

# VERAISON TO HARVEST

Statewide Vineyard Crop Development Update #1



Cornell University  
Cooperative Extension

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Edited by Tim Martinson and Chris Gerling

## About This Newsletter...

Here we go again with another harvest season – and the fifth year of *Veraison to Harvest*. The newsletter – jointly produced by the Lake Erie, Finger Lakes, Hudson Valley, and Long Island grape extension programs and our statewide viticulture and enology extension programs, aims to deliver up-to-date information about issues affecting harvest, grape maturity, and winemaking decisions. We will again be collecting weekly fruit samples from across New York, and summarizing results in our fruit maturity table. As we are in the second year of a project to evaluate Yeast Assimilable Nitrogen (YAN) and its prediction, expect some additional information about our survey results – and results of other projects. Thanks again to the **New York Wine and Grape Foundation** and Cornell's federal formula fund grants program, which are all providing funding for this effort. We'll publish weekly every Friday through the end of the harvest season.

—Tim Martinson & Chris Gerling, Co-editors

## Around New York...

### Statewide (*Tim Martinson*).

This week we have samples only from the Finger Lakes and Lake Erie regions. Fruit maturity indicators (p. 3-4) are running generally behind last year's very early maturity, with Brix readings 1-4° lower than last year's samples from the same week, and titratable acidity running 1-4 g/l higher than last years. Reports from across the state indicate that damage from the hurricane to grapes was minimal - notably the North Fork of Long Island apparently got only 2 inches or less of rain.

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

On Long Island all of the whites are through veraison while most reds are finished minus the later ripening varieties which include Cabernet Sauvignon and Petit Verdot. In the research vineyard we expect to harvest some young vine whites in the next week or so including Gruner Veltliner and Auxerrois. As of September 1 we are at 2687 GDD which is behind 2010 (not at all surprising) which was 2960 on the same date last year. This is still well ahead of 2009 which was only 2395 and 2495 in 2008.

As for the storm, the industry is breathing a collective sigh of relief. Fortunately the rain and wind was not as bad as predicted. In Riverhead, at the research station, we received 2.69 inches of



*Numbered variety NY95.0301.01, developed by Bruce Reisch's grape breeding program, in Justine Vanden Heuvel's training trial at the NYS Agric. Experiment Station in Geneva. With *V. cinerea* in its background, NY95 is very resistant to powdery mildew and downy mildew.*

Photo by Tim Martinson

rain compared to the 8-10 inches that were predicted. Canopies were knocked around and leaves took a beating. Some of the whites are a little bruised where nets pushed against them. There are a few trellis issues, loose posts and wire. Overall, the industry made it through OK. We did not include Long Island berry samples this week but will begin sampling next week.

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

Much like the younger sibling who is overshadowed by a high-achieving older brother or sister, the 2011 growing season was going to have a tough time making a name for itself after the 2010 season, which was acclaimed by many as one of the best the region has seen in a long time.

After two months of very dry conditions (<2" of rainfall in Geneva in June and July combined), the faucet got turned on again in August, and soils have been recharged with water just in time for the ripening period. The outer edges of Hurricane Irene brushed the Finger Lakes, giving us a slow, soaking rain of 0.5 - 1.0" over Saturday night and part of Sunday. As a bonus, stiff winds continued after the rain stopped, helping to dry out fruit and canopies quickly, significantly reducing the amount of disease pressure.

*Botrytis* levels remain low in most locations, mostly isolated to the usual suspects with tight clusters - Chardonnay, Vignoles, Pinot gris and noir. Many vineyards had to beat back some early downy mildew infections on leaves, which leaves the possibility of the dis-

ease reemerging when conditions are favorable (as in now) if control wasn't great early on.

Fruit set in most vineyards was average to above average this year, so it is possible that we will see slightly higher yields than normal this year, but time will tell. The combination of dry conditions during cell division and higher numbers of berries/cluster is resulting in smaller berry weights in almost all of our samples, according to this year's data when compared to 2010. Brix levels are lagging behind last year to some extent, but not drastically.

