

# VERAISON TO HARVEST

## Statewide Vineyard Crop Development Update #6



Cornell University  
Cooperative Extension

October 5, 2012

Edited by Tim Martinson and Chris Gerling

### Around New York...

#### Statewide (*Chris Gerling*)

##### Upstate New York weather forecasts explained-

30% chance of rain, mid-June through late August, means: Make sure you're wearing plenty of sunscreen.

30% chance of rain, mid-September through late October, means: Find two of every animal, an outboard motor, and the biggest bottle of Dramamine you can get your hands on.

Perhaps sensing one too many "this year's wines will be fantastic!" stories in the media, mother nature has lately decided to rain on our parade literally, figuratively and pejoratively. With most "early" (perhaps a bad term in a year when lots of people have already picked Riesling) cultivars long gone and the later reds hanging strong, some producers have seen a slight break in the action. People with many different natives, hybrids and vinifera "press on" (sorry) because there are just too many varieties that are ready, however.

Of the varieties where we have three or more sampling sites, only Cabernet Franc, Merlot and Noiret remain "complete" on the data table this week. The rate of change, if not the rate of harvest, has slowed and we see only modest differences in the numbers. From here on out, the major determining factor for those who finish sooner and those who wait will be the "B" word- botrytis. Botrytis is starting to pop up in the regional updates and also in vineyards here and there, and where it gets aggressive hang time will diminish. As per this harvest, almost none of the above applies to Long Island, where the season is later, the recent past is drier and things seem to be moving at a more reasonable pace. There is one thing we can say for sure from Montauk to Plattsburgh to Chautauqua: the full story of 2012 is far from over. Stay tuned.

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

While birds have disappeared from the Long Island research vineyard, a number of growers reiterated to me that bird pressure remains moderate to high in the industry. It seems that with both over the row and side netting, even the best attempts to button it up tightly cannot keep out determined birds. With nets in place, only periodic noise making will dislodge birds albeit temporarily. The best remedy is to pick the fruit.

Harvest for rose wines continued this week and is winding down. More Chardonnay came off this week. Growers are delighted with the rich flavors and balanced fruit. A bit of rain earlier in the week resurrected minor Botrytis infections. Growers are less



*Cluster variation in research treatments at Coyote Moon vineyards in Clayton.*

Photo by Tim Martinson

concerned about Botrytis in Chardonnay than the more difficult-to-control sour rot complex of organisms.

Chardonnay from the research vineyard came in at 21-22 Brix and 7-9 g/l TA, with the larger clustered selections at the higher end of that range. We thinned fruit in July as per usual. After a couple of timely rains after veraison, clusters sized up more than we expected. Consequently, our yields were a bit higher than our target of 3 t/a. Still, flavors were very good and nicely balanced with acidity.

#### Hudson Valley (*Steve Hoying*)

What a difference a week makes! Rain, rain, rain! Harvest that was going so well has almost ground to a halt with the persistent rains. Cabernet franc is ready now here in the Hudson Valley and is being harvested (between rain showers!) along with left other varieties that continue to hang for one reason or another. The Cab franc Brix is at 21.9, acids at 9 and pH at 3.2. Noiret is on the docket for many growers who have it.

Here at the Hudson Valley Lab, we harvested Cabernet franc, Merlot, Traminette and Dornfelder this week but not for the reasons you might think. Although the numbers were good, the turkeys found them and made a meal by ripping right through the side netting. We have doubled and tripled our netting on the remaining Syrah, Cab sauvignon, Vidal, Corot noir, Valvin Muscat and Reisling which we have yet to pick. Hopefully this will deter their foraging! Brix levels were 19.4, 19.4, 20.8, 19.1, 18.9, and 18.7 respectively.

The long term weather forecast is for good weather for the next

10 days with no frost or freeze predicted. It looks to dry out with sunshine and daytime highs falling slightly into the 60's. Perhaps we can get back to an orderly harvest and close out this vintage season.

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

Harvest continues to fly by in the Finger Lakes. Merlot and Lemberger fruit has all come to the crushpad at this point, and some final blocks of Riesling are being picked this week. Winemakers continue to say that the quality of this year's crop is excellent, even if yields are down somewhat. Despite it being almost the warmest growing season on record, we really are not seeing or hearing about many examples of overly ripe crops with unreasonably high Brix and low acidity.

