Lake Erie Regional Grape Program

Concords on 10/12/2022
Kim Knappenberger

CROP UPDATE
October 13, 2022

Cornell Cooperative Extension
Lake Erie Regional Grape Program

PennState Extension

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Click here to watch Podcasts

The Lake Erie Regional Grape Program is a Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extensions in Chautauqua, Erie and Niagara county NY and in Erie County PA.

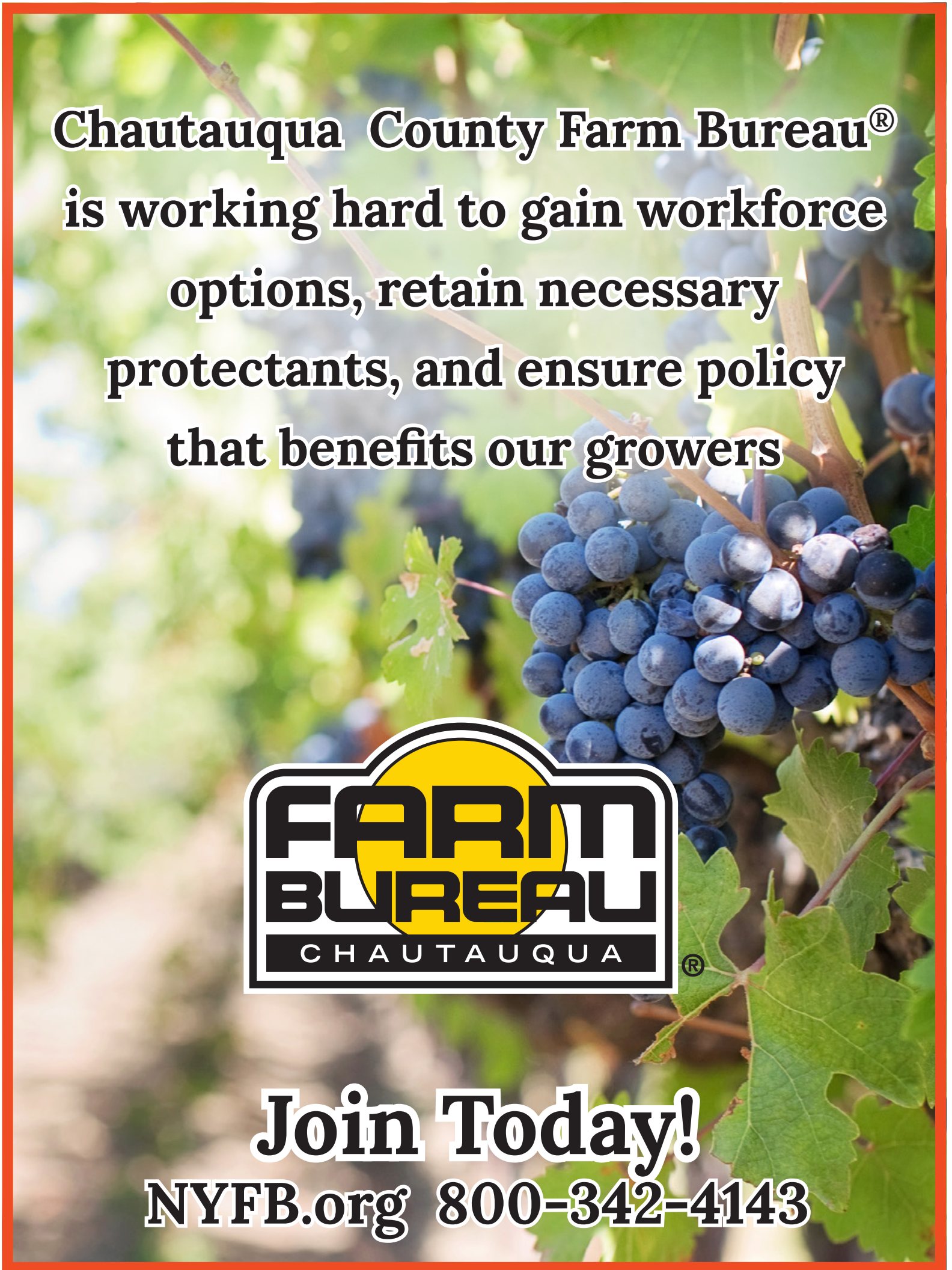
Back in the day.....

