



## CROP UPDATE July 22, 2021

photo credit-Kim Knappenberger

Cornell Cooperative Extension Lake Erie Regional Grape Program



and the

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### In this copy:

In Person Meeting Info- please register and join us! Will Inflation Run Away? -Kevin Martin Lake Erie Regional Grape Belt Crop Estimation - Jennifer Phillips Russo In the Vineyard - Andy Muza Box Tree Moth Information

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.

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### Vineyard Technician Position available at the North East Lab

The Penn State Lake Erie Regional Grape Research and Extension Center in North East, PA is looking for a full-time person to help manage a 40-acre research vineyard. In addition to maintaining the vineyard the responsibilities will also include working with the research and extension staff to examine novel approaches to viticulture that address the needs of the grape industry. The ideal candidate should have sufficient experience in viticulture and a PA pesticide applicators license.

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# **Business Management**

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

## Will Inflation Run Away?

I know sometimes growers ask questions of others that require a crystal ball, but usually it seems like it is me. Let me tell you, if I could predict these things I would be one highly compensated individual. Instead lets first discuss why it matters, what you can do about it and then we'll get to speculation on how likely it is to occur.

Inflation matters because the economy will operate less efficiently when inflation exceeds 5%. The impact is dramatic above 8%. Inflation makes planning difficult. We've already seen how price changes confound best management practices. Did you pay \$8 for round-up or \$19? The knee-jerk reaction is to say that \$19 round-up is unsustainable. In periods of rampant inflation, sustainability of price is impossible to predict. High input costs might even out if high grape prices compensate, or not if high prices don't materialize. This dramatically increases financial risk and slows economic growth. It makes, for instance, growth and consolidation of farms even more difficult. On top of high interest costs, high input costs come before grape payments are received. So far, the round-up analogy is a poor one. That is the kind of one off example that does not necessarily indicate inflation. We won't know if this will be widespread going forward.

To decrease financial risk growers, need to limit their exposure to higher interest rates. There are a number of ways to do that. First, while interest rates are low, take advantage of fixed rate financing. Use your best collateral (land or real estate) to further limit your exposure to high rates. Right size your farm now. Once it becomes obvious that inflation is a problem, it will be too late to efficiently grow your acreage. Do it now or find other ways to right size your farm. Most other methods of expansion will also require capital inputs. Whether you're modifying trellis, planting acreage, or investing in equipment all of those investments become harder to execute if inflation is a problem. Relative to purchasing power, inflation is likely to cause farm values to decrease. This lack of ability to plan, grow and borrow will decrease the pool of buyers as well as the ROI of any potential buyers' purchase. That is not to say that \$5,000 acre grapes would be worth \$3,000, just that inflation is likely to grow much faster than the value of the land. To decrease financial risk of the farm operation, the farm should not need to rely on the value of land. It should not be the foundation of a retirement plan or even a plan to finance production practices. Expansions will be lower risk if they're financed with available capital or fixed rate financing. Land investments with a duration of less than 10 years also would carry a greater risk.

I've always argued that meaningful inflation cannot occur because of an increase in the cost of a particular good or service, no matter how important that good or service is. An increase of inflation requires two things. One, the expectation that prices will continue to rise over time. Without that expectation buyers (consumers or producers) tend to decrease buying and wait. The other thing that is required is money. Even if buyers believe prices will rise, if they do not have access to ever increasing capital, it will be impossible for them to increase buying. Without both of these key ingredients, a simple rise in the price of oil (for example) will not cause meaningful changes to inflation over the medium or long-term.

Covid-19 was no joke. In March of 2020 most of the economy was turned off. Not sure anyone realized that capitalism had a light switch. Turns out it basically does and most things came roaring

back when the switch was flipped back to on. Perhaps this dramatic event is enough to change buyer expectation. Many have no memory of problematic inflation. It last occurred in 1981, 40 years ago. Without a memory of inflation, a dramatic event was probably going to be necessary to change expectations. With the exception of some panic buying very early on, the pandemic was not directly related to price expectations. Perhaps a year or two of pent up demand will do the trick. So there is a change that expectations have shifted enough.