We've been in a bit more of a wet pattern lately, with about 1.8" of rain falling over the last 10 days at our teaching vineyard in Dresden. That has started to fire up a few more botrytis and sour rot infections lately, which will obviously impact picking decisions. For the most part, though, fruit continues to look extremely clean this year.

The primary varieties that are still hanging out in vineyards at this point are Catawba, Cabernet Franc and Cabernet Sauvignon, but there are some vineyards that have already picked the first two. From the sounds of it, some places will start bringing in Cab Franc fruit next week. There are a few wineries, however, who will try to ride this growing season wave as long as they can and try to squeeze every possible ounce of ripeness out of it for these late season red varieties

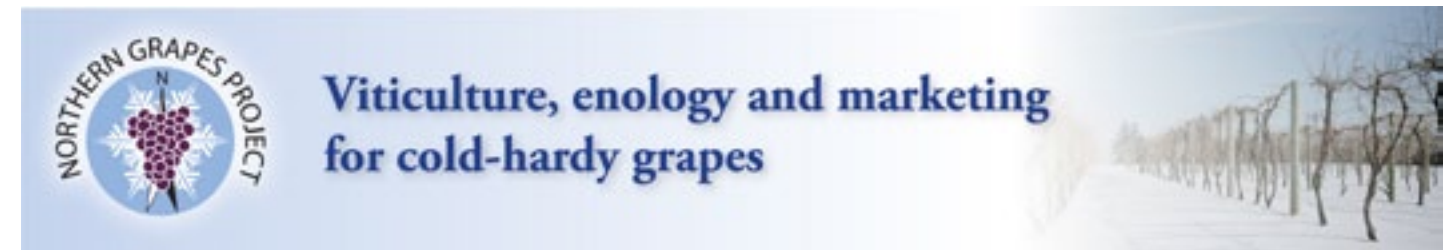
### Lake Erie (*Jodi Creasap Gee*).

The Lake Erie Region is nearing the end of harvest – almost an entire month earlier than usual. National Grape closed down over the last weekend, and the rest of the juice grape processors are also close to finishing up. "Let 'em hang" is the mantra of many LE winemakers, as they request that their growers allow the late season reds (hybrids and viniferas) to hang on the vine for as long as possible. The quality of the fruit that has been picked so far has been very good, according to both the juice and the wine grape industries, and what is left hanging is also in decent shape. As for our collections, we are down to sampling only the Cabernet Franc, which will likely remain on the vine for another couple of weeks. In years like these (abnormal, full of surprises), the dichotomy of the two industries in the Lake Erie Region becomes very apparent. Juice grape growers are disappointed – and rightfully so – in their smaller-than-average crop (that easily made plenty of sugar and remained in good shape for harvest), while many of the winemakers and wine grape growers are feeling optimistic due to the excellent quality out there. Folks are finishing up harvest operations for this year and figuring out what comes next for the remainder of the season – replacing posts, winterizing equipment, soil testing, etc..



Above: *Gewürztraminer* harvest by Cornell graduate students on Seneca Lake.

Credit: *Aloy Gu*



### HARVEST DATA FROM THE NORTH COUNTRY. PART II: CROP LOAD ADJUSTMENT

*TIM MARTINSON AND CHRISLYN PARTICKA*

This year the Northern Grapes Project established training system and crop load trials at Coyote Moon vineyards in Clayton. We harvested these plots over three weeks in September, and results reflect differing amounts of spring bud injury on Marquette and La Crescent (a lot) versus Frontenac (less). Last week (Veraison to Harvest #5) we summarized yield data from training trials. This week we'll cover crop load experiments in Frontenac and La Crescent.

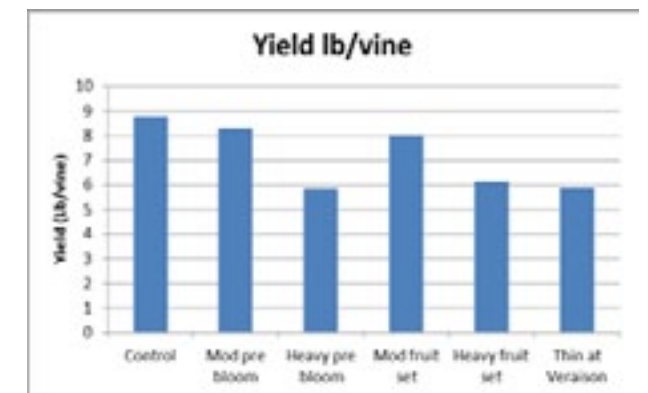
Crop load adjustment on Frontenac and La Crescent. One way to modify fruit composition is to change the ratio of leaf area to fruit – or the crop load - and one way of accomplishing this is by cluster thinning. Removing clusters reduces the crop load, and the timing during the growing season influences how much of an impact the cluster thinning will have on yield and fruit composition.