Can you help us?

We want to include a picture of an old piece of grape farming equipment or a nostalgic photo of back in the day grape farming on each month of our 2023 LERGP calendar. We would love to have your photos for our calendar!

If you would like to share a photo, email it to me at kjr45@cornell.edu

1970 -No more pulling a harvester behind the tractor. Introducing the first Chisolm Ryder - self propelled and the ability to harvest six to eight tons of grapes per hour.
posted on Pinterest by Grape Growers of Ontario


Chautauqua County Farm Bureau®
is working hard to gain workforce
options, retain necessary
protectants, and ensure policy
that benefits our growers
FARM
BUREAU
CHAUTAUQUA
®
Join Today!
NYFB.org 800-342-4143

Business Management

Kevin Martin, Penn State University, LERGP, Business Management Educator

Efficient Harvest

Operating efficiently throughout harvest requires balance. Circumstances of "balance" differ, depending on the operation and yields. A few principals guide the approach most growers take, but when those issues are in conflict, balance becomes challenging. Remaining flexible and changing your operation based on yields allows for the economical harvest of lower yielding vineyards. It also allows one to remain competitive when custom harvesting by the acre.

Equipment

In many years the goal of the operator is to keep the harvester in motion, to maximize the number of acres that can be harvested with a single machine. Success allows for the justification of additional acreage, decreased labor costs and a narrower harvest window.

Adoption of bulk harvesting is a more complex discussion. As processors become able to receive bulk, adoption will ramp up. Opinions differ behind the business advantages of bulk. For a grower that can switch 300 acres of harvest to bulk, there is no doubt the return on investment will be better than most capital investments a grower can make. The average grower harvests just 100 acres of grapes, so what about him? I've written in detail about the factors that influence the return on investment so I'll just provide a quick update here. Labor costs have increased dramatically. So too has the cost of bulk adoption. Be sure not to over-invest in unnecessary equipment. Gondolas and bulk harvesting speed up harvest and even plant turn-around times. Just because you have 4 trailers worth of boxes does not mean a grower needs to buy 8 bulk hoppers. Two larger gondolas can be more than adequate, especially for smaller growers, when three trailers made sense.

Newer harvesters can harvest more tons per hour. We've seen widespread adoption above 200 acres. The payback period on this would be the longest. We have also seen very successful adoption on small farms that adopt in a flexible way.

Labor

In harvest operations the use of labor varies greatly. Harvest operations can efficiently complete 50 tons per day with as few as three people. Most operations harvesting 100 – 125 tons per day use at least four individuals at a time. Others use as many as eight. This is where the amount and type of equipment are balanced by downtime and labor size. One advantage of a smaller workforce is that downtime is considerably less expensive.

Remaining flexible is particularly important. Small crop sizes allow for considerably more downtime. The efficiency of loading and hauling is far less important and justifies far less labor when there are simply fewer loads to be hauled. A typical grower might haul as many as 125 loads in a year. 20 minutes of tying down and an additional 30 minutes of delay in loading translates to an additional 3.5 hours per day. In a poor year, that same harvester may only haul 32 loads. The same inefficiencies in loading and tying down account for only 1.2 hours per day over a shorter season.

While the mindset of the custom harvester is to harvest as many tons as quickly as possible, some accommodation for small crops should be made. Reducing the labor costs balanced with some reasonable delay makes a lot of sense. Gross savings should be as high as $200 per day, per employee. Fewer employees will cause harvest to stop more frequently. Reasonable delays in loading and tying down should cost less than $50. This reduces acreage cost by nearly $10. When charging by the acre most growers are on the cusp of breaking even. This change in harvest style should push the more efficient growers right to the line of breaking even.