The next question is whether or not buyers have access to capital. The classic example is low interest rates. The issue with interest rates is that access to those interest rates is limited, it's not the same as cash. We've been in a pattern of low interest rates for decades. By itself it has not led to an adequate increase in capital. With other factors coming together, perhaps the potential of low interest rates will improve themselves. Another big factor is cash. The lower and middle class saw a meaningful bump in income related to government support. Almost nobody did better than farmers and the unemployed. Huge classes of people that are very likely to spend money, were given more. This may work in a way that tax cuts never did. A reduction in income tax never provided nearly as much money to individuals likely to spend it. Government checks as stimulus (I think) started in 2007. That first experiment was a small one, most people made fun of the amount. The government borrowed and distributed significant amounts of money, all while many people were saving extra. Putting all three factors together: low interest rates, higher savings rates and government stimulus; inflation is possible.

Despite all these factors the data is not in. Two months of inflation averaging 5.2% stimulated the questions that resulted in this article. That level of inflation is not concerning at all, particularly in the short term. If those two data points are the start of an upward spiral, there is room for concern. Inflation above 5% is probably higher than ideal but nothing that would be problematic unless it lasted for a significant period of time. This is something to watch and to plan for as you consider farm financial risks. Predictors of inflation are starting to feel like chicken little. For years those that have ignored them have done well to avoid real financial risks while the chicken gets eaten by the fox. I'd like to hedge the dismissive attitude as there are some factors in the macro-economic economy that have not been well researched because they've never happened before. Also, predicting human behavior is challenging. So as much as I always assure growers not to panic over the price of fuel, eventually it won't be just fuel.



Savers rate shows individuals have a dramatic increase in access to capital after a year of intensive savings.



Sticky prices exclude some of the most volatile prices, like energy. When we try to see through the noise to measure actual inflation, it appears to be trending upward. Nothing dramatic yet.



While actual inflation is just heating up, this U Michigan survey shows that consumers expect more dramatic inflation. Historically, it also shows that these consumers sometime change their mind and the inflation fears never materialize.

## Lake Erie Regional Grape Belt Concord Crop Estimation

The Lake Erie Regional Grape Program processed 182 Concord grape crop estimation samples from Niagara, Erie, Cattaraugus, Chautauqua counties in NY and Erie county PA that were collected 30 days after bloom. The data indicates that 54% of the 182 samples analyzed were 9 tons per acre and higher. There is definitely a large crop hanging out there. Table 1 below provides a breakdown of the percentages and Figure 1 displays the information in a visual manner.

Table 1. The Lake Erie Regional Grape Program Beltwide Concord Grape Crop Estimation percentage of total samples

LERGP Beltwide Concord Crop Estimation Samples				
tons/acre	percent of belt	blocks	total blocks	
0-4 tons	9%	17	182	
5-8 tons	37%	67	182	
9-11 tons	20%	36	182	
12-15 tons	15%	27	182	
16-19 tons	14%	25	182	
20+ tons	5%	10	182	

The above Table 1 indicates that 17 individual blocks out of 182 ranged from 0-4 tons per acre, which was only 9%. The tonnage ranging from 5-8.99 tons/acre held the largest majority of the belt crop estimation samples with 67 blocks and 37% of the total 182 samples. The next largest percentage are blocks ranging from 9-11.99 tons/acre consisted of 36 blocks and made up 20% of all samples analyzed, but not trailing far behind that are 27 blocks in the 12-15 tons range and 25 blocks in the 16-19 tons range. Ten blocks out of the 182 samples came in at 20 or more tons per acre.

The numbers indicate that there is a large crop out there. Hopefully you have all taken a crop estimation and know where you fall with these ranges. With that stated, it is important to improve and/or maintain vineyard health while maximizing your tonnage. If you push your vines this season, you run the risk of overcropping and reducing fruiting wood maturity for next year's crop. More than likely a block that falls within the 20 or more tons per acre range is overcropped and the odds of making sugar for harvest are slim, not to mention that overcropping your vine with drive down your vine size. That is not to exclude that there may be a half pound vine carrying a 5 tons/acre crop out there. This month's upcoming Newsletter with have more detailed information on this, but for now it is my hope that seeing this data will help you to see how many other growers may be in the same boat as you and prompt you to ask yourself the questions: *Can my vines handle this much crop and still be healthy for next year? Can I get the sugars that I need to by harvest? Will I be competing for loads with 37% of the growers in the region at the same time? Will the periderm ripen in time for winter and be hardy enough?* 



## NOAA's National Weather Service Forecast by 12 Hour Period for CLEREL

Notes: Weather forecasts are sourced from National Oceanic and Atmospheric Administration's (NOAA) National Weather Service. <u>National Weather Service Forecast (click to link)</u> <u>NOAA's Disclaimer (click to link)</u>

UTC Forecast Time: 2021-07-22T05:38:19+00:0

Overnight: Partly cloudy, with a low around 59. East wind around 6 mph.

