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Grapes News

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Phenology Updates

Champlain Valley - Veraison

Hudson Valley – Veraison



Veraison

Photos from Vineyard IPM Scouting Report, week of 5/3/10, University of Wisconsin Extension of Door County and Peninsular Agricultural Research Station, Sturgeon Bay, Wisconsin

Pest Alerts

Japanese beetles

- Still around causing damage
- Carbaryl frequent first choice
- Don't over use – resistance management
- Other options include Danitol or Assail
- Consult the Cornell Guidelines for rates
- In some cases, the damage done by JB may not warrant control. Especially in dense canopies trained to TWC, the leaf damage will increase sunlight penetration.

Grape berry moth

- Past 1620 GDD
- Scout vineyards, examine berries
- Action threshold is 15%, treat when reached
- See article later in newsletter

Birds

- Birds are active and will become more active as all vines reach veraison.
- Cover vines with bird netting if possible. See the article in [this issue](#) of last year's Grape Newsletters for more information on bird netting for TWC.
- Continue reading below for more information from the FLGP
- Following the avian pest control workshop this week, we will have more recommendation on how to control these pests!

Groundhogs, Racoons, and Turkeys

- These animals are active and will become increasingly active
- Vines trained to VSP are more susceptible because fruiting zone is lower to ground

Continued on next page

Continued from Pest Alerts

- Deer fencing is the ideal solution, especially for tender young plantings
- Electric fence is another. Inexpensive solar-charged systems are available

Veraison has started and in addition to continued pest management, there are a couple more things to add to the list. The short article below written by Hans Walter Peterson was taken from the July 29, 2015 Finger Lakes Grape Program Newsletter.

Time to begin assembling and deploying bird protection gear. As berries begin to turn color and ripen, they become attractive to one of the more troubling pests that growers have to deal with, birds (and other vertebrate varmints). A couple of growers at last night’s Tailgate Meeting mentioned that they are seeing large flocks of birds in and around some of their vineyards already this year. We won’t know the extent of the pressure until we see just how active they are in the vineyards, but most growers know how quickly a flock of birds can appear and make a crop disappear. We’re going to be putting our nets out over the Marquette and table grapes in the Teaching Vineyard this week.

Grape Berry Moth

By: Jim O’Connell

Warmer areas of Eastern New York (e.g. Hudson Valley) have reached or exceeded 1720 growing degree days (GDD). According to the NEWA model, since 1620 GDD was reached prior to August 5, 2015, there may be extended egg laying and overlapping generations. Therefore, growers in high pressure vineyards may need multiple insecticide applications to prevent excessive berry damage and crop loss. The NEWA model also indicates that insecticide applications made after mid-September will have limited effectiveness in preventing damage. Contact materials, (e.g. Carbaryl, Danitol, or Leverage) should be used for control at this stage.

Cooler areas of Eastern New York (e.g. Northern NY, Champlain Valley) are approaching 1620 GDD, the time when materials that need to be ingested (e.g. Dipel and Alticore) are effective control measures.

Daily Degree Days for Highland HVL								
Base Temp	Past	Past	Current	5-Day Forecast			Forecast Details	
	Aug 12	Aug 13	Aug 14	Aug 15	Aug 16	Aug 17	Aug 18	Aug 19
47.14F - GBM	24	23	25	29	29	32	30	28
Accumulation	1881	1904	1929	1957	1987	2019	2049	2077

Daily Degree Days for WILLSBORO FARM LOGGER								
Base Temp	Past	Past	Current	5-Day Forecast			Forecast Details	
	Aug 12	Aug 13	Aug 14	Aug 15	Aug 16	Aug 17	Aug 18	Aug 19
47.14F - GBM	21	19	22	25	28	30	26	23
Accumulation	1416	1434	1456	1481	1509	1539	1565	1589

Grape vine nutrient analysis & petiole sampling

By: *Anna Wallis*

Foliar analysis is an excellent way to assess the nutrient status of your vines and diagnose any potential nutrient deficiencies. Last month, we included an article on assessing grape vine nutrition and how to take a petiole sample for foliar analysis. See last month's newsletter for more information.