Since this is just a crop update I haven't exactly spelled out the assumptions here that justify these savings but that has all been done in newsletters and podcasts and will be done again in the future. In the meantime, to apply this to your specific situation, give me a call and I would be happy to discuss.

Pre-harvest samples

As of last week we've seen Concord brix vary from 14 – 18. Variability on one farm has been as much as 3 brix. Knowing and understanding where brix variability is now, by block, will result in significant efficiency in scheduling and staging equipment come harvest time. Challenges this year include both low crop yields and high crop loads. In addition to brix, crop estimation has also helped growers know where to harvest and when to start harvesting. Turn times to fill trucks have varied significantly because of highly variable crop. While delivering loads two hours late may not have a direct cost to the grower it does add stress and challenges to the harvest season that can be avoided.

Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

Unfortunately, we have had another close Spotted Lanternfly report. Our colleagues in Pennsylvania reported that they heard from DCNR forester that spotted lanternfly was reported for the first time in Erie County last week via an iNaturalist observation. If you go to the link below and select spotted lanternfly from the list of species, it will show you where they have been reported in PA. You can then zoom in to see where they were reported in Erie County.

https://www.inaturalist.org/places/pennsylvania

This one was in Wattsburg, PA.

That brings me to our efforts to encourage scouting and reporting of Spotted Lanternfly (SLF) in our region. The New York Department of Agriculture and Markets funded efforts to bring awareness of SLF and we created a short Public Service Announcement to help with those efforts. Please share this with friends and family, agricultural or not, to help us all keep these numbers low and become aware of populations to better combat them:

Photo 1. Spotted Lanternfly adults and egg masses photo by NYS IPM

Adult spotted lanternfly laying eggs. Photo by Emelie Swackhamer

Spotted lanternfly eggs on a rusty steel barrel.
Spotted lanternfly eggs. Photo by Lawrence Barringer

In the Vineyard

In the beginning of the week, I was getting reports from growers and industry representatives that they believed to be experiencing berry dehydration. Desired fruit chemistry for producing single strength juice is 16 Brix (+/- 0.5) and 1.0-1.1% (10-11 g/L) titratable acidity at approximately 30-40 days post-veraison. Environmental conditions (precipitation, sunlight, temperature) as well as viticulture management (crop load) can influence berry weight and the rate of sugar accumulation. You can read more about this here. The staff at the Cornell Lake Erie Research and Extension Laboratory (CLEREL) tracks Concord phenology and we officially called Concord Veraison on August 17, 2022, which puts the 30-40 days after veraison on September 16th-26th for the desired fruit chemistry mentioned above. As of October 13, 2022, CLEREL Concords are 57 days after veraison and 127 days after bloom. Previous Concord Fresh Berry Curves indicate that this could be a factor (see Figure 1), at 110 days after bloom, the berries reach 100% of final berry weight and then may trail off.

Some growers report that sugars are the highest this season than they have ever experienced in decades of farming. Processors agree that before the rain today, there may be some dehydration occurring with slight bumps up in soluble sugars. Overall, the crop is doing very well, but there are still comments about losses from Grape Berry Moth, deer damage, and how poor and damaged some vines are from being overcropped last season compounded with wet root systems from the never-ending rain last season. On the other side, there are talks of impressive yields in parts of the belt.