Some early table grape varieties were harvested a couple of weeks ago, but the beginning push of harvest came last Tuesday, August 23, when Constellation started processing Aurore, Cayuga White and some early Baco. Marechal Foch and Leon Millot have also been picked in a few vineyards as well. It is likely that we will see some Chardonnay and Pinot noir picked for sparkling wine production late this week or next.

Maybe this little brother got some game after all...

### **Hudson Valley (Steven McKay & Steve Hoying).**

Vines in the Hudson Valley have generally received sufficient moisture during the month of August to avoid water stress. As a result, last weekend's tropical storm Irene did not cause problems with fruit cracking.

There was less damage than expected, and excessive rainfall and flooding were more of a problem than high winds. Growers have been fighting Botrytis with sprays, and there have been some reports of Botrytis damage, especially where birds have been feeding on fruit. Some sour rot has also been reported. Downey mildew has been a challenge for a few growers. Bird pressure, especially starlings and turkeys, has been high in all vineyards reporting, and more bird netting is being installed this year to work with this problem. The crop is ripening well in spite of the wet season as sugars rise slowly and seed development has been progressing well. Ulster County is expecting to harvest Seyval in about a week to ten days.

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

After a wet start that was followed by a dry spell, most of the vineyards in the Lake Erie Region are in good shape for a nice crop this year. Cold sensitive varieties exhibited symptoms of cold injury from the mid-winter drop to -14°F. Cold hardy varieties, though, are in good shape and are carrying average to slightly-above-average crops this season. After a nearly-perfect 2010 growing season with a small crop, many LE growers have good-sized crops to make up for 2010's losses. Although powdery mildew is just starting to appear on new leaves, and the occasional downy mildew spot can be found from time to time, most fungal diseases are under control so

far. The exception, of course, being phomopsis, which can be found in nearly every vineyard this season, thanks to the wet May that made spraying difficult. In 2011, timing meant everything when it came to fungicide sprays, and it shows very clearly in many vineyards.

Luckily, Hurricane Irene merely caused a few clouds to appear over the region, and we received no extra rain. Harvest is in process for many of the hybrid varieties, and the juice processors are gearing up to start their harvest. National Grape will start bringing in the Niagara crop in mid-September, followed by the Concord crop, mid-season of which will parallel the late Niagara harvest.

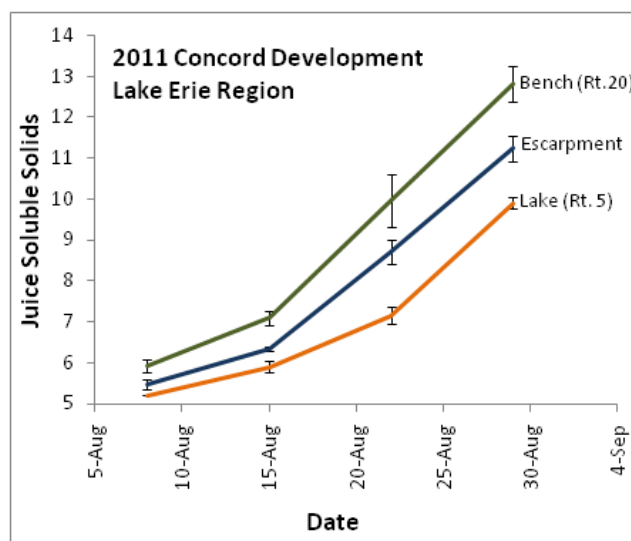
So far, we are feeling optimistic for a great crop – clean and decent-sized – and a great harvest.

## **LAKE ERIE CONCORD RIPENING PROFILE**

*Terry Bates*

*Cornell Lake Erie Research and Extension Laboratory*

Concord juice soluble solids are progressing well this season because of the favorable weather conditions and adequate vine water status. In 2011, a trial was initiated in the Lake Erie Region to investigate the effect of crop load and location on Concord fruit development. Nine vineyard sites were selected across the length of the production region with three sites along the Lake Erie shoreline (Lake zone), three along the gravel bench on route 20 (Bench zone), and three along the escarpment with elevations above 900 feet (Escarpment zone). This season, there has been a clear separation between the three zones with Bench zone vineyards having the highest juice soluble solids and Lake zone vineyards having the lowest juice soluble solids.



