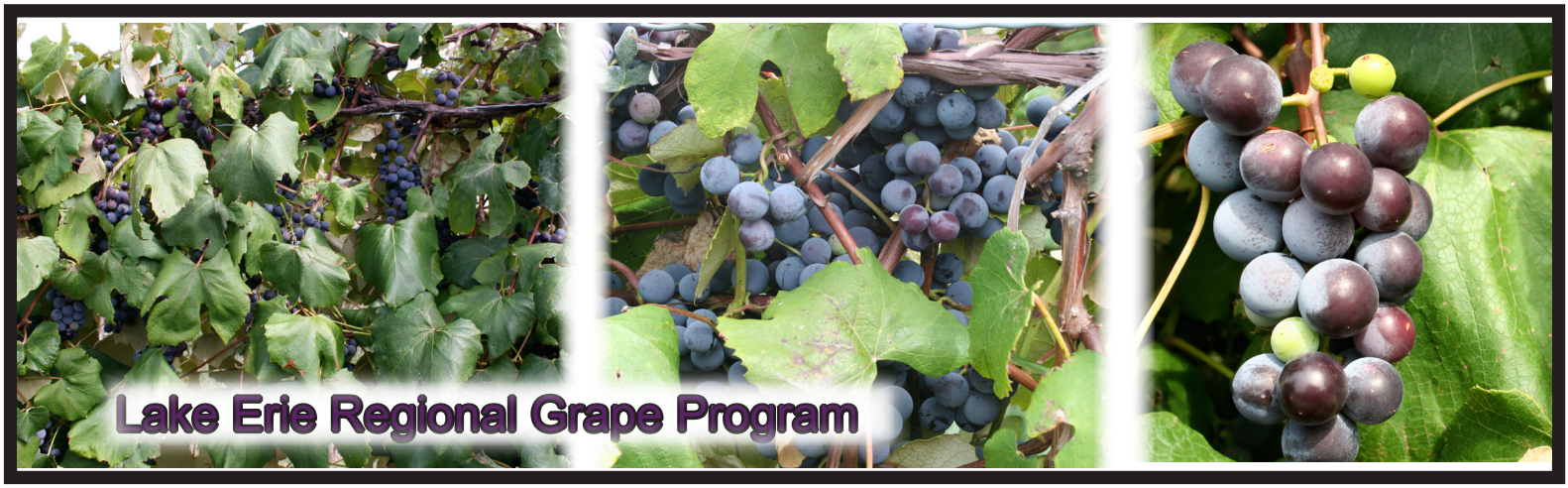


Crop Update October 17, 2019

CLEREL Concords ripe for the picking.
Photo: Jennifer Russo, LERGP

Cornell University Cooperative Extension

Lake Erie Regional Grape Program

PennState Extension

Building Strong and Vibrant New York Communities
Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

In this Crop Update:

- **Spotted Lanternfly Update- Tim Weigle**
- **Are You Experiencing Shelling?- Jennifer Russo**
- **Weather and Disease Update- Bryan Hed**
- **Crop Value: estimates Up Since August- Kevin Martin**
- **Vineyard Improvement Program-Kim Knappenberger**

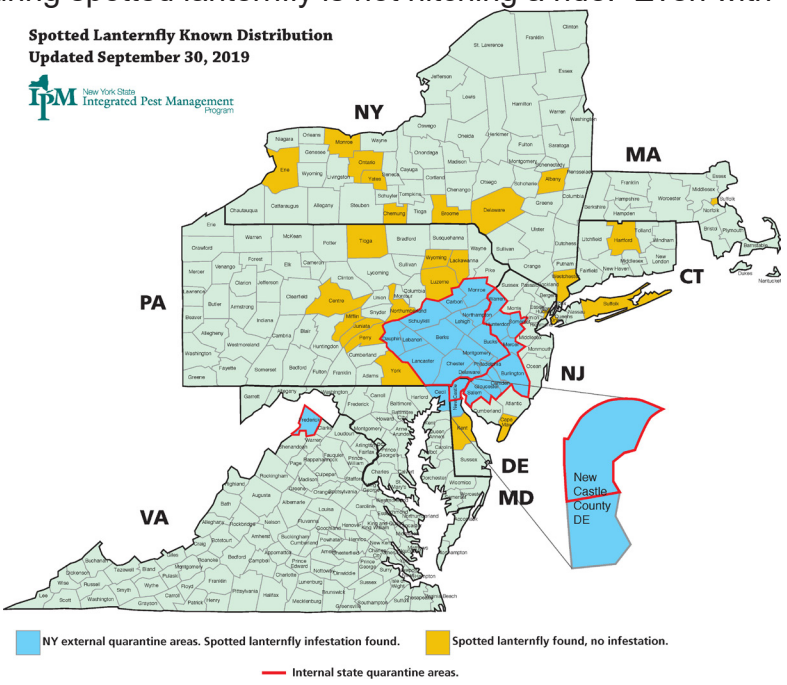
The Lake Erie Regional Grape Program is a Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extensions in Chautauqua, Erie and Niagara county NY and in Erie County PA.