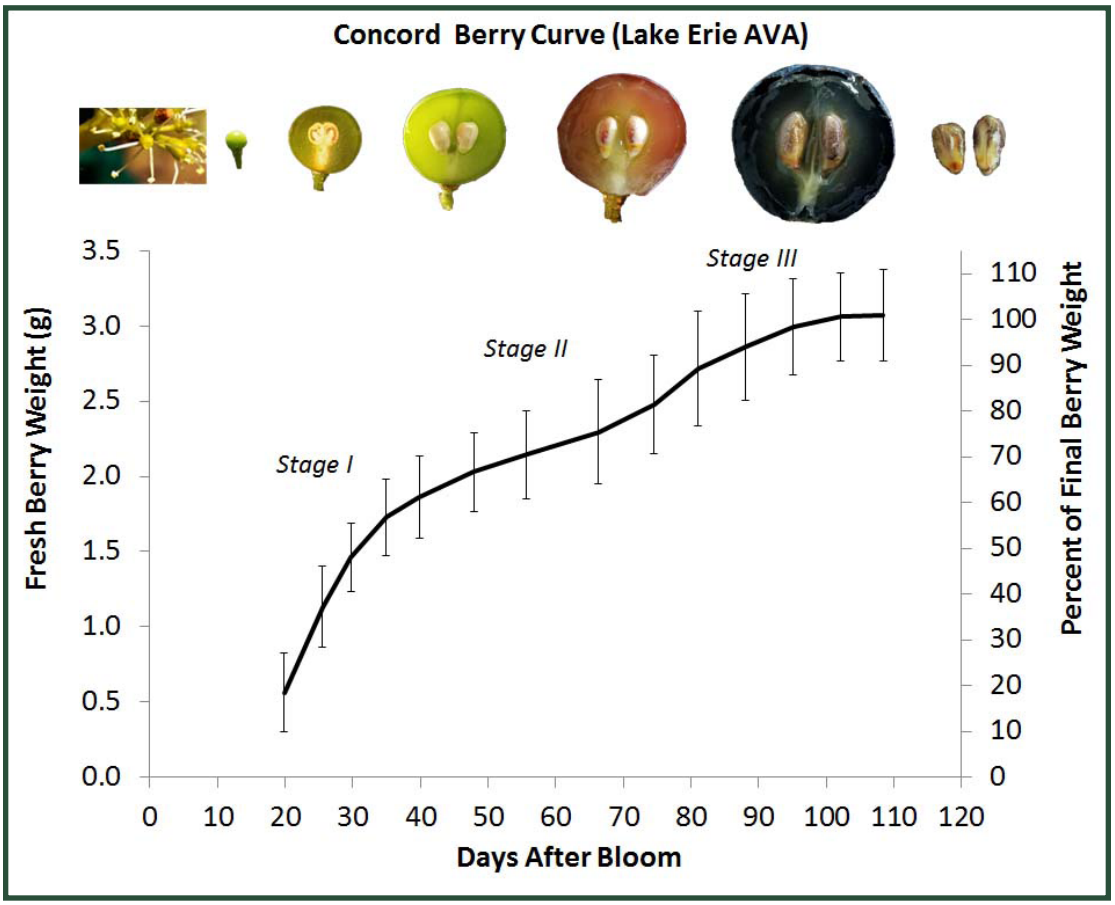


Figure 1. Three stages of Concord Berry Curve by Dr. Terry Bates

Well, it's wet. This Thursday morning by 9:00 AM, growers have reported that their rain gauges already collected between 1.5-1.75 inches of rain today. The following information (Table 1) was easily obtained at https://newa.cornell.edu/ and you can select the closest NEWA weather station to help guide your management decisions. I chose six stations around the belt to compare precipitation. The overview section on the NEWA Dashboard page provides the below information:

Table 1. NEWA Network Dashboard Weather Data for six NEWA stations around the Lake Erie Grape Region

