Lake Erie Regional Grape Program

LERGP CROP UPDATE
JULY 25, 2024

photo credit:
Kim Knappenberger

Cornell 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.

CORNELL UNIVERSITY FOUNDED A.D. 1865

In this copy:

Jennifer Phillips Russo - LERGP Viticulture Specialist:
jjr268@cornell.edu
Cell: (716) 640-5350

Megan Luke –LERGP Penn State Extension Viticulture and Tree Fruit Educator
MFL5873@psu.edu
Cell:(716) 397-9674 Office:(814) 825-0900

Andrew Holden-LERGP Penn State Extension Business Management Educator
azh6192@psu.edu
716-792-2800 ext 202
Cell: 716-640-2656

Kim Knappenberger – Extension Support Specialist
ksk76@cornell.edu
716-792-2800 ext 209

Kate Robinson – Administrative Assistant
kjr45@cornell.edu
716-792-2800 ext 201

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.

Upcoming Events

July 31, 2024
10:00am- Coffee Pot Meeting
Mason Farms, 8603 West Lake Rd.Lake City, PA 16423

July 31st, 2024
4:00pm -Gravel Pit Park Annual Chicken BBQ
10300 West Main St. North East, PA 16428
Registration is closed.

Business Management

Andrew Holden, Business Management Educator, Penn State University, LERGP

Cost Comparison of Metal Post Every Vine (PEV) vs Traditional Wood Post Trellis in Concord Grape Production

As part of the July 24th Coffee Pot Field Day at CLEREL, that featured the ongoing research of trellising concords with a metal T-post at every vine (See Jennifer's article), I was tasked to investigate the economics of this system compared to a traditional wood trellis. In this week's article, I will share a brief overview of the findings from that investigation.

Looking at the CLEREL Joy Block vineyard with a post at every vine, it is extremely uniform, no sags in the wire, no trunks in the row. It makes logical sense how this trellis would be more efficient for mechanical pruning and harvest. Dr. Bates has found this to be true, with no change to yield and brix when mechanically pruning. With three times as many post as the traditional wood post trellis, the cost of adapting this system seems like it would be cost prohibitive. But with T-post costing less per post, lasting longer, and saving yearly labor, there was enough to investigate which would cost more over the long run.

The price of post

First, I priced both T-post and wooden post. There are many types of post, varied sizes and woods, different weights, and coatings. For this experiment, I used 1.33# 8 ft. uncoated T-post with a plate and compared that to a 3-4" Yellow Pine treated sharpened wood post. The T-post were around $7.00, with price breaks with bulk orders. The wood post were $12.80 and the most expensive compared to the smaller 3.25 post and the lodge poles. Other posts of lower size or quality had lower cost, down to 3.25 lodge pine for $9.80. Yellow pine was used in this project because when looking at planting a new vineyard, the grower would likely pick the stronger post. When taking these prices and comparing the traditional to the post every vine, the cost for a 10-acre vineyard would cost as follows: Metal P.E.V. - $44,890.00, Wooden - $27,327.90. Right off the bat, which does not bode well for the metal post, with almost double the initial material cost.

The price of maintenance

Though the metal post at every vine cost significantly more upfront, it does have less maintenance cost compared to wood. We used the number of ten posts per acre per year as the replacement rate for wood post. In the 11 years that the research station has used the t-post, they have only replaced three that were struck with equipment. The assumption is that these posts would last 30 years before having issues. More research must be done to verify this, and soil type and moisture play a role as well. If you assume that the replacement rate for metal is near zero and wood is ten per acre per year, you find that you will end up paying the same amount for post after 14 years. This still makes wood more attractive, labor to check, remove, and install post adds more maintenance cost to wood. Once factoring in labor, the cost of a wooden trellis surpasses metal in year 10.

Calculating present value

The metal post every vine has a high upfront cost, with little maintenance, the wood has lower cost up front, but yearly, costly maintenance. To determine which trellis makes more financial sense, the time value of money must be considered. How can a farm use the money that would

have gone into metal post in another enterprise, or how much money would they save in interest on a loan? One way to compare two operation decisions is with a present value calculation. A present value comparison determines the current worth of a future sum of money or cash flow, discounted at a specific rate of return. In short, we can determine what each system would cost in today's money to compare which would be cheaper. When calculated, I found a cost of $44,274.33 for 3–4-inch Yellow Pine and a cost of $45,114.12 for 1.33# T-post at every vine. That is extremely close, and because it is a 10-acre planting, which means it is within $90 an acre to each other, with wood being cheaper still.

