Cornell Cooperative Extension
Finger Lakes Grape Program

Quarterly Report: January—March 2023

Program Highlights

- The annual B.E.V. NY conference was held March 28-30 in Syracuse, NY with in-person attendance for the first time in three years. The theme for this year was "Making, Measuring, and Marketing New York Wines", with many of the talks and panel discussions focusing on the importance of gathering and analyzing good data to improve decision-making in the vineyard, the cellar and marketing and sales.

- The FLGP organized and hosted a one-day "Sour Rot Summit" that brought together scientists from the Northeast and Midwest to discuss one of the most costly diseases for grape and wine producers in the region. The amount of work being done on this disease at multiple institutions is encouraging, and we started to identify potential areas for collaboration on research and extension projects to develop better tools to manage it.

- The annual grapevine winter hardiness project is now under the direction of Dr. Jason Londo, who is using the data that we collect from local vineyards not just to inform growers about the hardiness of their vines but also to refine a new model that will predict hardiness levels of vines in any location around New York State. This will provide growers with information that is more relevant for their specific vineyard.

B.E.V. NY 2023: Live and In Person!

For the first time since 2020, the B.E.V. NY conference was held at an actual venue with actual speakers and actual vendors and an actual audience of more than 300 people, plus an additional 180 who attended online. The conference was held at the Marriott Hotel in downtown Syracuse on March 28-30, 2023. The theme of this year's conference was "Making, Measuring, and Marketing New York Wines". Most of the speakers and panel discussions focused on how the use of data can help the industry to make better decisions in the vineyard, the cellar, and marketing and sales programs.

Cornell University grape breeder Bruce Reisch toasting his newest release, Aravelle.

One of the major highlights of the conference happened at the Unity Luncheon held on Tuesday, March 28, when Dr. Bruce Reisch of Cornell AgriTech released a new cultivar from his breeding program, 'Aravelle.' The variety, formerly known as NY81.0315.17, is the result of a cross made between Riesling and Cayuga White back in 1981. There is a lot of potential for this to be a successful variety in the Finger Lakes and many other regions around the world because of its high wine quality combined with good disease resistance, especially to late season bunch rots like sour rot. This is the final variety that Dr. Reisch will be releasing from his program, as his retirement became effective right after the conference.

The viticulture program at B.E.V. NY, organized by the Finger Lakes Grape Program, featured speakers from both near and far. The viticulture keynote speaker was Dr. Mark Greenspan, a scientist and vineyard consultant in California, who talked about the importance of data in achieving vineyard goals including fruit quality, productivity, management efficiency, and sustainability. In a follow-up session, Hans Walter-Peterson and Terry Bates from Cornell and Brent Sams with E&J Gallo talked about lo-tech and "mid-tech" options for data collection that growers can be using now to get better information about the performance of their vineyards. Other sessions at the conference included

B.E.V. NY 2023: Live and In Person!

discussions about soil health, pest and disease management, the status of the Spotted Lantern Fly, and an introduction to the MyEV digital vineyard mapping tool.

FLGP viticulturist Hans Walter-Peterson moderates a soil health panel at B.E.V. NY 2023.

Finger Lakes Grape Program Hosts Sour Rot Summit

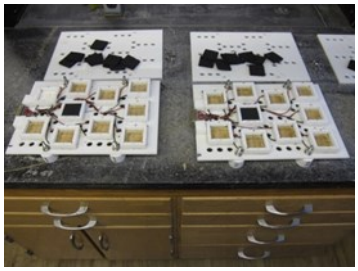
One of the costliest diseases for grapes in the eastern North America is sour rot, where sugars in the berries get converted into vinegar and other undesirable compounds. This disease, which is caused by a complex mix of yeasts, fungi and bacteria and then spreads rapidly by fruit flies, can cost growers hundreds or even thousands of dollars of revenue per acre under the right (or wrong) conditions. In addition to the lost revenue, growers have already put most of their expense into that year's crop by the time this disease gets established, which only heightens the potential economic impact that it can have. For the past several years, the Finger Lakes Grape Program (FLGP) has been collaborating with colleagues at Cornell to try to develop viable, sustainable management solutions for this problem, but its complex nature makes it difficult to make progress.

In March, 2023, the FLGP hosted an online meeting of 26 scientists and graduate students from Cornell, USDA, Penn State, Ohio State, Michigan State, University of Maryland, and Brock University in Ontario, who are working on understanding the mechanisms of sour rot and possible management solutions. In the morning, participants shared results from ongoing research and extension projects that ranged from field trials of spray materials to genetic studies of the microorganisms that are involved in the disease. The afternoon was mostly focused on considering what we could do next in terms of possible collaborations in both research and extension about the disease, including the potential for a multi-state effort which could help to coordinate the work being done.

