



Cornell Cooperative Extension
Lake Erie Regional Grape Program



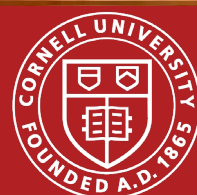
PennState Extension



Crop Update - July 30, 2020

Concord grapes -
Jennifer Phillips Russo

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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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Joining and Configuring Audio & Video (1 minute):

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Business Management

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

Liquidity:

After all that rainfall I'll take another minute to talk about liquid. It does seem like most of the region is set on H₂O. What about in the world of finance?

All that remains between today and harvest is liquidity. There are not many bills left to pay. Those bills that are left, are extremely difficult to pay for some growers. If there is going to be a cash crunch it is usually right now. It's hard to effectively time a discussion on liquidity. December or January is the time to attempt to plan cash flow for the year. Sometime between August and October is the end of the forecast period. With a good forecast, the business checking account might not be where you'd like it to be, but at least there is no surprise.



For grape growers' current assets are often just cash. A current ratio measures all current assets and compares them to current liabilities. The ratio should compare assets and liabilities in the same period, what is due currently. "Current" is typically defined as the next 12 months. Bills will likely include \$700 - \$1,000 in production practices. You do not need your checking account to cover all the bills due after your crop insurance or harvest advance will be paid. Current Assets/Current Liabilities should equal 1.5 – 3. Growers that have not purchased a vineyard in the last 10 years should often consider a ratio of 2 as healthy. Growers that sell exclusively to the cash market might need to aim closer to 3 as their business fully matures.

Wineries should use a quick ratio to measure their liquidity. A quick ratio only counts assets that can be quickly converted to cash; inventory is excluded. Winery inventory can be substantial and not easy to convert into cash. A quick ratio can be much lower than a current ratio. A result of 1 is considered healthy. One can expect to sell some inventory but trying to forecast exactly how much can lead to risk.

Inventory can be the enemy of liquidity. However, unrealized assets provide an identical hurdle. Delayed payments from cooperatives are certainly an asset on the books but cannot be converted to cash. As a result, growers can often have liquidity challenges for decades. Getting started in the business creates obvious liquidity challenges. Growth in acreage has a similar, but less pronounced, impact on liquidity. Finally, changes in markets (switching processors) can substantially impact liquidity.

Low grape prices can have a similar impact. Low yields should not impact liquidity. liquidity has a potential to be a concern, crop management is essential. Available cash and expected crop payments from crops before 2020, should total \$800 per acre + debt costs. If liquid assets fall short of that benchmark, crop insurance should be an essential risk management tool. Crop insurance payments will nearly eliminate liquidity issues caused solely by weather related disasters.

Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

Coffee Pot News

This 2020, the year of the pandemic, has been tumultuous to say the least. However, innovation is a result from being forced to look at a situation differently. Our Lake Erie Regional Grape Program team was forced to create new ways to blend old and new ideas as a result of this pandemic year. We created our Virtual Coffee Pot Meetings for educational outreach, with the use of technologies, that bridged the gap of a paused society and allowed for solutions that will have lasting effects to enhance our program for years to come.

Coffee Pot meetings have been a staple of the extension work done by the Lake Erie Regional Grape Program for many years. During these meetings researchers and extension associates come together with growers in a relaxed setting to share up-to-date information and advice on how to take care of the issues that arise in their vineyards as well as offering time for the growers to collaborate on what works and what doesn't work. In addition, pesticide recertification credits are given to those in attendance who present their pesticide applicator license.

COVID 19 halted in-person meetings and threatened to derail the events where one could obtain pesticide recertification credits. LERGP Specialists worked closely with the New York State DEC and Pennsylvania Department of Agriculture to get pesticide recertification credit approval for these Virtual Coffee Pot meetings and were approved for one credit for both New York and Pennsylvania growers for each meeting. This 2020 pandemic year has created a unique opportunity to move to an online platform by using Zoom to meet with the growers, and we were able to offer 13 chances for recertification credits this growing season.