We had planned on setting up treatments to test impacts of both severity and timing of cluster thinning in Frontenac and La Crescent, but the spring freeze made this impractical for La Crescent. So we took another approach, which is described later in this article.

**Frontenac.** We set up six treatments (one control and 5 thinning treatments) to test the effect of pre-bloom thinning (moderate and heavy) versus fruit set thinning (moderate and heavy). For the fifth treatment, we removed clusters lagging in maturity at veraison – a practice often called "green harvest" by growers. For the moderate

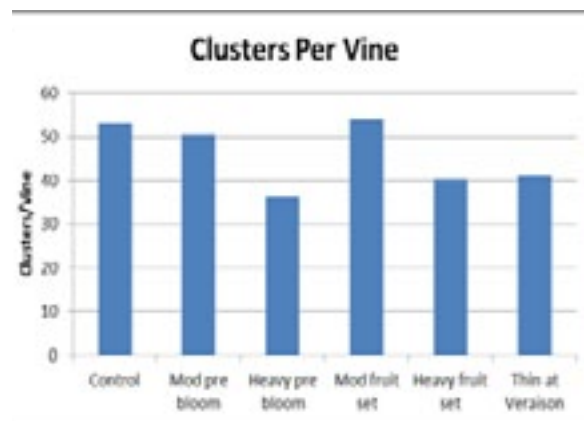
thinning, we removed six clusters per vine. For the heavy treatments, we removed all but one cluster per shoot. Vines were cane pruned to Umbrella Kniffen.

1. *Yield.* Cluster thinning treatments reduced yield, which ranged from an average of 5.9 to 8.8 lb/vine. Moderate thinning at both prebloom or fruit set had only a modest effect on yield (<0.5 lb/vine, or about 10% lower than the unthinned control). Heavy thinning at prebloom and fruit set reduced average yield to around 6 lb/vine (about a 30% reduction), as did the at-veraison green harvest.



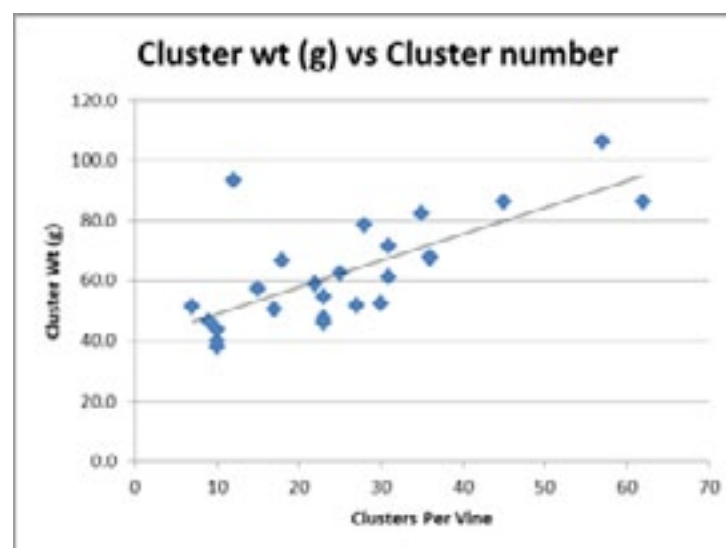
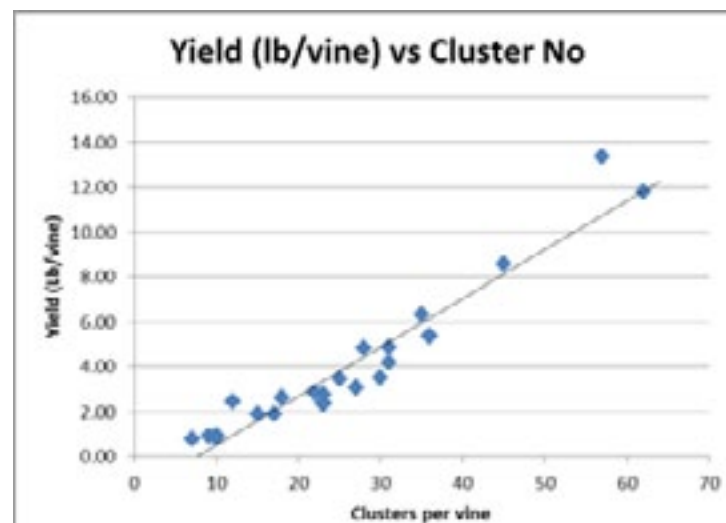
2. *Cluster number and cluster weight.* Yield is based on the number of clusters per vine and average cluster weight. Moderate cluster thinning before bloom only reduced cluster numbers by 5 clusters per vine (10%) from 52 clusters per vine in the control treatment. Heavy prebloom thinning resulted in 35 clusters/vine (30% reduction), and heavy fruit set and veraison thinning left 40 clusters/vine (22% reduction).

