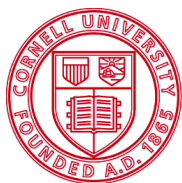




Lake Erie Regional Grape Program



Cornell University
Cooperative Extension



PennState Extension

Crop Update July 03, 2019



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- Crop Estimation Meeting-Jennifer Russo
- Field Update/Respirator Fit Process- Andy Muza
- PA Weather and Disease Update- Bryan Hed
- 2019 Coffee Pot Schedule

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Dave Maille

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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.

Business Management

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

Business Update

Strengths:

Fuel costs remain down 30% from peak and 5%, compared to last year. Higher commodity prices are directly linked to terrible weather and the expectation of low yields for harvest '19. Since the prices are a function of weather, input costs have stayed mostly flat so far. To the extent that low yields in 2019 impact production in 2020, it is possible we will see higher fertilizer demand (and costs) next year.

U.S. economic performance is mixed. Mostly good reports in jobs and GDP have maintained the relative strength of the US dollar. Despite that export challenge, supply and demand have at least normalized for Concord juice production. A significant number of acres has been removed. California wine juice ingredient surplus has struggled to compete on price as land values rise. With over 50,000 acres removed in just one county, opportunities will continue for us to skim the California market with our attractive prices. So despite some challenges, Concords should be in demand for at least a year or two. Optimistically, this could be the beginning of another cycle.

This likely means ongoing inexpensive fuel and fertilizer prices for grape growers. While we don't have robust economic data for juice grape prices it also likely means stable (low) juice prices in the medium term as well. Recent news indicates that the pause in US economic growth was enough to also result in a pause in federal reserve interest rate action. Not a big deal for most consumers, but Fed target rates do impact leveraged growers and processors in significant ways. The era of inexpensive debt looks very likely to continue for the foreseeable future.

Challenges:

Reduce Labor

Higher prices are necessary for Concord sustainability. A sustained period of higher prices will be an opportunity for growers to reinvest in capital equipment. It is particularly important that growers focus capital investment in areas that reduce paid labor costs. Whether that is machine pruning or variable rate technology, reducing paid labor will be necessary to maintain long-term sustainability. In NY we can peg unskilled labor rates to policy changes. Regardless of the market, employees paid less than \$22 will become more expensive over the next 3 years. The larger the farm the higher the pressure will be on these prices. More or all farms will begin paying workers compensation (2%) and unemployment (6%) over the next 5 years. Rising minimum wage will increase costs by another 20%. The cost of mandatory overtime is difficult to determine and based on a grower's ability to manage the hours worked by each individual worker. It should increase costs by approximately 6% for pruning and at least 10% for harvesting. This means at a current rate of 30 cents per vine, your actual cost will likely be 46 cents in 5 years or less. Flexibility in the overtime and minimum wage policies could actually increase that price even more. On the harvesting side, paid labor at \$14 per hour, would increase to an average total cost of \$19 or more.

Reduce Depreciation

That being said, investing in labor saving capital has the potential to increase depreciation. This is the next most important cost to reduce. Paid labor typically represents 20% of vineyard costs. Depreciation represents another 18% of vineyard costs. Those percentages are accurate for typical vineyard operations. The investment in labor savings equipment should have a fairly short payoff period to avoid depreciation expenses offsetting any labor expenses. Investments in new equipment can be a disaster for vineyards. These investments need to happen but they also need to be strategic. A \$400,000 harvester in Australia might harvest 700 acres of grapes. In our region, the same harvester might harvest 200. That 200-acre grower might also spend \$80,000 hiring harvest to be completed by another farmer. So the investment in capital needs to happen, but the grower needs to consider how to minimize the cost of that harvester and right-size it for his operation. There are multiple sizes of harvesters, modern harvesters have been around for 20 years or more. There are often options to reduce the cost from \$400,000 to \$200,000 for a smaller operation. A MOG remover is an example of equipment with very fast payback. Multi-row equipment that allows the grower to save on paid labor and reduce the size of a tractor fleet is another ideal investment.



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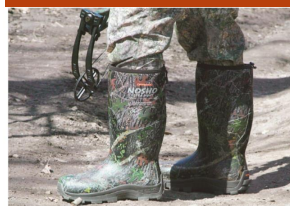
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Tim Weigle, NYSIPM, Cornell University, LERGP Team Leader

Grape Rootworm

It is not hard to find feeding from grape rootworm in area vineyards on sucker growth, lower foliage, and in some cases in the leaves of the upper canopy. Grape rootworm spends most of its life cycle underground feeding on grape roots. Around the third week of June the adult grape rootworm emerges from the soil and starts feeding, mating and laying eggs. Since the adult stage is the only time this pest is above ground it is the stage that provides the best timing for control measures. Scout vineyards looking for the distinctive chain-like feeding pattern on the leaves to determine if there is a need for an insecticide application.