In addition, the Virtual Coffee Pot Meetings invited guest speakers with expertise in their fields to present their research in an informal setting and entertain grower questions and comments. This was a bonus that COVID 19 presented. These facetime interactions with researchers provided an opportunity to share grower experiences, ask questions that may have always been on the forefront of your mind, and influence future research. This virtual platform for educational outreach was well received (after some bumps in the learning process). We have had many compliments from our grower stakeholders and guest speakers about the productivity of these meetings and requests to continue this virtual format throughout the year. Even the growers who were unable to attend in person during the virtual meetings, were pleased with the recorded sessions that are available to watch at their convenience on our website (link and list of guest speaker talks below).

We aren't the only ones taking notice of the innovation that can come out of these unprecedented times. We are honored and proud of the following statement from Sen. George Borrello, 57th District, who expressed support for the program, noting that *"the exchange of information by researchers, extension associates and growers is always important, but it is even more crucial this year as our agricultural sector works through the financial and operational disruptions caused by the pandemic. We are in a time of immense change and those who are informed and engaged will be in the best position to navigate both the challenges and the opportunities. I encourage all those in the Concord grape industry to join this valuable discussion."*

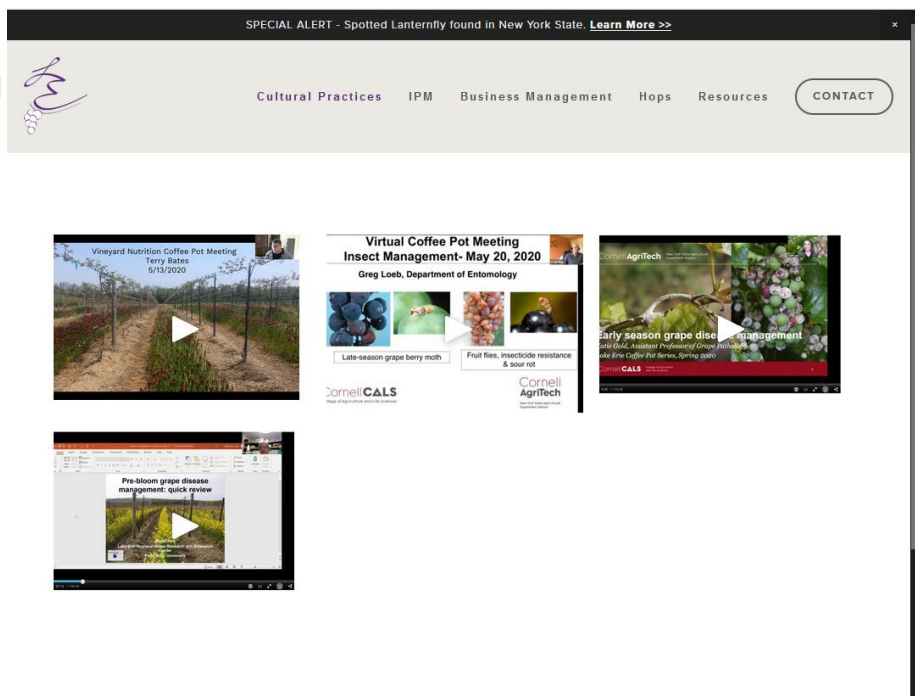
In efforts to continue to offer this type of educational programming, we would like to hear from you on topics that you would like to learn more about or maybe you have always had an idea that someone somewhere may have researched it. Please send your thoughts or comments to Jennifer Phillips Russo at jjr268@cornell.edu, Kevin Martin at kmm52@psu.edu, or Andy Muza at ajm4@psu.edu and we will do our best to line up guest speakers. We are also entertaining holding an evening session so you can stay in your vineyards during working hours. It would be really helpful if you would consider a term on our Advisory Committee, to help guide our educational outreach efforts and future research projects. A term would require you to attend two meetings, most likely via Zoom during this time, to provide your thoughts and ideas. If you are interested in getting involved, please contact Kate Robinson at kjr45@cornell.edu.

Use this link to view specialists from previous [Virtual Coffee Pot meetings](#).