This was the first time a meeting like this was held focused on this damaging disease, and participants felt the greatest value at this point was becoming familiar with what was being done in different states to address sour rot. The group agreed that we should continue to communicate on a regular basis in order to keep moving forward on this important issue for our grape and wine producers.

Tracking Grapevine Winter Hardiness in the Finger Lakes

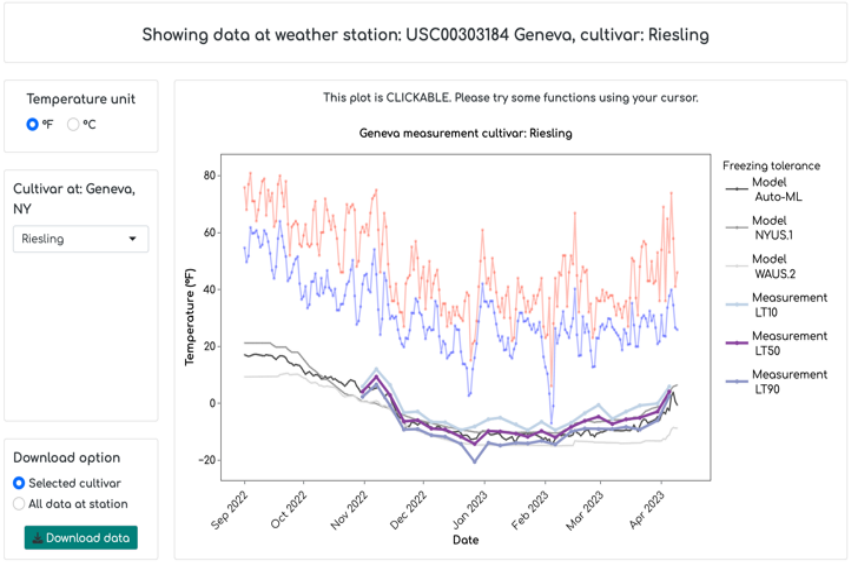
Cornell's annual winter hardiness monitoring project has continued this year under the direction of Dr. Jason Londo, associate professor of plant physiology at Cornell AgriTech, after the retirement of Tim Martinson last year. Dr. Londo has worked for many years on assessing and modeling cold tolerance in grapevines in order to give growers better tools to assess potential damage, and also to help breeders better understand the genetic basis for the trait so it could be incorporated into new grape varieties.



These trays can detect tiny heat spikes when ice forms inside a bud, which tells us the temperature at which it was killed.

Every two weeks during the winter, the FLGP collects bud samples of a few key varieties from multiple vineyards in the region for testing at Cornell AgriTech to assess their abilities to withstand cold temperatures. These results are reported to the industry as we get them so that growers can decide if they should be evaluating their own vineyards for winter damage, and make any necessary adjustments to their pruning strategy to account for it.

Dr. Londo and one of his graduate students have also created a new website for the project, which includes not only data from field samples, but the results of a new winter hardiness model that they have developed. This model provides growers with predictions about the hardiness level of different grape varieties at a given point in time based on the previous high and low temperatures recorded at a nearby weather station. Eventually, this model will be incorporated into the NEWA website so that growers at any location in New York can estimate the hardiness of their vines without the need for samples to be analyzed in a lab, which is a slow and expensive process.



The project website provides information on the predicted (and actual, when available) lethal temperatures for grape buds of different varieties in various locations around New York.

On February 4, temperatures in the Finger Lakes dropped below -5°F, which can be cold enough to kill buds on some of the more winter tender varieties. Because of this monitoring project, we were able to provide growers with guidance about which areas and varieties had greater potential for bud damage and recommended that they conduct their own bud assessments to see how much injury they sustained. These assessments showed that there was little injury and that growers did not need to make any major changes to their pruning practices, saving them time and money.

Grant Funding

Loeb, G., Walter-Peterson, H. (Co-PI) "Distribution of Tree of Heaven and Assessing Risks for SLF Establishment in NY Vineyards." Submitted to New York Wine & Grape Foundation. $24,456

Presentations

"The Case for Cover Crops in Vineyards." March 4, 2023. *Grape Expectations: A Viticultural and Enological Symposium*, Monroe Township NJ.

"Vineyard Data: Lo-Tech and 'Mid-Tech' Approaches". March 30, 2023. *B.E.V. NY 2023*, Syracuse NY.

Cornell Cooperative Extension
Finger Lakes Grape Program
Hans Walter-Peterson—Team Leader
Donald Caldwell—Viticulture Technician

The Finger Lakes Grape Program is a Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extension Associations in Ontario, Seneca, Schuyler, Steuben, Wayne and Yates Counties.

https://blogs.cornell.edu/flxgrapes/