Because this pest feeds directly on the roots of the grape vine it can quickly cause a decrease in vine vigor if ignored.

Ideally an insecticide should be applied prior to egg-laying. To accomplish this it is important to catch the population when it is first emerging and has not had time to extensively feed (so the distinctive chain-like feeding damage will be difficult to find). Adults are very skittish and will fall to the ground if the canopy is disturbed, making scouting difficult. To take advantage of this trait, we use a two-foot square catching frame covered with a white fabric. By placing the catching frame under the vine and giving the top wire a good shake it is easy to see grape rootworm adults that have been dislodged. This method will allow you to identify populations before feeding damage is easily found in the vineyard.



If you have areas where vine vigor is a problem and you are not sure why, scout for grape rootworm. Have too many acres to scout all of them intensively? Take advantage of the loaner sensor program now available with LERGP. By participating in this program you will end up with a map that will show variation in vine size (it won't tell you what your vine size is but it will tell you areas that differ from each other. A member of the LERGP extension team will be happy to discuss the results of the map(s) with you and help you to use the map to concentrate your scouting efforts.

We have a number of insecticides that are available for use against grape rootworm in New York using FIFRA 2(ee) recommendations (where the pest needs to be on the label – for those of you in Pennsylvania you can use any insecticide labeled for grapes). You must have a copy of the FIFRA 2(ee) recommendation with you (as well as the insecticide label) when you make the application. The 2(ee)'s can be found on our website at <https://lergp.com/fifra-recommendations>. We recently did a short video on grape rootworm that can be found at <https://lergp.com/podcasts>

Grape Berry Moth

As seen in Table 1, we are still a ways off from the 810 DD where an insecticide should be applied if scouting (or vineyard classification using the grape berry moth risk assessment protocol) calls for it. Right now it is looking like 810 DD will fall in the third week in July unless you are in Niagara County where you are a bit further behind. Keep checking the model on NEWA for the station(s) nearest you to get an idea of when to time scouting.

NEWA Location	Wild grape bloom date*	DD Total on July 3, 2018	Forecasted DD for July 8, 2018
Versailles	June 7	523	658
Hanover	June 8	514	650
Sheridan	June 6	564	701
Silver Creek	June 8	513	636
Dunkirk Airport	June 9	506	635
Forestville	June 8	515	649
East Fredonia	June 9	487	623
Fredonia	June 9	461	598
Brocton Escarp.	June 9	487	624
Portland Escarp.	June 7	540	676
Portland	June 8	520	656
East Westfield	June 9	488	619
Westfield	June 9	489	619
Ripley	June 8	530	669
Ripley Escarp	June 8	511	652
Ripley State Line	June 8	524	664
North East State Line	June 9	489	618
North East Escarp	June 7	540	674
North East Sidehill	June 8	516	650
North East Lab	June 8	531	657
Harborcreek	June 8	516	650
Harborcreek Escarp	June 9	478	616
Lake City	June 7	541	677
Ransomville	June 11	475	615
Burt	June 19	304	431
Corwin	June 13	433	574
* 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 3, 2019.

Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

The Lake Erie Regional Grape Program (LERGP) is holding a crop estimation meeting and fruit thinning demonstration at The Cornell Lake Erie Research and Extension Laboratory (CLEREL) in Portland, NY on July 11th from 1-2:30 PM with a light lunch starting at 12:30 PM.

The grape bloom date was officially called at the station on June 20, 2019, which is six days later than the historical average of June 14th. The last time bloom was this late was in 2002. It is imperative for the health of your vines and next year's crop to assess your crop estimation. Please join us!

Inaccurate yield forecasts have implications for both growers and processors of Lake Erie grapes. For processors, errors in yield prediction have major effects for the planning of delivery schedules, allocation of tank space and fermentation or concentration equipment, staffing of personnel and negotiation of contracts with growers for the future. Crop load management is dependent on accurate spatial assessment of vine size and crop. For growers, making crop load management decisions that ensure adequate ripening of fruit and promote perennial vineyard health is futile without an accurate estimate of what harvest yield will be. This estimate must be made while there is still time in the season to see benefits from correcting crop imbalances.