There is still time to take petiole samples! The general timing recommendation is about 70-100 days (2-3 months) after bloom for taking samples. Veraison is one of the preferred times of year to do this, because tissue nutrient concentrations are stable. Two companies that offer tissue analysis are:

- Agro One
<http://dairyone.com/analytical-services/agronomy-services/plant-tissue-testing-services/>
- A&L Eastern Labs
<http://www.al-labs-eastern.com/agricultural.aspx>

Be sure to follow the sampling directions available on the website. Then print out the fruit foliar analysis form and mail it in with your sample. Contact Jim or Anna if you have any questions.

The FLGP YouTube video (<https://www.youtube.com/watch?v=IrvpQWUEQKw>) on petiole sampling provides some more details on how to collect these samples.

Drought Stress in Grapevines

By: *Jim O'Connell*

July and August have been dry months in the Hudson Valley. Total rainfall received from July to the second week of August has been 2.58 inches total. Although some reduction in rainfall may help slow vigor, too little water can stress the vines. Mid to late season stress can reduce (or even shutdown) photosynthetic activity in vines, as well as delay ripening. Reducing stress at this time of the season is also important for flavor. Since flavor develops in the last few weeks of ripening, late season water stress can negatively impact fruit flavor, resulting in dull or short lived wines.

How does a grower know what stress is good and what is bad? Here are some excerpts from an article written by Alan Lasko and Robert Pool (<http://www.hort.cornell.edu/lakso/fcp/PaperScans/2000scan140.pdf>).

-- Adequate water early in the season to have good, but not overly-vigorous, canopy and cluster development through bloom. This normally occurs as the early growth period is normally cool and there is little leaf area on the vine.

-- Mild stress should gradually develop after bloom so that good fruit set can occur, but the growth of the berries and shoots are slowed somewhat.

-- After fruit set, and initial berry growth, the canopy should be filling the trellis, at this time, the stress should increase so that the shoots slow growth markedly, the berries stop growth at a somewhat reduced size and yet the leaves are still fully functional.

-- Mid-season to harvest the vines should be maintained at the intermediate stress to reduce vegetative growth, but keep the leaves healthy through harvest, there should be some, but not a lot of basal leaf yellowing before harvest if the canopy is kept open. In NY this period is most commonly the time that water stress develops to be too severe. Maintaining vines in a healthy state is the most likely value of irrigation in NY.

EnoCert Courses Offered by Cornell's Enology Extension Program

Over the past few months we have been in the process of organizing and formatting our extension offerings into a more coherent package. We have created a new curriculum of certificate courses in extension enology that we are calling EnoCert.

We hope that you will stop and take a look at our offerings and maybe even give us some feedback on what you like, what you don't like, and what you'd like to see that's not currently included. As you will notice, there are two tracks-wine production and tasting room operations. <http://grapesandwine.cals.cornell.edu/extension/enocert>

We have three audiences in mind:

1. Winery employees who may lack background in any or all of these topics.
2. Winemakers/ tasting room managers who just want to catch up or review one or more particular areas.
3. People who are just getting into/ looking to get into the industry. We held the first EnoCert 101 and 201 sessions in April, and we are planning to hold 202 and 203 August 4th and 5th.
- 4.

To register, use the link <http://grapesandwine.cals.cornell.edu/extension/enocert/eno> or contact Sarah Lincoln at slj38@cornell.edu or 315-787-2255.

Insights from the Finger Lakes Grape Region – VIEN PWT Meeting Summary

By: *Jim O'Connell and Anna Wallis*

Each year, CCE viticulture and enologists from across the state meet to discuss regional industries and research priorities as part of the 'VIEN Program Work Team' (VIEN stands for Viticulture and Enology).

This July, the meeting was held in Geneva. In addition to meeting with colleagues from around the state, we had opportunity to tour the Finger Lakes Grape region. It was inspiring to see the vineyards and winemaking operations of this region, as well as the research being conducted by the CCE Finger Lakes Grape Program. A few facts about the region:

- **AVA:** Established in 1982; Cayuga Lake AVA and Seneca Lake AVA sub-regions established in 1988.
- **Vineyards:** Over 9,300 acres
- **Wineries:** 119 bonded wineries, 136 wineries and tasting rooms
- **Varieties:** Most of the grapes grown are vinifera species, as well as several French-American and native varieties. Leading varieties include: Chardonnay, Riesling, Pinot Noir, and Cabernet Franc.