The list includes:

- Dr. Terry Bates – Soil Health and Nutrition
- Dr. Greg Loeb – Insect Management for Grapes
- Dr. Katie Gold – Early Season Disease Management
- Bryan Hed – Early Season Disease Management
- Heather Leach – Spotted Lanternfly update from Pennsylvania
- Dr. Terry Bates – Bloom Talk
- Kevin Martin – Farm Safety Plans
- Dr. Michela Centinari – Under Vine Cover Crops
- Dr. Justine Vanden Heuvel – Canopy Management
- Dr. Misha Kwasniewski – Flavor Development in the Vineyard / Pruning Level Impact on Concord Juice Flavor Development and Optimal Harvest Timing
- Chris Gerling – Impacts of Late Season Sprays on Wine Quality
- Dr. Terry Bates – How Grapevines Respond to Drought Conditions
- Dr. Lynn Sosnoskie – Weed management

The Lake Erie Regional Grape Program is a cooperative effort between Cornell and Penn State Universities; the participating Cornell Cooperative Extension Associations of Chautauqua, Erie, Niagara and Cattaraugus Counties in New York and Erie County in Pennsylvania; and participating industry partners National Grape Cooperative (Welch's), Constellation Brands and Walkers Fruit Basket. The LERGP extension team provides research-based educational programming for commercial grape growers throughout the year at venues across the Lake Erie grape belt. For more information on LERGP, call 716-792-2800 or visit our website at <http://lergp.cce.cornell.edu/>





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Updates and Information

Kimberly Knappenberger, Viticulture Assistant, LERGP

NEWA Location	Wild grape bloom date*	DD total on July 30, 2020	Forecasted DD for Aug 4
Versailles	June 5	1354	1474
Hanover	June 6	1357	1479
Sheridan	June 4	1440	1564
Silver Creek	June 6	1356	1480
Silver Creek (Double A)	June 4	1464	1585
Dunkirk Airport	June 4	1470	1593
Forestville	June 5	1393	1514
East Fredonia	June 5	1377	1499
Fredonia	June 6	1331	1453
Brocton Escarpment	June 6	1334	1457
Portland Escarpment	June 5	1376	1496
Portland	June 5	1371	1492
East Westfield	(offline)		
Westfield	June 7	1316	1438
Ripley	June 5	1395	1518
Ripley Escarpment	June 6	1333	1456
Ripley State Line	June 5	1384	1507
North East State Line	June 7	1301	1414
North East Escarpment	June 5	1388	1507
North East Sidehill	June 6	1338	1457
North East Lab	June 5	1407	1538
Harborcreek	June 5	1423	1555
Harborcreek Escarpment	June 7	1272	1401
Lake City	June 6	1357	1482
Ransomville	June 6	1405	1532
Burt	June 10	1300	1430
Corwin	June 7	1377	1505
*Estimated date provided by NEWA website			

Table 1. Phenology-based Degree Day model results for Grape Berry Moth by NEWA station location in the Lake Erie Region on July 30, 2020.

PA Update

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

In the Vineyard (7-30-20) –

Grape Berry Moth – THIRD GENERATION (1620 GBM Degree Days)

On Wednesday (7/29), I checked the GBM Degree Day Model for each NEWA site in the Lake Erie Regional Grape Program to approximate when 1620 DD will be reached across the region. I used the total accumulated degree days on August 3rd at each station, as a starting point, and then assumed a daily accumulation of both 25 and 28 DD until 1620 DD was reached at each site.

The NEWA site with the most GBM DD (Silver Creek – Double A Vineyards) may reach 1620 DD as soon as next Thursday (8/6). However, the site with the fewest GBM DD (Harborcreek - Escarpment) may not reach 1620 DD until the following Thursday (8/13). Most of the sites are projected to reach 1620 DD between August 8 – 11. However, it is important to check the GBM Degree Day Model in [NEWA](#), choosing the closest station near your vineyard, for more accurate timings.