Portland Overview		**North East (Side Hill) Overview**	
At 9:00 AM today		**At 9:00 AM today**	
56 ˚F		53 ˚F	
Base 50˚F Degree Days since January	12732	Base 50˚F Degree Days since January	2693
Relative Humidity	97%	Relative Humidity	95%
Dew Point	54.9˚F	Dew Point	52˚F
Wind Speed	10.1 mph	Wind Speed	8.3 mph
Yesterday		**Yesterday**	
Precipitation:	0 in	Precipitation:	0 in
High Temp:	71 ˚F	High Temp:	69 ˚F
Low Temp:	55 ˚F	Low Temp:	52 ˚F
Today as of 9:00 AM		**Today as of 9:00 AM**	
Precipitation:	1.19 in	Precipitation:	1.44 in
High Temp:	61 ˚F	High Temp:	60 ˚F
Low Temp:	56 ˚F	Low Temp:	53 ˚F
Silver Creek (Double A Vineyard)		**Harborcreek Overview**	
At 9:00 AM today		**At 9:00 AM today**	
57˚F		57 ˚F	
Base 50˚F Degree Days since January	2841	Base 50˚F Degree Days since January	2728
Relative Humidity	84%	Relative Humidity	85%
Dew Point	52.1 ˚F	Dew Point	52.1 ˚F
Wind Speed	13 mph	Wind Speed	13 mph
Yesterday		**Yesterday**	
Precipitation:	0 in	Precipitation:	0.01 in
High Temp:	73 ˚F	High Temp:	71 ˚F
Low Temp:	47 ˚F	Low Temp:	55 ˚F
Today as of 9:00 AM		**Today as of 9:00 AM**	
Precipitation:	0.93 in	Precipitation:	1.81 in
High Temp:	64 ˚F	High Temp:	60 ˚F
Low Temp:	57 ˚F	Low Temp:	54 ˚F

Portland Overview		North East (Side Hill) Overview	
Versailles Overview		**Burt Overview**	
At 9:00 AM today		**At 9:00 AM today**	
57 ˚F		59 ˚F	
Base 50˚F Degree Days since January	2574	Base 50˚F Degree Days since January	2399
Relative Humidity	100%	Relative Humidity	90%
Dew Point	56.9 ˚F	Dew Point	56 ˚F
Wind Speed	11 mph	Wind Speed	15 mph
Yesterday		**Yesterday**	
Precipitation:	0 in	Precipitation:	0 in
High Temp:	70 ˚F	High Temp:	70 ˚F
Low Temp:	50 ˚F	Low Temp:	54 ˚F
Today as of 9:00 AM		**Today as of 9:00 AM**	
Precipitation:	0.66 in	Precipitation:	0.62 in
High Temp:	64 ˚F	High Temp:	65 ˚F
Low Temp:	57˚F	Low Temp:	57˚F

Unfortunately, there is a chance of rain in the forecast for the next few days. This weather can make harvest challenging. If you are looking to help stabilize your middle-rows consider cover cropping. You can find information on our website Click Here, or reach out to me via email for more information at jjr268@cornell.edu.

NOAA's National Weather Service Forecast by 12 Hour Period

Notes: Weather forecasts are sourced from National Oceanic and Atmospheric Administration's (NOAA) National Weather Service.

National Weather Service Forecast (click to link) NOAA's Disclaimer (click to link)

UTC Forecast Time: 2022-10-12T11:37:20+00:00

Thursday Night: A chance of rain showers. Mostly cloudy, with a low around 44. Southwest wind 8 to 14 mph. Chance of precipitation is 40%. New rainfall amounts less than a tenth of an inch possible.

Friday: A chance of rain showers before 3pm. Mostly sunny, with a high near 56. Southwest wind 10 to 20 mph. Chance of precipitation is 30%. New rainfall amounts less than a tenth of an inch possible.

Friday Night: Partly cloudy, with a low around 43.

Saturday: A chance of rain showers after 2pm. Partly sunny, with a high near 60. Chance of precipitation is 30%.

Saturday Night: A chance of rain showers. Mostly cloudy, with a low around 45. Chance of precipitation is 50%.

Sunday: A chance of rain showers. Mostly sunny with a high near 55. Chance of precipitation is 40%.

Sunday Night: A chance of rain showers. Mostly cloudy, with a low around 41. Chance of precipitation is 40%.