IPM

Tim Weigle, NYSIPM, Cornell University, LERGP Team Leader

Keep an Eye out for Spotted Lanternfly

I know this is the time of year where everyone is busy with harvest and they do not need anything else put on their already overflowing plate. However, this is also the time of year when spotted lanternfly is at its hitchhiking best via the adult and egg mass life stage. If you are expecting anything that is coming from one of the quarantined areas (see map) with existing spotted lanternfly populations, make sure to take the time to inspect that load for adults and egg masses. DO NOT expect the manufacturer, seller, or shipper to be the last line of defense in ensuring spotted lanternfly is not hitching a ride. Even with their best efforts we have seen that a number of hitchhiking spotted lanternfly have made their way outside of the quarantine zone. Only by everyone doing their due diligence will we be able to keep populations of this invasive pest to a minimum while researchers work on effective management strategies. The same holds true for something as simple as family or friends coming up from a quarantine area for a visit. Check out their vehicle, both inside and out, to ensure there are no unwanted visitors.



You are probably asking yourself “what’s the big deal?” Spotted lanternfly are swarm feeders and tend to return to areas where they fed the year before. Add in the fact that they feed directly in phloem and you have a pest that removes large amounts of carbohydrates at a time when the vine is trying to ripen a crop and build up reserves for overwintering buds and the vine itself. Reports from the wine and grape industry in Southeastern Pennsylvania are showing entire vineyards with no return crop following a year of heavy infestations and feeding by spotted lanternfly. After a second year of heavy feeding growers are finding enough vine death that the vineyard is considered a total loss.

For the majority of vineyards in New York and Erie County, PA mechanical harvesters are used to get the fruit off the vine rather than hand picking. The swarm feeding habit of the spotted lanternfly almost ensures that large numbers of this pest will be harvested along with the grapes. While no tolerances have

been set at this point it is not hard to imagine that it will not take too many 1-inch long spotted lanternfly adults in a load to get it rejected.

And a final thought, and I have thought this many times during my trips down to the quarantined areas of southeastern Pennsylvania, you do not want to be known as the person responsible for spotted lanternfly becoming established in your area.

If you see it, report it. If you do find spotted lanternfly, take a photo and send it to spottedlanternfly@dec.ny.gov if you are in New York State. In Pennsylvania call 1-888-422-3359 or report via the web at https://extension.psu.edu/have-you-seen-a-spotted-lanternfly Make sure you provide information on location, street address and zip code if possible, landmarks or GPS coordinates if in rural areas. Kill the specimen by placing it in alcohol or hand sanitizer or place it in a bag in the freezer. Make sure you keep the specimen so positive identification by be made by the appropriate authorities.

If you have any questions on spotted lanternfly, Penn State Extension has a wealth of information available on line https://extension.psu.edu/spotted-lanternfly, the NYS IPM Program has a web page with resources and links at https://nysipm.cornell.edu/environment/invasive-species-exotic-pests/spotted-lanternfly/ and the LERGP extension team has a number of podcasts on the subject that can be found at https://lergp.com/podcasts

Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

Are You Experiencing Shelling?

All shelling photos by Jim Joy

Have you noticed shelling of fruit in your vineyards? Some growers have reported shelling, where berries fall off of the rachis to the vineyard floor. There are a number of factors that can cause shelling and most likely it is a combination of them. Some of the combining factors that may lead to shelling this year are the prolonged bloom that was wet and cool delaying some spray programs in the important post-bloom spray window, Grape Berry Moth, reports of large crops, and it was a dry summer. In an overcropped situation, when you are pushing your vines, you may run into nutrient deficiencies.

Look at these Concord grape photos submitted this week. The fruit is beginning to shell, the leaves are senescing too early, and there is also some evidence of Phomopsis on the shoots as well. With the weather and crop load situation that we have this season, I am concerned about potassium deficiencies in your vines.

Potassium is a very mobile macronutrient in the vine. If the vines are balanced, where vine shoot growth provides enough leaf area to properly ripen the crop, then the potassium distribution in the vine is balanced between all of the organs. If you are pushing your vines this year in an overcropped situation, the vine sends potassium to the fruit disproportionately, and less to the rest of the vine. Pushing your vines can cause reduced wood maturation, lower root growth, and reduced vine size next season ultimately leading to reduced crop.