The LERGP is committed to providing researched based management tools and guidance to aid our region stakeholders to get the most out of their vines in a sustainable way. This program will be informational and provide applied science management tools. Increasing accuracy of crop estimates will provide numerous benefits from the grower to processor level including optimized scheduling of labor, especially, particularly scarce, transportation labor, efficient coordination of space for fruit and juice, improved delivery scheduling, reliable reporting to government agencies and distributors, early projection of revenues, proactive filing of crop insurance claims if the estimate is critically low and a reliable basis to make crop reduction decisions if the estimate is critically high. Join us on July 11th at CLEREL for discussion on crop estimation from a Welch's representative, crop insurance discussion, crop load research based decision making by Dr. Terry Bates followed by a mechanical fruit thinning demonstration.

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PA Update

Andy Muza, LERGP Extension Educator, Penn State University

In the Vineyard (7- 3 -19) – Andy Muza, LERGP Extension Team & Penn State Extension – Erie County

Finally, within about the last 2 weeks, the weather has changed from wet with cooler temperatures to dryer and hot. The higher temperatures (in the 80's) should continue at least through next Tuesday with chances of thunderstorms ranging from 30 – 50% until Sunday.

Vineyard blocks I checked, this past Monday, all showed signs of spray residue and disease symptoms on leaves (i.e., black rot and powdery mildew) were at low levels. A small amount of powdery mildew was also observed on pedicels and developing berries in both Concord and Niagara blocks (Figure 1).

At this point in the season, symptoms of powdery mildew on clusters will start to be noticeable. Scout your vineyards to determine the efficacy of your fungicide program so far. If powdery mildew, black rot or Phomopsis is relatively easy to find, a second Postbloom fungicide application (within 10 - 14 days after the first Postbloom fungicide spray) is highly advised.



*Figure 1. Powdery mildew on pedicels of developing Niagara berries.
Photo – Andy Muza, Penn State*

PA Update

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

Weather: June rainfall totaled 4.58" (well above average) at our location by the lake. Also, we had measurable rainfall on 14 of 30 days in June (frequently wet). We accumulated about 478 growing degree days during June (below average), and we now have 803 gdds as of April 1 (about 10% behind, according to our 20 year average here by the lake). In the forecast, high temps will hover around average, so we won't gain on heat accumulation (but we won't lose either). We have had six whole days of dry weather (until now), which is good in terms of disease control. However, the forecast predicts consistent cloudiness and the potential for frequent rainfall from pop up showers over the next 5 days or so. These are perfect conditions for grapevine fungal diseases to spin out of control, especially on hyper susceptible wine varieties. Stay on top of your spray programs and don't be lulled to sleep by the relatively dry bloom/early fruit development periods of the past several seasons. This year's early fruit development period is shaping up to being different weather-wise, from what we've seen in recent years.

Phenology and Diseases: We are currently in the early post bloom period. That means that fruit of all varieties (including Concord and Niagara) are very susceptible to all the major diseases. Hopefully you have already applied your first post bloom spray (and within 10-14 days of the immediate prebloom spray) and have your crop protected from all diseases. As I mentioned above, the weather has been more conducive to disease development than in recent years at this time, and looks to be remaining in that groove over the next several days.

That said, we are seeing plenty of black rot lesions on leaves where there are mummies in the trellis and where fungicide sprays are being withheld. Some of these are fully developed lesions from infections that occurred during the four-day rainy period of June 13-16. If you're scouting, these lesions are most likely to be found on leaves at nodes 5-7 (at the outer end of the fruiting zone), because those were the leaves that were still rapidly expanding around mid-June. Lesions on these leaves pose a very real threat for spore release to newly developing (and extremely susceptible) fruit during subsequent rain periods. In addition to that, very young black rot leaf lesions are just now becoming visible and are a result of the rainy period of June 20-21 (about 12-13 days ago) that generated a fairly nasty infection period. These lesions are more likely to be found at nodes farther beyond the fruit zone. For black rot, protection will definitely need to continue if thorough scouting reveals the presence of infected leaves and wet weather continues.

Downy mildew has also been spotted on leaves of unprotected Vidal vines at our site. These infections are manifesting themselves as the typical "oil spot" symptom on young leaves, and they're just beginning to sporulate. This tells me the infections that produced these leaf lesions likely occurred during the rain period of June 24/25 (about a week ago). Rain in the forecast will continue to make downy mildew and black rot, a serious threat, especially if you're already seeing some symptomatic leaves in the vineyard.