Efficient Vineyard

Get Your Whole Team Collecting Farm Data - Written By Nicholas Gunner

This post is part of a series of tutorials designed to help growers adopt my.efficientvineyard.com (myEV).

The myEV tool allows your whole team to collect and manage data together. The following video walks you through the simple steps required to get your team collaborating in minutes. This could be useful at this stage of the growing season to mark any broken posts or deep ruts to guide management decisions later.

Watch the tutorial on how here!

The Press Deck
Weekly News and Updates from the New York Wine & Grape Foundation.
Wednesday, October 12, 2022
SUSTAINABILITY

New York Sustainable Winegrowing Vineyard Certification Enrollment Open Now
🌐 newyorkwines.org

The New York Sustainable Winegrowing Program is excited to announce that applications are now open for the Vineyard Certification process.

Following the success of our pilot in 2022, the program is now open to all wineries in New York. The NYWGF Sustainable Winegrowing program provides a pathway to voluntary third-party certification that verifies vineyards are using the best practices to ensure environmental, social, and economic sustainability of New York Wine.

Sam Filler, NYWGF Executive Director, “The New York Sustainable Winegrowing program is a strategic priority of the NYWGF Board of Directors’ and is intended to support the resiliency and continued growth of the New York wine and grape industry. NYWGF’s statewide, national, and international education and marketing plans will prominently feature sustainably produced wines that both trade and consumers will recognize in the marketplace.”

Certification is based on regionally defined sustainability standards compiled in the annually reviewed VineBalance workbook. This workbook consists of 144 action items addressing input reduction, soil health, water protection, resources and waste, energy conservation, ecosystem health, climate resiliency, continuous improvement, and social equity. If a vineyard meets all requirements and is certified through the New York Sustainable Winegrowing program, they may market their vineyard and grapes as such.

Bottles of wine produced with at least 85% certified grapes will be able to display the New York Sustainable Winegrowing Trustmark indicating the winery’s dedication to environmental and social sustainability. The first certified bottles should be hitting shelves in 2024, so keep an eye out and support sustainable New York Wine.

To learn more or apply for certification click here.

Updates and Information

Kimberly Knappenberger, Viticulture Assistant, LERGP

NEWA

The Brant station has been offline since September 17th and unable to connect. All of the usual IT tricks (for example, have you turned it off and back on again?) have been tried numerous times, but to no avail. The datalogger has been removed from the mount and is currently on its way back to Onset to be serviced. This particular station is owned by the NYS IPM program and they are making efforts to be sure it is not offline for much longer. Due to the length of the outage the station is not currently available on newa.cornell.edu. If stations do not report for 21 days they are temporarily removed. We hope to have it back in service soon.

PA Update

Bryan Hed, Research Technologist, Lake Erie Grape Research and Extension Center

Weather: Until today, we logged just 0.06" of rain in the first 12 days of October. Cool weather conditions continue to dominate as growing degree accumulations have slowed to a crawl. Our first zero growing degree day occurred on October 3 and again on the 8th. This is a bit earlier than in the recent past, but not that unusual (first zero growing degree day in 2015 occurred on October 2). We have accumulated about 60.5 growing degree days (gdds) over the past 12 days of October.

That said, we just got whopped earlier this morning with one to two inches of precipitation in most places along the lake. My rain gauge in east Erie showed about 2.25" this morning. The rain should be tapering off throughout the day. The short-term forecast for North East PA predicts 20% chance for rain Saturday, dry on Sunday, but then 80% chance for rain on Monday again. Temperatures will remain rather cool, with highs in the 50s, and lows in the 40s, and little to no gdd accumulation.

Phenology: At our location by the lake, we managed to reach 16 degrees brix in our Concord in the first week in October. However, some vineyards continue to struggle to make minimum sugar, even 14.5 brix. From sources I've heard from, these are typically vineyards with heavy crops, away from the lake. There won't be much sugar accumulation going on aside from potential desiccation at this point, and even that is less likely now.