I would suggest as you harvest this season, take observations and note where the shelling is occurring so you can address it next spring. Take soil and petiole samples in those areas, and because of this season you may want to add a corrective potash application in the spring. Tony Wolf's Wine Grape Production Guide for Eastern North America (2008) provides target soil and petiole values and fertilizer guidelines. The maintenance application for potassium is to apply up to 150 pounds/acre of Potash, but if you pushed your vines this year then apply the recommended moderate application of up to 400 pounds/acre for corrective measures.

The information below is the table provided in Wolf's guide for your reference.

POTASSIUM					
	Target Values				
	Soil	Bloom Petiole	70-100 DAB	AND	THEN
	75 ppm	1.00%	0.80 %	High soil Mg and K deficiency symptoms obvious.	Apply K fertilizer - Heavy rate.
			1.20 %	Excessively dry or excessively wet.	Apply K fertilizer - maintenance rate or irrigate to increase soil K mobility.
	75-100 ppm	I .50-2.50 %	120-2.00 %	Large crop.	Apply maintenance rate of K fertilizer.
	75-100 ppm	1.5 -2.50 %	I .20-2.00 %	Normal crop.	No action necessary; repeat sampling in two years.
	100 ppm	2.50 %	2.00 %		Monitor for chronic Mg deficiency

Notes:

Muriate of Potash (KCI) typically applied in the fall to allow K movement into the root zone and chloride leaching out of the root zone. Caution must be used on soil with a salinity problem (not common in the Northeast) or on shallow or poorly drained soils where the chloride cannot leach from the root zone.

Potassium is typically banded; however, broadcasting in vineyards with spreading root systems and no-till row-middle management is an option.

Factors to watch:

1. K-Mg competition, especially with changes in soil pH.
2. K demand, especially in high cropping systems.
3. K soil mobility, it decreases with decreasing soil moisture.

Sources:

Muriate of Potash (52% K, 62% 1<20), most common.

Sulfate of Potash (44% K, 53% K20), use if chloride toxicity is a potential problem.

Sulpomag (22% 1<20, 11% Mg), has both K and Mg, more expensive, considered organic.

Rates:

Preplant:

Desired soil K is 75-100 ppm. Soil should be amended with potash (K20) prior to planting to bring within this range, as follows.

Example:

(1 00 ppm K desired) - (50 ppm K from sample test) = 50 ppm K needed x 2.4 = 1 20 lbs K20/acre needed (120 lbs K20/acre needed) x 1.67 (60% 1<20 in KCI) = 200 lbs KCI/acre applied - or(120 lbs K20/acre needed) x 2 (50% 1<20 in K2S04) = 240 lbs K§04/acre applied

Existing vineyard (rates based on soil test, petiole test, visual observation, or combinations thereof)

Heavy: Apply up to 600 pounds/acre K20 (see text for graduated response to deficiency symptoms)

Moderate: Apply up to 400 pounds/acre KYO

Light/maintenance: Apply up to 150 pounds/acre 1<2

PA Update

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

Weather: October, for the most part, has been warm and dry at North East PA, and conducive to ripening…until today (Oct 17), when cool showers have moved our rainfall total to 2.1 inches for the month. For the most part we were lucky enough to be missed by the worst of the effects of the bomb cyclone that's been pounding areas farther east. Being just on the western edge of the storm, we still received over an inch of rain and high winds, which will continue into Friday and which I'm sure will result in some shelling of crop in unharvested vineyards. We have accumulated 139 growing degree days (gdds) so far during October, warmer than average, though heat accumulations have slowed to a trickle over the past several days with below average temperatures. The short-term forecast looks dry for the weekend, with high temperatures moving back up to average or slightly above average; nice.

INSURING GRAPES

NY, 2019

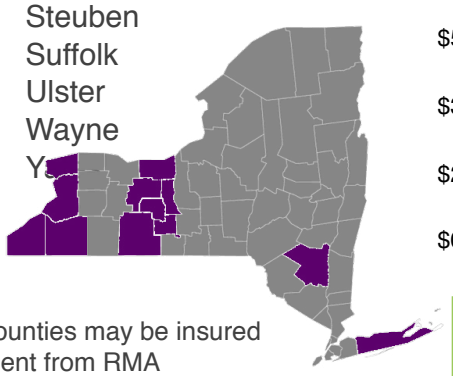
Crop insurance is a safety net for farmers that helps you **manage risk**. If you have a crop failure, crop insurance can help you farm again next year.