Powdery mildew is also a threat for another week or two on fruit of native varieties like Concord and Niagara. Cloudy, warm, humid conditions are ideal for powdery mildew development and at this point in the season (the rise of secondary disease cycles, that don't require rain) every day is an infection period. Concord and Niagara fruit generally become resistant to powdery mildew about 2-3 weeks after bloom or about the time they achieve a quarter inch in diameter. Wine varieties will remain susceptible for a little longer and fruit of vinifera and sensitive hybrids will require protection for at least

3-4 weeks after bloom. This is especially critical for varieties with tight clusters that are more prone to bunch rots. Powdery mildew fruit infections that occur 3-4 weeks out from bloom tend to be less conspicuous (diffuse infections) but provide entry points for bunch rot organisms to exploit later in the season during ripening. This can exacerbate losses to Botrytis and sour rots at harvest.

For premium wine varieties, leaf removal in the fruit zone is highly recommended especially for rot prone varieties like Riesling, Vignoles, Pinot gris/noir, and Chardonnay. Fruit zone leaf removal has been shown, time and again, to be beneficial to maintaining good fruit health, and is an excellent cultural addition to your chemical fungicide programs. Applying this cultural treatment, will make anything else you do to control diseases, more effective; it reduces disease pressure on fruit, improves spray penetration to fruit, and reduces fruit susceptibility to diseases.

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ANNUAL CHICKEN BBQ**

DATE: WEDNESDAY, JULY 31, 2019

PLACE: Gravel Pit Park
10300 West Main Road (Route 20), North East, PA 16428

TIME: GRAPE PROGRAM – 5:00 - 6:15 P.M.
FREE CHICKEN BBQ – After the Program

NOTE: Farm Equipment Display by Various Vendors – 3:30 to 7:00 P.M.

GRAPE PROGRAM:

- **Information on Grants available to Grape Growers – 5:00 to 5:15 P.M.**
- **Revisions to the Worker Protection Standards – What Does It Mean to You - 5:15 to 5:45 P.M.**
Jim Harvey, PA Office of Rural Health, Penn State University
- **Insect and Disease Management Updates – 5:45 to 6:15 P.M.**
Bryan Hed, Lake Erie Regional Grape Research & Extension Center, North East, PA
Andy Muza, Tim Weigle, Kevin Martin and Jennifer Russo, Lake Erie Regional Grape Extension Team

This meeting has been assigned:

- 1 Core and 1 Category pesticide re-certification credits approved by PA Department of Agriculture; and
- 1 pesticide re-certification credit (pending approval by NYDEC) for New York growers.

NOTE: The BBQ is free but REGISTRATION is mandatory.

Erie County Horticultural Society's NEW POLICY: No Reservations will be taken after 4:00 PM on Monday, July 22, 2019. There will be a limit of 6 reservations per farm.

Register by Monday, July 22, by calling Terri at Penn State Extension Erie County at (814) 825-0900, Ext. 0.

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.

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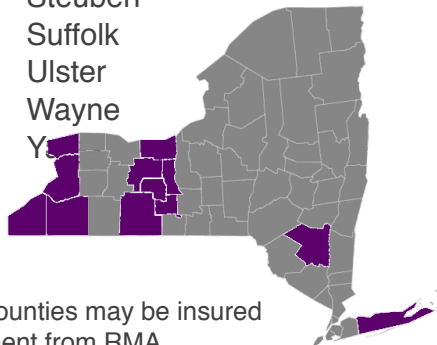
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- **Nov. 20, 2018:** Sales Closing, Policy Change, Cancellation, Termination Date
- **Nov. 20, 2019:** End of Insurance Period
- **Jan. 15, 2019:** Acreage / Production Report Date