According to the GBM DD Model, “Control measures should be timed to coincide with 1620 DD in high risk vineyards. For materials that must be ingested, e.g. Intrepid, Altacor, Verdepryn, it is important to get materials on as close to 1620 DD as possible”. DO NOT neglect scouting low and intermediate risk vineyards. If more than 15% damaged clusters are found, then also apply an insecticide in these areas.

Grape Leafhopper – In Concord blocks scouted this week there was a slight increase in GLH leaf feeding on interior leaves in the canopy compared to last week. Some adults and only a few nymphs

were observed (Figure 1). However, in an unmanaged block, adults, nymphs and leaf feeding were easy to find. In the coming weeks growers should keep an eye out for potential increases in GLH population levels. While scouting be aware that feeding injury will be more prevalent on leaves in the interior of the canopy. At this point in the season, an insecticide application is recommended if a threshold of 5 nymphs/leaf is reached (see: [“Bulletin 138, Risk Assessment of Grape Berry Moth and Guidelines for Management of the Eastern Grape Leafhopper”](#))

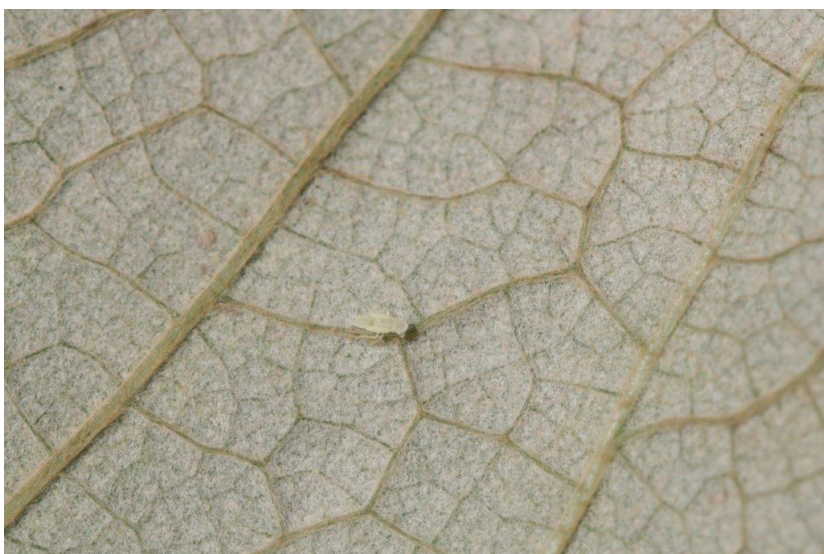


Figure 1. Grape leafhopper nymph on underside of Concord leaf. Photo – Andy Muza, Penn State.

Powdery Mildew – In blocks scouted this week, canopies look healthy with low levels of PM evident. However, colonies of PM are starting to appear on younger leaves (Figure 2). Downward curling and yellowing of younger leaves closer to shoot tips, caused by PM infections, will become more evident as the season progresses.



Figure 2. Colonies of powdery mildew on upper surface of young Concord leaf. Photo – Andy Muza, Penn State

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PA Update

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

We're starting to see some of our early table grapes entering the ripening period; varieties like Somerset, Mars, Thomcord, and Jupiter.

Weather: We have currently recorded 726 growing degree days in July at our location, well above our total July average of 658 gdds. So, we've gained a lot of heat in July and are now ahead of average for the season. This July will also end up being the hottest July in at least the past 21 years I've been keeping records here. Rainfall accumulation in July measures in at 4.25 inches, above our average of about 3.8. High temperatures for the next 3 days look to be just slightly above average with a chance for rain on Saturday, August 1.

Diseases: Rain on the 28th generated new infection periods for black rot, Phomopsis, and downy mildew at many locations. Fruit of native varieties should be resistant to downy and powdery mildew, and resistant/nearly resistant to black rot at this point. Phomopsis spore sources should be milked out by now, so that disease is no longer a threat. So, our main focus at this time is keeping the leaves clean and healthy enough to ripen the crop and the wood. We've had 6 wetting periods in the past 2 weeks, with very warm, humid conditions, and downy mildew can spin out of control very quickly under these conditions, especially if you're growing susceptible varieties. Also, fruit of vinifera may retain black rot susceptibility for another couple of weeks.