There were no significant differences in cluster weight. The yield differences are therefore the result of a different number of clusters per vine in the different treatments.



by the USDA's Specialty Crops Research Initiative Program of the National Institute for Food and Agriculture, Project #2011-51181-30850

Figures 3&4- La Crescent data



**La Crescent.** Spring frost removed a lot of primary buds in the La Crescent vineyard, with the result that the number of clusters per vine varied from zero to a more normal complement of 50 clusters per vine. Instead of setting up treatments to adjust the crop load in this vineyard, we selected 25 vines with varying numbers of clusters (and therefore varying crop load) and measured yield and fruit composition.

*Yield and cluster weight.* Not surprisingly, yield (lb/ per vine) was closely associated with the number of clusters per vine ( $r^2 = 0.92$ ). But average cluster weight also increased as the number of clusters per vine increased. Vines with more clusters had larger clusters, on average ( $r^2=0.50$ ). We suspect that vines with more clusters also had more of them coming from primary buds, while clusters on more severely-frosted vines (with fewer clusters) probably came from secondary buds that pushed because the primary bud was dead.

**Fruit composition.** We are in the process of running fruit composition analyses on fruit from both the training trials (last week's article) and the crop load adjustment trials described here. We hope those results will be as informative, because a major goal of these experiments is to determine how fruit thinning and training systems affect brix, pH, and titratable acidity in these varieties.

**Acknowledgements.** We'd like to thank Phil and Mary Randazzo and the crew at Coyote Moon Vineyards for their assistance in cooperating with this trial. The Northern Grapes Project is funded



Samples reported here were collected on **Monday, October 1st and Tuesday, October 2nd.** Where appropriate, sample data from 2011, averaged over all sites is included. Tables from 2011 are archived at <http://grapesandwine.cals.cornell.edu/cals/grapesandwine/veraison-to-harvest/2011.cfm>

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 (details in later issue) . - TEM

**Cabernet Franc**

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	10/1/12	E.Seneca	1.56	23.1	3.35	4.8	37
Finger Lakes	10/1/12	W.Seneca	1.31	23.7	3.15	6.8	21
Finger Lakes	10/1/12	Cayuga	1.57	21.2	3.27	5.9	67
Hudson Valley	10/1/12	HVL	1.57	21.4	3.57	5.2	86
Lake Erie	10/2/12	Portland	1.67	21	3.34	7.7	140
Long Island	10/1/12	North Fork	2.11	20.2	3.55	5.7	122
Long Island	10/1/12	North Fork	1.61	20	3.41	5.6	67
<b>Average</b>	<b>10/1/12</b>		<b>1.63</b>	<b>21.5</b>	<b>3.38</b>	<b>5.9</b>	<b>77</b>
Prev Sample	9/24/2012		1.67	21.2	3.32	6.4	69
'11 Average	10/4/2011		1.74	19.4	3.37	7.1	103

**Catawba**

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	10/1/12	Keuka	2.24	19.5	3.02	9.0	77
Prev Sample	9/24/2012		2.52	18.8	2.94	8.9	70
'11 Sample	10/3/2011		2.60	18.2	3.02	10.3	92