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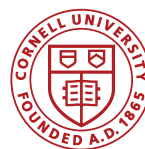
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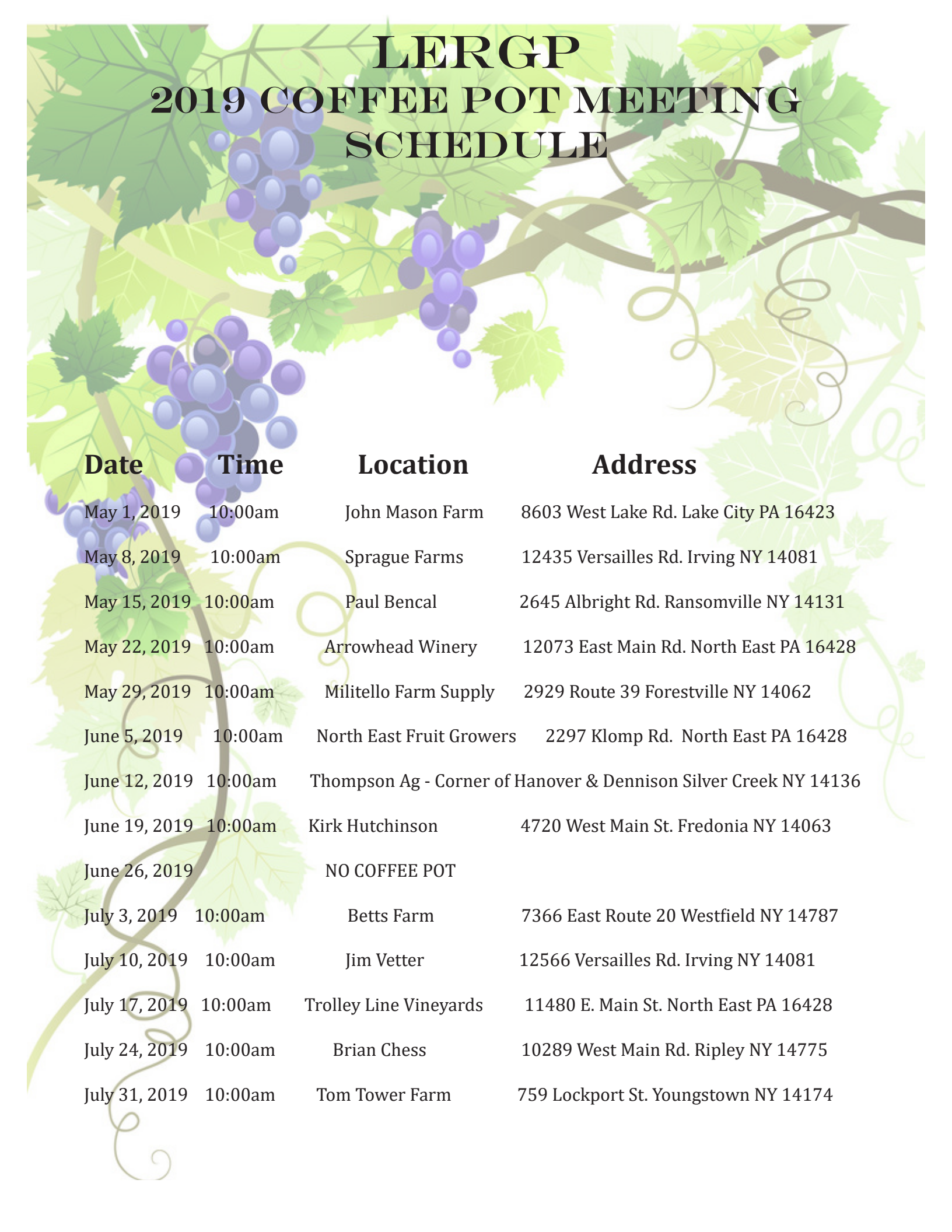


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LERGP 2019 COFFEE POT MEETING SCHEDULE

Date	Time	Location	Address
May 1, 2019	10:00am	John Mason Farm	8603 West Lake Rd. Lake City PA 16423
May 8, 2019	10:00am	Sprague Farms	12435 Versailles Rd. Irving NY 14081
May 15, 2019	10:00am	Paul Bencal	2645 Albright Rd. Ransomville NY 14131
May 22, 2019	10:00am	Arrowhead Winery	12073 East Main Rd. North East PA 16428
May 29, 2019	10:00am	Militello Farm Supply	2929 Route 39 Forestville NY 14062
June 5, 2019	10:00am	North East Fruit Growers	2297 Klomp Rd. North East PA 16428
June 12, 2019	10:00am	Thompson Ag - Corner of Hanover & Dennison	Silver Creek NY 14136
June 19, 2019	10:00am	Kirk Hutchinson	4720 West Main St. Fredonia NY 14063
June 26, 2019		NO COFFEE POT	
July 3, 2019	10:00am	Betts Farm	7366 East Route 20 Westfield NY 14787
July 10, 2019	10:00am	Jim Vetter	12566 Versailles Rd. Irving NY 14081
July 17, 2019	10:00am	Trolley Line Vineyards	11480 E. Main St. North East PA 16428
July 24, 2019	10:00am	Brian Chess	10289 West Main Rd. Ripley NY 14775
July 31, 2019	10:00am	Tom Tower Farm	759 Lockport St. Youngstown NY 14174