Thursday: Mostly sunny, with a high near 72. West wind 5 to 9 mph.

Thursday Night: Partly cloudy, with a low around 61. Southwest wind around 8 mph.

Friday: Mostly sunny, with a high near 75. West wind around 6 mph.

Friday Night: A slight chance of rain showers after 2am. Partly cloudy, with a low around 63. East wind 1 to 10 mph. Chance of precipitation is 20%.

Saturday: A slight chance of rain showers before 5pm, then a chance of showers and thunderstorms. Partly sunny, with a high near 79. Chance of precipitation is 30%. New rainfall amounts less than a tenth of an inch possible.

Saturday Night: A chance of showers and thunderstorms before 8pm, then showers and thunderstorms. Mostly cloudy, with a low around 69. Chance of precipitation is 80%.

Sunday: Showers and thunderstorms likely. Mostly cloudy, with a high near 79. Chance of precipitation is 70%.

Sunday Night: Showers and thunderstorms likely before 8pm, then a chance of showers and thunderstorms. Partly cloudy, with a low around 68. Chance of precipitation is 60%.

Monday: A slight chance of rain showers before 2pm. Mostly sunny, with a high near 80.

## Historical Growing Degree Days (base 50) for CLEREL

Notes: Current season accumulation is reported as the thick blue line from January 1 through date of this report. Historical season data is reported between January 1 and December 31 of each year. The legend indicates how many GDDs had accumulated by the same date in previous years and the final total for the year on December 31.

Data is sourced from Cornell's Northeast Regional Climate Center (NRCC) high resolution gridded data service.

The GDDs for 2021 cumulative since January 1<sup>st</sup> (denoted by the thick blue line on Figure 2) are 1363, which 65 days more than the five-year average and only 3 above 2017.



Figure 2. Cumulative Growing Degree Days (base 50F) for Cornell Lake Erie Research and Extension Laboratory

## Historical Precipitation (inches) for CLEREL

Notes: Current season accumulation is reported as the thick blue line from January 1 through date of this report. Historical season data is reported between January 1 and December 31 of each year. The legend indicates how many inches of precipitation had accumulated by the same date in previous years and the final total for the year on December 31. Data is sourced from Cornell's Northeast Regional Climate Center (NRCC) high resolution gridded data service.

We are certainly closing the gap of cumulative precipitation this year, coming in at a total of 24.6 inches since January 1, 2021 (denoted by the thick blue line in Figure 3), that is only 2.4 inches below the five-year average and no longer the driest year since 2016.



*Figure 3. Historical Cumulative Precipitation in inches for Cornell Lake Erie Research and Extension Laboratory in Portland, NY* 

#### Phenological Resources:

- Grape Disease Control, Spring 2021 | Katie Gold, Cornell University
- Enterprise Tool for Eastern US Small Vineyard Management | Cornell University
- <u>Spotted lanternfly experts debunk myths about the prodigious, pestilent pest</u> | *Amy Duke, Pennsylvania State University*







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Lake Erie Regional Grape Program

### GRAPE TWILIGHT MEETING & ERIE COUNTY HORTICULTURAL SOCIETY'S ANNUAL FREE DINNER

#### DATE: WEDNESDAY, AUGUST 4, 2021

- PLACE: Gravel Pit Park 10300 West Main Road (Route 20), North East, PA 16428
- **TIME:** GRAPE PROGRAM 5:00 6:00 P.M. FREE DINNER – After the Program
- NOTE: Farm Equipment Display by Various Vendors 3:00 to 7:00 P.M. Pesticide Recertification Credits available for NY & PA. NO REGISTRATION REQUIRED (just show up)