A nice timeline of the history of the region can be found [here](#). The first vineyards and wineries were established in the early 1880s, but it wasn't until the 90's that the region truly became internationally recognized when two Semi-Dry Rieslings took gold at Alsace at the World Competition. The Finger Lakes industry has learned a lot from experience, and in many ways offers a model for the nascent Eastern NY industry. We hope our recent experiences touring the Finger Lakes can inspire and inform your productions.

Here is a summary of the things we saw:

Field-grafted vines at White Springs Vineyard/Ravines. In 2012, owner Morton Hallgren had 'Corot Noir' grafted over to various *V. vinifera* varieties. He contracted with a company from CA to do this for him in the field at \$1/graft; with double trunks this was \$2/vine. He estimated nearly 99% success for the grafts and began cropping the vines in the second year. The investment was a quick and economical way to begin growing more desirable varieties.

Clonal Riesling Trial at Merwerth/Weimer Vineyards. The Finger Lakes are known for their Rieslings. Through this trial, PhD project for Hans Walter Peterson of the FLGP, they are investigating differences between clones. Hans reported that they are already



Field grafted vines at White Springs Vineyard (right). Photo Anna Wallis.

Continued from Insights From the Finger Lakes Grape Region - VIEN PWT Meeting Summary

picking up differences between clones in wine sensory analysis. In contrast, previous work done by Cornell in the Finger Lakes has generally not identified sensory differences in wines based on location or vineyard site.

LEED-certified building at Red Tail Ridge Winery. Owners Nancy Irelan and Mike Schnelle received their [Leadership in Energy and Environmental Design \(LEED\) certification](#) for their new wine-making facility. Their design includes waste water recycling, natural light source, geothermal heating and cooling, and recycled materials. The motivation for getting the certification was purely to build a more sustainable building, and not a marketing strategy. They estimated approximately 10-15% more costs in building materials for the project. In addition, they have started a wine quality analysis lab, to offer these services to other wine-makers in the region.

At this stop we also discussed the [Vine Balance workbook](#), a NY Guide to Sustainable Viticulture Practices, developed by Tim Martinson, CCE NY State Viticulture Specialist, and Alice Wise, CCE Suffolk County Viticulture Specialist. The Long Island wine industry is currently using the workbook as part of a sustainability [education and certification program](#).



LEED Certified building at Red Tail Ridge Winery

Anthony Road Teaching Vineyard. This vineyard is a collaboration between Finger Lake Grape Program and the Finger Lakes Community College (FLCC). It was established in 2010 as a place for FLCC students to practice pruning and training, without the risk of damaging a commercial vineyard. The planting is largely maintained by the Anthony Road vineyard crew in return for part of the harvest. In addition to the vineyard, we were able to tour the very impressive new FLCC classroom and lab facilities, which are located just adjacent to the NY Agricultural Experiment Station in Geneva.



Hans Walter Peterson and Paul Brock talk about their experiences creating the Anthony Road Teaching Vineyard (left) and the new FLCC building near the NYAES in Geneva (right). Photos – Anna Wallis

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Continued from Insights From the Finger Lakes Grape Region - VIEN PWT Meeting Summary

Under Row cover crop trial at Prejean Vineyard. The goal of the [Justine Vanden-Heuvel's work](#) has been to find a way to control excess vigor in cold-hardy hybrids grown in the Finger Lakes region. In this particular trial involving Noiret as well as other trials, she and her students are finding that a variety of cover crops, including turnip, buckwheat, tillage radish, rye grass, and rye-vetch mix, can be effective at de-vigorating vines and providing weed control. Somewhat to our surprise, even nitrogen-fixing crops like legumes, which we might expect to release extra N when tilled into the soil and increase vine vigor, were also effective at reducing vigor in trials.

Mechanized Grape Production at Clearview Vineyard and Bedient Vineyard. In the Finger Lakes, vineyards rely on seasonal, unspecialized labor crews for vineyard maintenance and harvest. As a result, grape growers find they are increasingly competing with other industries and each other for a limited number of workers. At Clearview and Bedient Vineyards we saw one solution to this problem: a mechanized pruner. These machines can be front mounted on a tractor and are effective at pruning both *V. vinifera* and hybrids. While they do often require hand-pruning follow-up, they significantly reduce labor. These machines are being used more and more in the juice industry, and research is being conducted on the effects on juice and wine quality. In the Lake Erie region, a significant amount of mechanized pruning and harvesting is practiced on concord grapes.