**Cayuga White**

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes		HARVESTED					
Finger Lakes		HARVESTED					
Final Sample	9/5/2012		2.52	18.8	3.18	8.7	284
'11 Average	9/13/2011		2.39	16.0	3.00	8.8	184

**Chardonnay**

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	9/17/12	HARVESTED					
Finger Lakes	9/17/12	HARVESTED					
Hudson Valley	9/17/12	HARVESTED					
Hudson Valley	9/17/12	HARVESTED					
Long Island	10/1/12	North Fork S	1.52	19.3	3.62	8.93	244
Prev Sample	9/24/2012	North Fork S	1.66	20.1	3.49	7.7	242
'11 Average	10/3/2011		1.65	19.3	3.56	6.7	206
'11 Average	9/13/2011		1.55	17.4	3.25	8.8	237

**Concord**

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	10/1/12	Keuka	3.02	17.6	3.43	6.6	226
Lake Erie	9/25/12	HARVESTED					
Prev Sample	9/24/2012		3.20	17.0	3.37	6.4	220
'11 Sample	10/3/2011		3.41	17.4	3.34	7.9	199

### Lemberger

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	10/1/12	HARVESTED					
<i>Final Sample</i>	<i>9/24/2012</i>		<i>1.79</i>	<i>23.6</i>	<i>3.20</i>	<i>7.2</i>	<i>40</i>
<i>'11 Sample</i>	<i>10/3/2011</i>		<i>1.63</i>	<i>20.8</i>	<i>3.27</i>	<i>5.7</i>	<i>79</i>

### Malbec

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	10/1/12	HARVESTED					
<i>Final Sample</i>	<i>9/24/2012</i>		<i>1.79</i>	<i>23.6</i>	<i>3.20</i>	<i>7.2</i>	<i>40</i>
<i>'11 Sample</i>	<i>10/3/2011</i>		<i>1.63</i>	<i>20.8</i>	<i>3.27</i>	<i>5.7</i>	<i>79</i>

### Merlot

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Hudson Valley	10/1/12	HVL	1.50	21.2	3.75	4.4	114
Long Island	10/1/12	North Fork (4)	2.02	19.8	3.77	5.1	147
Long Island	10/1/12	North Fork (8)	2.00	20	3.54	4.8	76
<b>Average</b>	<b>10/1/2012</b>		<b>1.84</b>	<b>20.3</b>	<b>3.69</b>	<b>4.8</b>	<b>112</b>
<i>Prev Sample</i>	<i>9/24/2012</i>		<i>1.97</i>	<i>20.0</i>	<i>3.60</i>	<i>5.1</i>	<i>102</i>
<i>'11 Sample</i>	<i>10/3/2011</i>		<i>1.58</i>	<i>16.3</i>	<i>3.80</i>	<i>5.7</i>	<i>221</i>

### Niagara

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Lake Erie		HARVESTED					
<i>Final Sample</i>	<i>9/5/2012</i>		<i>3.84</i>	<i>16.6</i>	<i>3.26</i>	<i>7.2</i>	<i>205</i>
<i>'11 Sample</i>	<i>9/13/2011</i>		<i>4.25</i>	<i>14.9</i>	<i>3.24</i>	<i>7.5</i>	<i>166</i>

### Noiret

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Hudson Valley	10/1/12	HVL	1.419	19.5	3.68	5.4	212
Hudson Valley	10/1/12	W HV	1.621	18.6	3.31	7.1	132
Lake Erie	10/2/12	Ripley	1.776	19.6	3.37	8.4	279
<b>Average</b>	<b>10/1/2012</b>		<b>1.61</b>	<b>19.2</b>	<b>3.45</b>	<b>6.9</b>	<b>208</b>
<i>Prev Sample</i>	<i>9/24/2012</i>		<i>1.74</i>	<i>19.2</i>	<i>3.37</i>	<i>7.5</i>	<i>147</i>
<i>'11 Sample</i>	<i>10/3/2011</i>		<i>1.69</i>	<i>17.9</i>	<i>3.27</i>	<i>8.3</i>	<i>201</i>

### Pinot Noir

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	9/17/12	HARVESTED					
Hudson Valley	10/1/12	HVL	1.45	23.9	3.73	5.27	188
Hudson Valley	9/17/12	HARVESTED					
<b>Final Sample</b>	<b>9/10/2012</b>		<b>1.46</b>	<b>20.9</b>	<b>3.52</b>	<b>6.4</b>	<b>222</b>
<i>'11 Sample</i>	<i>10/3/2011</i>		<i>1.43</i>	<i>20.0</i>	<i>3.85</i>	<i>9.5</i>	<i>356</i>