#### **GRAPE PROGRAM:**

- **MAKING A HABIT OF THE WORKER PROTECTION STANDARD** 5:00 -5:30 P.M. JIM HARVEY, PA OFFICE OF RURAL HEALTH, PENN STATE
- INSECT & DISEASE MANAGEMENT UPDATES 5:30 to 6:00 P.M. Bryan Hed, Lake Erie Regional Grape Research & Extension Center, North East, PA Andy Muza, Jennifer Russo, Kevin Martin - Lake Erie Regional Grape Extension Team

Sincerely,

Andy Muza County Extension Educator

7/15/21

The Pennsylvania State University encourages qualified persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, please contact Andy Muza at 814-825-0900, Ext. 1 in advance of your participation or visit.

Where trade names appear, no discrimination is intended, and no endorsement by Penn State Extension is implied.

# Far past the frozen leaves

There's no end to the potential hazards your crops face: freeze, hail, wind, insects and disease. And those are just the natural disasters. As a fruit farmer, you also have to deal with other variables like fluctuating market prices.

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# PA Update

Andy Muza, LERGP Extension Team & Penn State Extension - Erie County

## In the Vineyard (7 -22- 21) -

#### **Insects**

<u>Grape Berry Moth</u> – checking the GBM Model at NEWA stations throughout the region, I estimated that the earliest that any areas are expected to reach 1620 GBM degree days will be the first week in August. Over the next 2 weeks keep track of the accumulating GBM degree days by checking the NEWA stations closest to your vineyards (<u>http://newa.cornell.edu</u>).

<u>Grape Leafhopper</u> – in 2 Concord blocks checked this week (7/19-20), grape leafhoppers were starting to build up. Now, both adults and nymphs are present. While scouting look for leaf stippling in the interior of the canopy and for nymphs and adults on the undersides of leaves (Figures 1 & 2).

<u>Japanese Beetle</u> – leaf feeding was low in Concord blocks that were checked but was much more evident in some wine grape blocks. Thin leaved wine grape varieties are more likely to have higher levels of injury so continue to scout these varieties to determine if an insecticide is needed.



Figure 1. Stippling on Concord leaf caused by grape leafhopper feeding. Photo – Andy Muza, Penn State.



Figure 2. Grape leafhopper nymphs on the underside of Concord leaf. Photo – Andy Muza, Penn State

## <u>Diseases</u>

<u>Powdery Mildew</u> – The most noticeable symptoms caused by powdery mildew (PM) infections in Concord vineyards are the distortion and cupping of leaves closer to the ends of shoots (Figure 3). But, overall, canopies look good, and levels of PM are still at low-moderate levels.

As Bryan Hed has stated in previous Crop Updates, "control should be targeting leaves at this point and the decision to continue spraying on native juice varieties will be based on crop size. There is no formula for just how long you need to continue leaf sprays for powdery mildew; it depends on how much above average your production is on a block by block basis (which a good estimate and your cropping history records will tell you), and how much good ripening weather we have left (which is the million dollar question that no one can answer)."

<u>Downy Mildew</u> – This week I fully expected to find downy mildew (DM) popping up in vineyard blocks due to rainfall amounts over the last 2 weeks. (See table, provided by Kim Knappenberger, for precipitation amounts for June and July for NEWA locations around the Lake Erie Region). But I still was unable to find any DM in Concord, Niagara, Fredonia or Delaware blocks that were scouted. The only DM that I was able to find was in unsprayed plots of Chancellor at the Grape Research & Extension Center in North East, PA (Figure 4). However, growers are reporting finding DM in Catawba, Niagara and susceptible wine grape varieties. Continue to scout your vineyard blocks to get an idea of the extent of DM infections and manage accordingly.



Figure 3. Distortion and cupping of Concord leaf caused by powdery mildew infection. Photo – Andy Muza, Penn State.



Figure 4. Downy mildew symptoms on Chancellor cluster showing red discoloration and browning of berries. Photo – Andy Muza, Penn State.