Mechanical grape vine pruning at an orchard outside of NY, with lots of pictures: <https://binghamfamilyvineyards.com/2010/07/06/mechanical-pre-pruning-in-the-vineyard/>

Konstantin Frank Vineyard. This pioneering *V. vinifera* winery in the Finger Lakes was started by the Dr. Konstantin Frank, a European Immigrant from Ukraine whose vision and work 'ignited the "Vinifera Revolution" a movement that forever changed the course of wine growing in the Finger Lakes and the United States.' The vineyard is known for their Rieslings but also produces sparkling wines. We toured the cellar and learned about the sparkling wine making process. Meaghan Frank, the 4th generation owner is currently studying at Cornell in the viticulture and enology program.



View of Keuka Lake from the tasting room (left) and stacked bottles of sparkling cider at the Konstantin Frank vineyard and winery. Image from winery website.

Thank you so much to Tim Martinson, Chris Gerling, and Hans Walter-Peterson for organizing the event. It was an amazing opportunity for us to tour the Finger Lakes Grape Program. We learned so much about the region and from conversations with colleagues from around the state, and hope that it can at least vicariously inspire you!



New York State Agricultural Resiliency Summit

Weather is an important variable in farming operations across New York. In the past several years, the frequency of severe weather events has increased, bringing new challenges to many farmers.

This summit aims to review current research on how resilient NY agriculture is to severe weather events and explore ways to increase the capacity of farms and communities to plan, endure, and recover from severe events.

One goal is to develop action items that can be implemented on farms and in communities across the state. Please join us in this discussion.

Thursday, September 10th 2015

9:00 AM to 3:00 PM

Jordan Hall, Cornell Geneva Campus

Geneva, New York 14456

Lunch will be provided

Register: Register online at <http://www.etches.com/135499> or by contacting Trevor Partridge. There is no registration fee, but preregistration is required.

Questions may be directed toward Trevor Partridge, at (315) 558 – 2815 or tfp23@cornell.edu



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**Empire State
Development**

Preparing for Harvest

By: *Anna Wallis*

With veraison beginning, harvest is inevitably just around the corner. You’ve probably applied your last fungicide for the season, installed bird netting if you use it, made your last attempt at training those wild vines, and possibly done a little leaf pulling to aid in light penetration and air circulation.

What’s next? Now is the time to start measuring grapes for maturity. The most important maturity measurements to take are for pH, TA (titratable acidity), and sugar content (or soluble solids measured in °Brix). This can be done using pH test strips or kit, TA kit, and a refractometer, all available through most major vineyard or wine supply company. Other measurements that should be considered include flavor, aroma, juice color, tannins, and seed color.

Sampling should be done every 7-10 days, and increase in frequency to every 2-3 days closer to harvest. It is best to sample by 10AM, before the hottest part of the day. Approximately 200 berries should be randomly selected to include berries from many different clusters in various parts of the canopy. Remember that a sample should consist of only one variety and one location in your vineyard, especially if plantings vary greatly by age, soil type, etc.

Maturity measurements will be taken at the Willsboro Farm this season for Marquette, Frontenac, Frontenac gris, and La Crescent. These will be available weekly in the Cornell publication [Veraison to Harvest](#).

Approximate Target Brix measurements by Variety	
Variety	Target
Aromella	17
Baco	19
Cayuga White	18
Edelweiss	Max 15
Foch	20
Frontenac Gris	21
Frontenac	21
GR-7	19
La Crescent	22
La Crosse	19
Landot	18
Leon Millot	21
Louise Swenson	19
Marquette	23
MN 1200	21
Niagara	15
Noiret	16
Petite Amie	18
Praire Star	18
Sabrevois	18
St. Croix	19
St. Pepin	20
Vignoles	19

Quick Links

Cornell Grapes Website <http://www.fruit.cornell.edu/grape/>

ENYCHP <http://enych.cce.cornell.edu/>

Jim’s Blog <http://blogs.cornell.edu/hudsonvalleygrapes/>

Northern Grapes Project <http://northerngrapesproject.org/>

NEWA Weather and Pest Forecasting <http://newa.cornell.edu/>

Viticulture and Enology Cornell <https://grapesandwine.cals.cornell.edu/>

Veraison to Harvest <http://grapesandwine.cals.cornell.edu/newsletters/veraison-harvest>

Appellation Cornell <http://grapesandwine.cals.cornell.edu/newsletters/appellation-cornell>

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