Cornell Cooperative Extension Lake Erie Regional Grape Program

A cooperative program between Cornell and Penn State Universities, Cornell Cooperative Extension Associations in Chautauqua, Cattaraugus, Erie and Niagara Counties, Penn State Extension – Erie County, NYS IPM Program, National Grape Cooperative, Constellation Brands, Walker's Fruit Basket and growers of the Lake Erie Grape Industry

First Quarter Report 2020

Seasonal Bud Low Temperature Exotherms

The Lake Erie Regional Grape Program received funding to purchase a Tenney 2 freezer to conduct Low Temperature Exotherms (LTE) work at our lab. With funding from the

New York Wine and Grape Foundation, we are posting bud cold-hardiness and seasonal bud mortality information for four representative varieties on both websites, <u>https://grapesandwine.cals.cornell.edu/extension/</u> <u>bud-hardiness-data/ and https://lergp.com/</u>. The cultivars sampled at Cornell Lake Erie Research and Extension Laboratory in Portland, NY were Concord, Niagara, Riesling, and Traminette.

Winter low temperatures that fall below a critical value can damage grapevine buds. The critical temperature for bud injury varies over the dormant season, and responds to daily changes in temperature. We can measure this critical temperature through a procedure called differential thermal analysis, which involves controlled freezing of a sample of buds collected from vineyards. This is a valuable tool for our growers to use along with daily weather information to compare the daily low temperatures and the bud hardiness data from our region so they can make risk management decisions in regards to pruning levels, delay pruning (pruning timing), and shoot thinning.

The cultivars were sampled weekly after successful installation of the bud freezer mid-January 2020. The Buds were subjected to differential thermal analysis (DTA), with approximately 50 buds total for each variety for every run collected. The LT50 (Median Bud Freezing Temperature) values for each variety are listed in tables on each website listed above.



Lake Erie (Monitoring from 1/17/2020)

DATE	LOCATION	VARIETY	LT10	LT50	LT90	BUD MORTALITY %
3/9/2020	Portland	Concord	3.6	1.1	-2.8	3%
Final Collection		Niagara	3.4	-2.0	-5.4	8%
		Riesling	-4.5	-6.6	-8.0	3%
		Traminette	-3.0	-6.9	-8.3	0%



Cornell University



Vineyard Improvement Program

Just under 20 individuals requested information regarding the Vineyard Improvement Program this quarter.

This was a combination of in person, phone and email consultations. Some of these were a result of Crop Update and Newsletter articles, as well as from press releases that were published during this time.

During the past 3 months we have received 2 more applications. Both of these applicants are from Chautauqua County and the additional Concord acreage for the program is approximately 60 acres. Neither of these applicants has had their initial site visits as of the end of the quarter, and both are still in the process of finalizing the exact locations of the acreage to be removed. These processes have been slowed down due to the recent restrictions due to COVID-19.

Some of the budgets and final expense spread sheets have had a little more attention during this quarter as a result of the low volume of applicants, but we are unable to finalize any of them until all of the expenses have been submitted.

Our third reimbursement has been finalized with a check in the amount of \$8,742.59. This represents a removal and replant on 4.45 acres. This one had been delayed due to the holidays and the CCE office moving. Two interesting things happened during this quarter. The first was that the Observer ran a political cartoon about the program. We felt the artist didn't understand the program and the cartoon doesn't portray what the program is about. We thought we might get a little interest as a result of it, but nothing more came in. The second, and more important, was that we got a question about using the program to clear a vineyard to put solar panels up as a part of a project. We were unsure how to answer so passed it off to Emily Cook at Ag and Markets. She quickly notified us that that would be an appropriate use of the project. Armed with this information a notification was sent out to our growers. As with all of the applications, details will have to be examined prior to acceptance. The larger projects may already include clearing the land which would nullify use of this program.

NEWA

The year began with a number of stations not reporting data in both

the Lake Erie region and the Finger Lakes region. After speaking with the owners of the stations and technical support from Rainwise it was determined that there were a couple of reasons for the outages. Rainwise itself had experienced some system wide outages that were noticed, but generally the data was backfilled once the servers came back online. In addition some of our more remote stations, specifically Portland Escarpment and Silver Creek, experienced some internet connectivity problems. While troubleshooting it was noticed that a number of our area stations are getting to a point that Rainwise recommends replacing the station versus making temporary fixes. I have been getting some pushback as far as replacing stations, so we are trying to get the stations reporting as best we can.

New batteries were purchased and replaced in the Portland Escarpment, East Fredonia and Silver Creek stations. Since then the East Fredonia and Silver Creek stations have improved operations. The Portland Escarpment station is still not giving



consistent data, and conversations are ongoing regarding moving the IP-100 to aid in the data collection. The owner has indicated it is not likely they will be able to pay full price for a replacement at this time and would need assistance to stay in the network.

The LERGP purchased a HOBO station from Onset Computer Corporation in February and it is now installed and receiving data. This data is linked to the NEWA network as Portland(LERGP West). The rationale behind installing this additional weather station is to become familiar with both systems and be able to assist local station owners with questions on either one.

In February, Kim began assisting Dan Olmstead with the NEWA help desk. This frees up some of Dan's time to address the more difficult NEWA related questions and situations, while ensuring that the day to day questions to the help desk get answered.

Labor and Price Trends

Growers were provided with labor and input cost trends throughout the winter months as pre-buying materials occur through February. Winter a soil tests and lower fertilizer prices, that created some opportunities for

fertilizer costs reflected current trends in soil tests and lower fertilizer prices, that created some opportunities for growers that were shared in newsletters, crop updates and video blogs.

The labor situation in NY evolved rapidly with changes in regulation that growers needed to respond to. Through similar delivery methods, press releases and a live presentation at CLEREL we provided growers with both regulatory compliance information and cost estimates. Programming was supplemented by Cornell agricultural workforce development program. Further enhancements to strategy were to be presented at the now rescheduled grower conference.



COVID-19

As mentioned, the winter conference had to be rescheduled due to COVID-19. LERGP has since rescheduled the conference, provided relevant business management updates to growers through usual electronic methods and taken virtual office hours live twice a week.

Growers have particular concerns about impacts on grape prices, finances, and the availability and cost of materials. Given the rapidly evolving situation, the focus has been

managing risk. By entertaining the possibilities of material shortages and lower grape prices, growers can focus on purchasing the things they'll need before there is an issue. With prices of things relatively low, this risk management strategy has little downside (other than a hit to cash flow) until prices move upward. Along with this strategy there have been a number of government programs that have or will soon make inexpensive credit available. That inexpensive credit is the second leg of the strategy we've shared with growers to make sure that stockpiling 2020 supplies does not interrupt cash flow. The third part of risk management we've shared with growers is to take the issue seriously. Their workforce and business model for labor supply is vulnerable to interruptions. Following CDC and DOH guidelines to minimize risk has been encouraged by illustrating the potential costs and damages to the operation, if just one full time person is forced to quarantine.

As everyone has mentioned far too many times this situation has evolved rapidly. At this time, we are hoping these changes to programming a curriculum are relevant, effective and topical but evaluations to COVID-19 relevant programming will take some time to complete.



To date in 2020:

Publications - Lake Erie Vineyard Notes Newsletter (2) and LERGP Crop Update (5) Podcasts - 11 weekly podcasts available on http://lergp.com/podcasts/ Web resources - http://lergp.cce.cornell.edu, http://lergp.com and https://www.efficientvineyard.com Like us on Facebook - Cornell-Lake-Erie-Research-and-Extension-Laboratory and Efficient-

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