NEWA location	June Precip in inches	July precip in inches (to 7/22)
Ransomville	3.59	5.56
Burt	3.02	3.84
Corwin	1.67	4.04
Brant	2.22	7.75
Versailles	2.09	7.27
Hanover	2.73	7.96
Sheridan	2.75	6.28
Silver Creek	1.43	5.69
Silver Creek Double A	2.92	8.92
Dunkirk Airport	2.40	6.87
Forestville	2.78	5.65
East Fredonia	2.28	5.41
Fredonia	2.95	7.51
Brocton Escarpment	3.05	8.41
Portland Escarpment	2.48	8.43
Portland	1.61	5.87
Portland (LERGP West)	1.42	8.09
Westfield	2.41	4.64
Ripley	1.46	6.71
Ripley Escarpment	3.43	6.44
North East Escarpment	3.81	8.88
North East State Line	3.49	5.95
North East Sidehill	3.46	4.91
North East Lab	2.86	5.45
Harborcreek Escarpment	3.60	6.45
Lake City	3.03	5.34

## A Message from USDA to Gardeners in New York State Save Your Boxwoods: Check Them for the Box Tree Moth!



Courtesy: Matteo Maspero and Andrea Tantardini, Centro MiRT - Fondazione Minoprio [IT].)

#### A New Invasive Pest May Be in New York State

The U.S. Department of Agriculture (USDA) is responding to a significant plant health threat and needs your help. Please check your boxwood plants for the invasive and destructive box tree moth. During the spring, a number of U.S. nurseries received potentially infested Canadian boxwood plants. This invasive pest feeds on the plants' leaves, and can cause complete defoliation, eventually killing the plant.

Many [Insert State Name] residents have already purchased and planted these boxwoods. If you bought one, you may have infested boxwood on your property. USDA wants to prevent the box tree moth from spreading and establishing itself in the State and beyond.



(Photo by iredding01, Adobe Stock.)

#### Help Protect New York State's Boxwoods!

Here's how you can help:

If you bought a boxwood plant during spring 2021, please inspect it for signs of the moth and report any findings to your local <u>USDA office</u> or <u>State agriculture department</u>. If State or Federal agriculture officials visit your home, please allow them to inspect your boxwood trees and place

an insect trap. Box tree moths can produce several generations between June and October, so acting now is essential to prevent this pest from establishing itself in [Insert State Name].



This is what you should look for:

Caterpillars and webbing (larvae can reach 1.5 inches long)

(Courtesy of Matteo Maspero and Andrea Tantardini, Centro MiRT - Fondazione Minoprio [IT].)

*Damage* (Photo by <u>Lavizzara</u>, Adobe Stock.)



#### Pupa

(Courtesy of Ilya Mityushev, Department of Plant protection of the Russian State Agrarian University - Moscow Timiryazev Agricultural Academy.)



Adult moths (wingspan is 1.5 to 1.75 inches):

(Courtesy of Matteo Maspero and Andrea Tantardini, Centro MiRT - Fondazione Minoprio [IT].)



Dark form of the moth. (Courtesy of Ilya Mityushev, Department of Plant protection of the Russian State Agrarian University - Moscow Timiryazev Agricultural Academy.)



*Egg mass under the leaves* (Courtesy of Walter Schön, <u>www.schmetterling-raupe.de/art/perspectalis.htm</u>.)

Report signs of infestation to:

Your USDA local office: http://www.aphis.usda.gov/planthealth/sphd

#### **More Information**

For more information about the moth and boxwoods, or USDA's response with State partners, visit: <u>www.</u> <u>aphis.usda.gov/planthealth/box-tree-moth</u>

## Other links of interest:

#### LERGP Web-site:

Cornell Cooperative Extension website:

Cornell CALS Veraison to Harvest Newsletter:

Efficient Vineyard:



#### Appellation Cornell Newsletter:

#### **COVID-19 resources:**

Need information? View the following Cornell CALS and CCE Resource Pages Updated Regularly

General Questions & Links:

https://eden.cce.cornell.edu/

Food Production, Processing & Safety Questions:

https://instituteforfoodsafety.cornell.edu/coronavirus-covid-19/

Employment & Agricultural Workforce Questions:

http://agworkforce.cals.cornell.edu/

Cornell Small Farms Resiliency Resources:

https://smallfarms.cornell.edu/resources/farm-resilience/

Financial & Mental Health Resources for Farmers:

https://www.nyfarmnet.org/

Cornell Farmworker Program

www.farmworkers.cornell.edu

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