# FRUIT MATURATION REPORT - 9/2/2011

Samples reported here were collected on **Monday and Tuesday, August 29 and 30, 2010**. This week we have samples **only from the Finger Lakes and Lake Erie**. Next week we'll add samples from the Hudson Valley and Long Island. Where appropriate, sample data from 2009, averaged over all sites is included. Tables from 2010 are archived at [www.cals.cornell.edu/cals/grapesandwine/veraison-to-harvest/2009.cfm](http://www.cals.cornell.edu/cals/grapesandwine/veraison-to-harvest/2009.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)
FL	8/29/2011	W Cayuga	1.13	14.5	2.88	12.3	29.2
LE	8/29/2011	Portland	1.57	11.8	2.69	23.3	168.2
		<i>Average</i>	<i>1.35</i>	<i>13.2</i>	<i>2.79</i>	<i>17.8</i>	<i>98.7</i>
		<i>Prev Sample '10 Average</i>	<i>1.45</i>	<i>17.0</i>	<i>3.41</i>	<i>10.2</i>	<i>80</i>

## Catawba

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
FL	8/29/2011	W Cayuga	2.52	12.6	2.58	27.8	116.3
		<i>Prev Sample '10 Sample</i>	<i>2.11</i>	<i>12.0</i>	<i>3.13</i>	<i>18.1</i>	<i>196</i>

## Cayuga White

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
FL	8/29/2011	W Keuka	2.46	13.5	2.81	14.4	146.6
FL	8/30/2011	W Cayuga	1.98	15.1	2.93	9.9	157.2
		<i>Average</i>	<i>2.22</i>	<i>14.3</i>	<i>2.87</i>	<i>12.2</i>	<i>151.9</i>
		<i>'10 Sample</i>	<i>2.91</i>	<i>15.4</i>	<i>3.01</i>	<i>18.4</i>	<i>196.0</i>

## Chardonnay

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
FL	8/29/2011	W Seneca	0.96	16.0	3.01	8.8	75.0
FL	8/29/2011	W Cayuga	1.31	16.4	3.01	10.6	190.9
		<i>Average</i>	<i>1.35</i>	<i>16.2</i>	<i>3.01</i>	<i>9.7</i>	<i>98.7</i>
		<i>Prev Sample '10 Average</i>	<i>1.46</i>	<i>18.1</i>	<i>3.52</i>	<i>9.6</i>	<i>235</i>

## Concord

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Lake Erie	8/30/2011	Portland	2.99	12.1	2.85	17.0	222.3
		<i>Prev Sample '10 Sample</i>	<i>3.05</i>	<i>11.9</i>	<i>3.31</i>	<i>10.3</i>	<i>116</i>

## Lemberger

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/29/2011	E Keuka	1.30	19.2	2.86	11.1	12.3
Finger Lakes	8/29/2011	W Seneca	1.38	17.9	2.99	8.5	223.1
		<i>Average</i>	<i>1.35</i>	<i>18.6</i>	<i>2.93</i>	<i>9.8</i>	<i>98.7</i>
		<i>'10 Sample</i>	<i>1.89</i>	<i>19.8</i>	<i>3.29</i>	<i>10.4</i>	<i>67</i>

## Niagara

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Lake Erie	8/30/2011	Portland	3.61	12.7	2.88	12.1	150.3
		<i>Prev Sample</i>					

## Noiret

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Lake Erie	8/30/2011	Ripley	1.63	15.9	2.86	12.6	215.5
<i>Prev Sample</i>							
<i>'10 Average</i>	<i>8/30/2010</i>		<i>1.65</i>	<i>18.2</i>	<i>3.45</i>	<i>11.6</i>	<i>162</i>

## Pinot Noir

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/29/2011	E Seneca	1.11	15.4	2.98	10.2	56.4
<i>Prev Sample</i>							
<i>'10 Average</i>	<i>8/30/2010</i>		<i>1.36</i>	<i>19.7</i>	<i>3.54</i>	<i>9.5</i>	<i>167.2</i>