Powdery mildew appears to be developing slowly from what I see at our location. There is very little powdery on fruit, and Concord leaves still appear relatively free of mildew, with the exception of tissue on the newest shoot growth, where young leaves are distorted from the pathogen. Late season sprays for powdery mildew on juice grapes should be based on crop size (the more above average the crop, the more necessary it will be to keep canopies clean, longer) and anticipated weather conditions. Foliar nutrient sprays like Nutrol (with a surfactant) or Harvestmore will provide some deterrent to buildup of mildew on leaves. Trials we've run with Harvestmore show that this product, applied as a foliar nutrient at 5 lbs/A, will provide about 30% suppression of mildew on Concord leaves. If you're applying a resistance prone material (one of the sterol inhibitor fungicides or something like Quintec, Vivando, or Torino), you should tank mix these materials with a Nutrol or Harvestmore-like material or sulfur (for varieties that are not damaged by it) for resistance management. And make sure to limit your applications of resistance prone materials to two per season. Another option for mid/late summer powdery mildew on leaves is copper/lime. In our trials here at the North East lab we have had very good control of leaf infections with copper/lime applications to Concord. Copper is also great for downy mildew control. And with copper, there are no resistance issues. Just be careful to apply copper/lime only when you have good drying conditions to limit the odds that leaf injury may occur; ideal conditions are clear, sunny, low humidity with some air movement. Avoid applying copper to dew-covered leaves in the morning.

Finally, a recap from last year, regarding Botrytis bunch rot and sour rot pesticide applications to susceptible wine varieties. Botrytis specific fungicides have active ingredients that are prone to the development of resistance by the Botrytis fungus. Therefore, I have listed them below according to the FRAC (Fungicide Resistance Action Committee) group that each product belongs to, so you know what rotations work for managing resistance. FRAC groups are fungicide chemistries with the same or similar mode of action, so that pathogen resistance to one fungicide is going to confer cross resistance to another, within that same FRAC group. For example, notice that Vanguard and Scala are in the same FRAC group, 9. This means that if a population of Botrytis in a vineyard has developed

resistance to the active ingredient in Vanguard, then it will also be resistant to the active ingredient in Scala, even though the active ingredients may be different (cyprodinil in Vanguard and pyrimethanil in Scala). The mode of action (the way in which the fungicide disrupts a specific metabolic pathway in the fungus, killing it) of these two chemistries is the same, or similar enough that pathogen resistance to one chemistry will confer resistance to the other.

FRAC group 2: Rovral, 7 day pre-harvest interval

FRAC group 7: Endura, 14 day pre-harvest interval

FRAC group 7 (and 3, which is not for Botrytis): Luna Experience, 14 day pre-harvest interval

FRAC group 7 and 11: Pristine, 14 day pre-harvest interval

FRAC group 9: Vanguard, Scala, 7 day pre-harvest interval


FRAC group 9 (and 3, which is not for Botrytis): Inspire Super, 14 day pre-harvest interval

FRAC group 9 and 12: Switch, 7 day pre-harvest interval

FRAC group 11: Flint, 14 day pre-harvest interval

FRAC group 17: Elevate, 0 day pre-harvest interval

For sour rot control, some great work by Drs. Megan Hall and Wayne Wilcox at Cornell University has shown a close connection between fruit flies and sour rot development and spread; control fruit flies = control sour rot. A tank mix with additional antimicrobials (Oxidate, Fracture) and you could see reductions in sour rots of 50-80%. Just be careful to rotate insecticides; fruit flies can develop resistance to insecticides very quickly. So far, the best results appear to occur when weekly sprays are initiated before sour rot symptoms are observed (preventive sprays just before about 15 brix). If you're growing varieties like Pinot noir/gris, Vignoles, Chardonnay, or Riesling, this should be an important part of your rot control program, especially is the last leg of the ripening period is a wet one.



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Cornell Small Farms Resiliency Resources:

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