### Riesling

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	10/1/12	W. Seneca	1.31	20.3	2.89	8.7	15
Finger Lakes	9/24/2012	E. Seneca HARVESTED					
Finger Lakes	10/1/12	Keuka	1.35	19.8	3.12	7.0	64
Finger Lakes	9/24/2012	W Seneca HARVESTED					
Hudson Valley	10/1/12	HVL	1.68	18.8	3.42	5.5	129
Lake Erie	9/25/2012	Fredonia HARVESTED					
Long Island	9/24/2012	North Fork HARVESTED					
Finger Lakes	9/24/2012	E. Seneca HARVESTED					
Finger Lakes	10/1/12	E. Seneca	1.54	19.5	2.97	7.2	28
Finger Lakes	9/24/2012	Cayuga HARVESTED					
<b>Average</b>	<b>10/1/2012</b>		<b>1.47</b>	<b>19.6</b>	<b>3.10</b>	<b>7.1</b>	<b>59</b>
<i>Prev Sample</i>	<i>9/24/2012</i>		<i>1.66</i>	<i>19.5</i>	<i>3.07</i>	<i>7.5</i>	<i>76</i>
<i>'11 Sample</i>	<i>10/3/2011</i>		<i>1.69</i>	<i>17.7</i>	<i>3.09</i>	<i>8.4</i>	<i>78</i>

### Sauvignon Blanc

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Long Island	9/17/12	HARVESTED					
<i>Final Sample</i>	<i>9/10/2012</i>		<i>1.70</i>	<i>20.2</i>	<i>3.40</i>	<i>7.5</i>	<i>141</i>
<i>'11 Sample</i>	<i>9/20/2011</i>		<i>1.64</i>	<i>18.7</i>	<i>3.44</i>	<i>7.1</i>	<i>170</i>

### Seyval Blanc

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	9/17/12	HARVESTED					
Hudson Valley	9/17/12	HARVESTED					
Hudson Valley	9/17/12	HARVESTED					
<i>Final Sample</i>	<i>9/10/2012</i>		<i>1.71</i>	<i>19.4</i>	<i>3.39</i>	<i>6.3</i>	<i>194</i>
<i>'11 Sample</i>	<i>9/20/2011</i>		<i>1.76</i>	<i>18.4</i>	<i>3.29</i>	<i>7.2</i>	<i>136</i>
<i>'11 Sample</i>	<i>9/13/2011</i>		<i>1.88</i>	<i>17.6</i>	<i>3.23</i>	<i>7.7</i>	<i>135</i>

### Traminette

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	10/1/12	Keuka	1.84	23	3.09	8.0	98
Hudson Valley	10/1/12	HVL	1.76	20.6	3.27	6.4	121
Hudson Valley	9/24/12	W HV HARVESTED					
Lake Erie	9/25/12	Fredonia HARVESTED					
<b>Average</b>	<b>10/1/2012</b>		<b>1.80</b>	<b>21.8</b>	<b>3.18</b>	<b>7.2</b>	<b>109</b>
<i>Prev Sample</i>	<i>9/24/2012</i>		<i>1.91</i>	<i>21.7</i>	<i>3.14</i>	<i>7.1</i>	<i>91</i>
<i>'11 Sample</i>	<i>10/3/2011</i>		<i>1.87</i>	<i>19.4</i>	<i>3.15</i>	<i>8.2</i>	<i>115</i>

### Vignoles

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	9/17/12	HARVESTED					
Finger Lakes	9/17/12	HARVESTED					
Finger Lakes	9/17/12	HARVESTED					
<b>Final Sample</b>	<b>9/10/2012</b>		<b>1.32</b>	<b>24.5</b>	<b>3.27</b>	<b>8.8</b>	<b>163</b>
<i>'11 Sample</i>	<i>9/20/2011</i>		<i>1.42</i>	<i>22.4</i>	<i>3.09</i>	<i>11.7</i>	<i>149</i>



*Above: Coyote Moon crew members helping out with the Frontenac harvest on September 20th  
Credit: Tim Martinson*



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