## Riesling

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/29/2011	E Seneca	1.11	15.4	2.98	10.2	56.4
Finger Lakes	8/29/2011	E Seneca	1.14	13.5	2.69	18.6	25.0
Finger Lakes	8/29/2011	E Seneca	0.98	13.8	2.69	18.1	112.9
Finger Lakes	8/29/2011	W Seneca - LR/ST	1.12	14.5	2.73	16.9	31.2
Finger Lakes	8/29/2011	W Seneca - NLR/NST	0.98	14.5	2.70	18.8	39.1
Finger Lakes	8/29/2011	E Seneca-shoot thin	1.34	15.1	2.78	15.0	51.2
Finger Lakes	8/29/2011	E Seneca - no thin	1.26	13.1	2.74	15.7	65.2
Finger Lakes	8/29/2011	W Cayuga	1.30	13.9	2.76	17.2	153.9
Lake Erie	8/30/2011	Fredonia	1.53	11.7	2.76	20.4	274.3
<i>Average</i>			<i>1.19</i>	<i>13.9</i>	<i>2.76</i>	<i>16.8</i>	<i>89.9</i>
<i>Prev Sample</i>							
<i>'10 Average</i>	<i>8/30/2010</i>		<i>1.38</i>	<i>16.2</i>	<i>3.22</i>	<i>14.8</i>	<i>96</i>

## Seyval Blanc

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/29/2011	W Cayuga	1.56	15.7	2.97	10.0	96.1
<i>Prev Sample</i>							
<i>'10 Average</i>	<i>8/30/2010</i>		<i>1.64</i>	<i>18.3</i>	<i>3.46</i>	<i>9.3</i>	<i>170</i>

## Traminette

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/29/2011	W Keuka	1.10	13.7	2.68	17.7	75.8
Finger Lakes	8/29/2011	W Seneca	1.40	12.0	2.58	19.8	242.0
Lake Erie	8/30/2011	Fredonia	2.04	15.2	2.79	17.6	126.6
<i>Average</i>		<i>Average</i>	<i>1.51</i>	<i>13.6</i>	<i>2.68</i>	<i>18.4</i>	<i>148.1</i>
<i>Prev Sample</i>							
<i>'10 Average</i>	<i>8/30/2010</i>		<i>1.61</i>	<i>17.0</i>	<i>3.27</i>	<i>14.2</i>	<i>113</i>

## Vignoles

Region	Harvest Date	Description	Ber. Wt. g.	% Brix	pH	TA g/L	YAN (ppm)
Finger Lakes	8/29/2011	W Keuka-VSP, Shoot thin	1.38	18.9	2.98	14.2	178.1
Finger Lakes	8/29/2011	W keuka-VSP, No Thin	1.24	17.3	2.90	13.6	157.7
Finger Lakes	8/29/2011	W keuka-high wire ST	1.28	18.5	2.93	13.8	166.9
Finger Lakes	8/29/2011	W keuka-high wire NST	1.20	17.1	2.85	16.2	146.5
<i>Average</i>			<i>1.32</i>	<i>18.0</i>	<i>2.92</i>	<i>14.5</i>	<i>162.3</i>
<i>Prev Sample</i>							
<i>'10 Average</i>	<i>8/30/2010</i>		<i>1.54</i>	<i>19.3</i>	<i>3.21</i>	<i>17.2</i>	<i>220</i>

## DROUGHT PHYSIOLOGY AT THE STATION

*Tim Martinson*

To study water relations and drought stress experimentally, some researchers resort to laying down tarps (right) to prevent water from infiltrating the soil (I bet the soil was dry first). Then they use various tools, such as a small microphone (left) laid up against water-conducting xylem cells in a green shoot. Apparently, when water stretches past the breaking point, it 'pops' and the sound of this air embolism (like an air bubble in a straw or tube) forming is audible to the microphone and recorded. Just one of many tools used by (bottom right, left to right) visiting scientist Vivian Zufferey of Switzerland, Grad student Vinay Pagay, and Alan Lakso.



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