Important Insurance Deadlines

- **Aug. 15, 2018:** Premium Billing Date
- **Nov. 20, 2018:** Sales Closing, Policy Change, Cancellation, Termination Date
- **Nov. 20, 2019:** End of Insurance Period
- **Jan. 15, 2019:** Acreage / Production Report Date

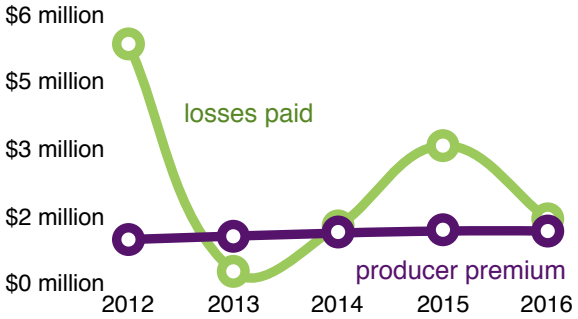
Over 40 grape varieties are insurable in these counties:

Cattaraugus
Chautauqua
Erie
Niagara
Ontario
Schuyler
Seneca
Steuben
Suffolk
Ulster
Wayne
Yates



Grapes in other counties may be insured by written agreement from RMA

NYS Grape Crop Insurance



for every $1 grape producers spent on crop insurance premiums from 2012 to 2016, **they received $2.07** in losses

Learn more & sign up:

Learn more about crop insurance options available to New York producers at agriskmanagement.cornell.edu
To sign up, contact a crop insurance agent. Find an agent using the Agent Locator tool at rma.usda.gov/en/Information-Tools/Agent-Locator-Page

Cornell University delivers crop insurance education in New York State in partnership with the USDA Risk Management Agency. Diversity and Inclusion are a part of Cornell University's heritage. We are an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

Cornell CALS
College of Agriculture and Life Sciences

USDA
U.S. Department of Agriculture
Risk Management Agency

Business Management

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

Crop Value: Estimates Up Since August

With nearly half the crop contained, data shows mostly good news for growers. Average delivered brix is over 16.0. The higher quality, particularly in the cash market, will certainly provide a modest boost to revenue on the 2019 crop. While weather has been mixed, in general the unseasonably warm weather has allowed all but the most over-cropped vineyards to mature nicely. Isolated challenges with crop load, high water tables, disease, and potassium deficiency have led to some deliveries of Concords between 14.5 and 15.5 brix.

Based on delivery records these problems are impacting less acres than normal, when comparing similar years. In particular, where we have data showing brix variability across the region, it is showing up less. This data can be a bit deceptive if severe problems are causing widespread harvest delays and load cancellations. There have not been reports of such problems, so the data looks relatively trustworthy.

Remaining risk continues to be related to weather. Hopefully we only need another ten days of good weather to avoid shelling issues that drive yields down at this late stage. Shelling is expected in over-cropped areas that require dehydration and a delayed harvest to meet minimum quality standards. However, current weather patterns allow maximum profitability for vineyards that have reached high quality and are just not yet harvested. With the abundance of harvesters and presses in the area, we are in a good position to do just that.

August pricing for Concord was mostly positive but brix contingent payment scales are a concern with the late bloom date. With above average September weather we should see above average yields per acre and average to above average brix. Average revenue per acre is likely to approach a 7 year high.

Quality for wine varieties has been mixed. Our weather patterns were much closer to long-term averages than the last five years. We have seen typical patterns in some varieties with higher than ideal acid. This will not impact prices this year, which are already down. It may, unfortunately impact demand for juice and bulk wine. Hopefully fairly average yields, despite some quality challenges, will allow the market to work through some surplus for a better 2020. We'll know more once harvest is complete and the sales season is underway.

Vineyard Improvement Program

Kim Knappenberger, LERGP, Program Aid

Weak Concord Vineyard

Here we are, knee deep in Concord harvest. As harvesters run the rows and tractors keep pace, you might want to keep this program in mind. Are there some vineyard blocks that you operate and wonder why, because of low yields, short rows or limited headlands to turn? Are some of your vines poor producers due to soil, pest pressure, or water issues? The Vineyard Improvement Program might be that nudge you need to remove the vineyard and make changes needed to increase productivity of the site, or just to try a different agricultural commodity. Maybe diversification into apples, another grape variety, Christmas trees, or even a field crop will be better supported by that piece of land. Concords might even be better served by that land if it is tiled and the rows planted in a way that running equipment through will be more efficient. Whatever your issues may be, we invite you to check into this program to see if it could benefit your operation.

The Vineyard Improvement Program offers 50% reimbursement for the removal of poorly producing Concord vineyards at least an acre in size, up to $1,500 per acre. It also offers 25% reimbursement of replanting of vineyards, orchards, berry farms, etc up to $1,500 per acre. However, it does not cover seed costs for hay, cover crops, or vegetables.

If you want to learn more, go to lergp.com and click on the Vineyard Improvement Program button in the center of the page.

Other links of interest:

LERGP Web-site:

Cornell Cooperative Extension website:

Cornell CALS Veraison to Harvest Newsletter:

Efficient Vineyard:

Appellation Cornell Newsletter: