4.3	0.5
'07 Average	9/23/2007		1.59	21.3	3.25	9.8	4.6	4.2	*

### *Lemberger*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Finger Lakes	9/22/2008	FL-12	1.94	20.7	2.88	11.2	6.3	3.2	0.2
Finger Lakes	9/22/2008	FL-13	1.94	19.3	3.07	10.8	6.0	4.1	0.7
<i>Average</i>	<i>9/22/2008</i>		<i>1.94</i>	<i>20.0</i>	<i>2.97</i>	<i>11.0</i>	<i>6.2</i>	<i>3.7</i>	<i>0.5</i>
Previous sample	9/15/2008		1.99	18.7	3.01	10.8	6.2	3.5	0.6
'07 Average	9/17/07		1.80	19.2	2.94	10.6	6.1	3.1	*
'06 Average	9/18/06		2.18	17.6	3.04	12.1	5.6	4.8	*

### *Merlot*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Long Island	9/22/2008	LI-M-3	1.64	20.6	3.37	7.7	4.7	2.7	0.5
Long Island	9/22/2008	LI-M-6	1.57	20.4	3.48	7.4	4.7	3.1	0.6
<i>Average</i>	<i>9/22/2008</i>		<i>1.61</i>	<i>20.5</i>	<i>3.42</i>	<i>7.6</i>	<i>4.7</i>	<i>2.9</i>	<i>0.6</i>
Previous sample Ave	9/15/2008		1.69	19.9	3.35	7.9	4.9	2.5	0.4
'07 Average	9/24/07		1.74	20.9	3.37	8.4	4.6	3.2	*

*Pinot Noir*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Hudson Valley	9/22/2008	15-HV-PN-4	1.32	20.2	3.26	7.6	5.1	1.2	0.8
Hudson Valley	9/22/2008	16-HV-PN-5	1.17	21.7	3.22	10.1	4.9	3.8	0.8
<i>Average</i>	<i>9/22/2008</i>		<i>1.25</i>	<i>21.0</i>	<i>3.24</i>	<i>8.9</i>	<i>5.0</i>	<i>2.5</i>	<i>0.8</i>
Previous Sample	9/15/2008		1.28	19.2	3.19	9.2	4.9	3.6	0.5

*Riesling*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Finger Lakes	9/22/2008	FL-14	1.66	17.9	2.82	14.1	7.2	5.3	0.2
Finger Lakes	9/22/2008	FL-15	1.67	17.5	2.77	14.9	7.4	5.6	0.1
Finger Lakes	9/22/2008	FL-16	1.55	18.7	3.18	11.1	5.9	4.9	0.8
Finger Lakes	9/22/2008	FL-17	1.38	17.3	2.81	13.2	7.0	4.5	0.1
Finger Lakes	9/22/2008	FL-18	1.56	17.2	2.79	14.0	7.0	5.1	0.2
Lake Erie	9/22/2008	10-LE- -Leaf Pulled	1.81	16.2	2.94	12.5	6.6	4.8	0.8
Lake Erie	9/22/2008	11-LE- No leaf pull	1.62	15.7	2.92	13.2	6.4	5.5	0.6
<i>Average</i>	<i>9/22/2008</i>		<i>1.61</i>	<i>17.2</i>	<i>2.89</i>	<i>13.3</i>	<i>6.8</i>	<i>5.1</i>	<i>0.4</i>
Previous Sample	9/15/2008		1.60	16.3	2.87	13.6	6.7	5.1	0.4
'07 Average	9/24/07		1.36	17.5	2.94	12.3	6.6	4.2	*
'06 Average	9/25/06		1.70	16.6	2.92	16.4	7.1	7.2	*

*Sauvignon blanc*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Long Island	9/22/2008	LI-SB-4	1.77	20.1	3.03	10.8	5.3	4.0	0.0
Previous sample	9/15/2008	LI-SB-4	1.80	19.1	3.00	10.9	5.0	3.8	0.4

*Marachel Foch*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Finger Lakes	9/22/2008	FL-7	1.00	23.8	3.15	12.6	5.3	5.9	0.1
Finger Lakes	9/22/2008	FL-8	1.04	24.3	3.20	13.0	5.2	6.5	0.2
<i>Average</i>	<i>9/22/2008</i>		<i>1.02</i>	<i>24.1</i>	<i>3.18</i>	<i>12.8</i>	<i>5.3</i>	<i>6.2</i>	<i>0.2</i>
Previous sample	9/15/2008		1.09	23.3	3.17	13.0	5.5	6.1	0.3
'07 Average	Harvested		*	*	*	*	*	*	*

*Noiret*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Finger Lakes	9/22/2008	FL-1 Leaf Rem/Shoot th	1.81	16.5	2.94	13.8	6.5	6.1	0.3
Finger Lakes	9/22/2008	FL-2 No LR/no Sh Th	1.62	16.3	2.93	13.5	5.9	6.1	0.2
Hudson Valley	9/22/2008	14-HV-N-4	1.93	19.2	3.00	8.5	4.8	1.6	0.5
Lake Erie	9/22/2008	5-LE-N-8-1-3	1.51	16.2	2.97	12.5	5.8	5.3	0.2
Lake Erie	9/22/2008	6-LE-N-3-1-3	1.80	17.6	3.09	11.6	6.0	5.0	0.5
<i>Average</i>	<i>9/22/2008</i>		<i>1.81</i>	<i>16.5</i>	<i>2.94</i>	<i>13.8</i>	<i>6.5</i>	<i>6.1</i>	<i>0.3</i>
Prev Sample	9/15/2008		1.75	16.6	2.94	13.0	6.1	5.4	0.3
'07 Average	9/24/2007		1.62	18.0	3.06	11.0	5.7	4.3	*

*Cayuga White*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Hudson Valley	9/22/2008	3-HV-CW-Not thinned	3.34	21.3	3.24	8.6	5.0	2.3	0.4
Hudson Valley	9/22/2008	4-HV-CW-Cluster-thinned	3.20	21.7	3.18	8.6	4.6	2.2	0.3
<i>Average</i>	<i>9/22/2008</i>		<i>3.27</i>	<i>21.5</i>	<i>3.21</i>	<i>8.6</i>	<i>4.8</i>	<i>2.3</i>	<i>0.4</i>
Prev Sample	9/15/2008		3.31	20.3	3.20	8.9	4.7	3.3	0.1

*Corot Noir*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Finger Lakes	9/22/2008	FL-22 Unthinned	2.33	16.5	3.23	8.2	4.2	3.2	0.1
Finger Lakes	9/22/2008	FL-23 Shoot thin/ LR	1.98	14.0	3.20	7.0	4.2	2.0	0.2
<i>Average</i>	<i>9/22/2008</i>		<i>2.16</i>	<i>15.3</i>	<i>3.22</i>	<i>7.6</i>	<i>4.2</i>	<i>2.6</i>	<i>0.2</i>
Previous sample	9/15/2008		2.13	14.4	3.12	10.1	5.1	3.9	0.2

*DeChaunac*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Hudson Valley	9/22/2008	9-HV-D-Not thinned	2.83	17.8	2.84	16.0	7.1	6.1	0.0
Hudson Valley	9/22/2008	10-HV-D-Cluster Thinned	2.83	18.6	2.81	16.1	7.0	6.0	0.0
<i>Average</i>	9/22/2008		2.83	18.2	2.82	16.1	7.1	6.1	0.0
Previous sample	9/15/2008		2.86	17.5	2.82	16.3	6.9	7.0	0.0

*Seyval blanc*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Finger Lakes	Harvested								
Finger Lakes	Harvested								
Finger Lakes	Harvested								
Finger Lakes	Harvested								
Hudson Valley	9/22/2008	5-HV-No Thin	2.19	21.3	3.05	9.0	4.1	2.4	0.2
Hudson Valley	9/22/2008	6-HV-SB-Clust Thin	2.12	21.7	3.03	9.0	4.3	2.3	0.2
Hudson Valley	Harvested	7-HV-SB-No Thin							
Hudson Valley	Harvested	8-HV-SB-Clust Thin							
<i>Average</i>	9/22/2008		2.16	21.5	3.04	9.0	4.2	2.4	0.2
Previous sample	9/15/2008		2.13	20.8	3.02	9.7	4.1	3.8	0.0

*Traminette*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Hudson Valley	9/15/2008	13-HV-T-4	1.82	21.0	2.91	9.3	5.0	1.9	0.3
Lake Erie	9/15/2008	3-LE-Shoot Thin	1.98	17.4	2.91	12.7	6.2	4.9	0.0
Lake Erie	9/15/2008	4-LE- Not thinned	2.10	17.3	2.89	13.0	6.1	5.3	0.0
Lake Erie	9/15/2008	7-LE-T-Shoot Thin	1.68	18.9	2.93	12.1	5.8	4.8	0.0
Lake Erie	9/15/2008	8-LE-T-Not Thinned	2.15	20.0	2.96	11.5	5.7	4.4	0.0
<i>Average</i>			1.95	18.9	2.92	11.7	5.8	4.3	0.1
Prev Sample	9/15/2008		1.91	17.3	2.88	12.5	6.0	4.7	0.0
'07 Average	9/17/2007		1.67	17.6	2.90	12.1	5.9	4.3	*

*Vidal Blanc*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Hudson Valley	9/22/2008	1-HV-V-Not thinned	2.29	19.2	3.06	11.1	5.4	4.1	0.5
Hudson Valley	9/22/2008	2-HV-V-Clust Thin	2.14	21.5	3.09	11.6	5.3	4.3	0.5
<i>Average</i>	9/22/2008		2.22	20.4	3.07	11.4	5.4	4.2	0.5
Previous Sample	9/15/2008		2.16	18.4	3.06	12.1	5.7	5.3	0.4

*Concord*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Finger Lakes	9/22/2008	FL-19	3.31	15.5	3.15	7.3	3.6	2.6	0.2
Finger Lakes	9/22/2008	FL-20	3.37	15.1	3.14	6.7	3.3	2.2	0.2
<i>Average</i>	9/22/2008		3.34	15.3	3.15	7.0	3.5	2.4	0.2
Prev Sample	9/15/2008		3.56	14.6	3.05	10.0	4.5	4.0	0.2

*Diamond*

Location	Harvest Date	Samples	Av Berry Wt	% Brix	pH	g/L TA	g/L Tartaric Acid	g/L Malic Acid	g/L Lactic Acid
Lake Erie	Harvested								
Lake Erie	Harvested								
<i>Average</i>	9/15/2008	Final	>2.00	17.4	3.02	10.0	5.0	2.9	0.2





Above: Two Pinot noir clones. Mariafeld (left) has notably larger berries and looser clusters than clone 113 (right). It is much less susceptible to bunch rot, because of the looser cluster, as was demonstrated by **Wayne Wilcox** and student **Stella Zitter** a few years ago.

Below: Chardonnay nearing harvest at a Seneca Lake Vineyard.

Photos by Tim Martinson



Corot Noir planted at the Hudson Valley Laboratory in Highland, NY. Steve Hoying leads a project to evaluate several cultivars for their suitability in the Hudson Valley. Planting is 3 years old.

Photo by Steve Hoying



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