Conclusions

In this investigation, I strictly looked at two trellis designs and a small number of post types. There are many other combinations that could be compared and are worth exploring. In this comparison, wood is still cheaper, but if the uniformity of the post every vine allows for more mechanization, faster pruning, harvesting, and weed control, I can see the $90 per acre over 30 years being made up. In making this comparison I found that in most cases, this system does not make sense for most growers. Especially growers that have an established vineyard in decent shape, renting, or do not have a 30-year plan for their operation (succession/transition plan). I believe it could make sense for those planting new/replacing a vineyard, which have a long-term goal/vision for the farm, highly mechanized operations, or if we see a disproportional increase in input cost (labor, post, fuel). With the numbers being so close, it really would be on an operation-to-operation basis on which would be best to build. I would be happy to work with any grower considering PEV or another trellis system to find which makes most sense to their business.

Other considerations/thoughts

- Wood post replacement rates vary from vineyard to vineyard, soil type
- Wood post continue to lose quality and increase in cost
- Metal t-post are made from recycled railroad rails with plenty of supply
- Metal has unknown longevity in different soil types/moistures in concord production
- T-post can be scrapped when removed
- Would a T-Post every other vine work? It would be significantly more competitive
- What do you think?... If you have any experience with alternative trellis systems and cost, please give me a call, email, or stop by my office.

My Contact Information:
Andrew Holden
Business Management Educator
Lake Erie Regional Grape Program

Mobile (call or text): (716) 640-2656
Office: (716) 792-2800
Email: AZH6192@psu.edu

URGENT – Grape Growers Asked to Respond to 2024 Grape Forecast Survey

Earlier this month, The U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) announced that they will conduct a forecast survey for 2024 grape season in the Northeast States. The survey comes after the 2021 USDA decision to drop the yearly grape survey in all states except for California and Washinton. The data collected and reported is extremely useful and important for growers making business decisions, research and Extension projects, and FSA disaster programs. We encourage anyone growing grapes to respond so that the size and strength of our industry can be heard and accurately represented.

Growers should expect a call this week or early next week (July 22nd – August 1st) to be surveyed with a short list of questions. These questions will pertain to 2024 acreage and projected production from growers in the northeastern region. The USDA shared that they will try and contact producers twice if they do not answer the first call.

Per the news release, "The survey participant sample will be phoned by the New York NASDA staff. As with all NASS surveys, information provided by respondents is confidential by law." They also state there will be a quick turnaround with the data to be published in the August 12th, 2024, *Crop Production* report.

For more information on NASS surveys and reports, call the NASS Northeastern Regional Field Office at 1-800-498-1518.

Attached: see next page

- USDA News Release - USDA to forecast grape production

NEWS RELEASE

United States Department of Agriculture
NATIONAL AGRICULTURAL STATISTICS SERVICE
NORTHEASTERN REGIONAL FIELD OFFICE
4050 Crums Mill Rd., Suite 203
Harrisburg, PA 17112

FOR IMMEDIATE RELEASE
July 8, 2024

Robert Bradley (717) 657-6306
robert.bradley@usda.gov

USDA to forecast grape production

HARRISBURG, PA –The U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) will conduct a forecast survey for 2024 grape inquiry during August 2024. The survey will collect information about acreage and projected production from growers in the northeastern region of the United States.

"The information from these surveys directly impacts our regions' grape growers by providing a forecast of grape production in the northeast," said Kevin Pautler, acting director of the National Agricultural Statistics Service, Northeastern Regional Field Office. "Growers can use the survey results when making business plans and marketing decisions. USDA's Farm Service Agency (FSA) relies on the average yields to administer farm programs. Cooperative Extension uses the data to provide needed outreach and education, and State Departments and Agencies of Agriculture use the information to aid growers."

In this survey, NASS asks participants to answer a variety of questions about grapes, depending on state and version of the questionnaire. The survey participant sample will be phoned by the New York NASDA staff. As with all NASS surveys, information provided by respondents is confidential by law. NASS safeguards the confidentiality of all responses and publishes only State and National level data, ensuring that no individual producer or operation can be identified.

NASS will compile, analyze, and publish survey results in the August 12th, 2024, *Crop Production* report. Publications are available online at http://www.nass.usda.gov/Publications. For more information on NASS surveys and reports, call the NASS Northeastern Regional Field Office at 1-800-498-1518.

###

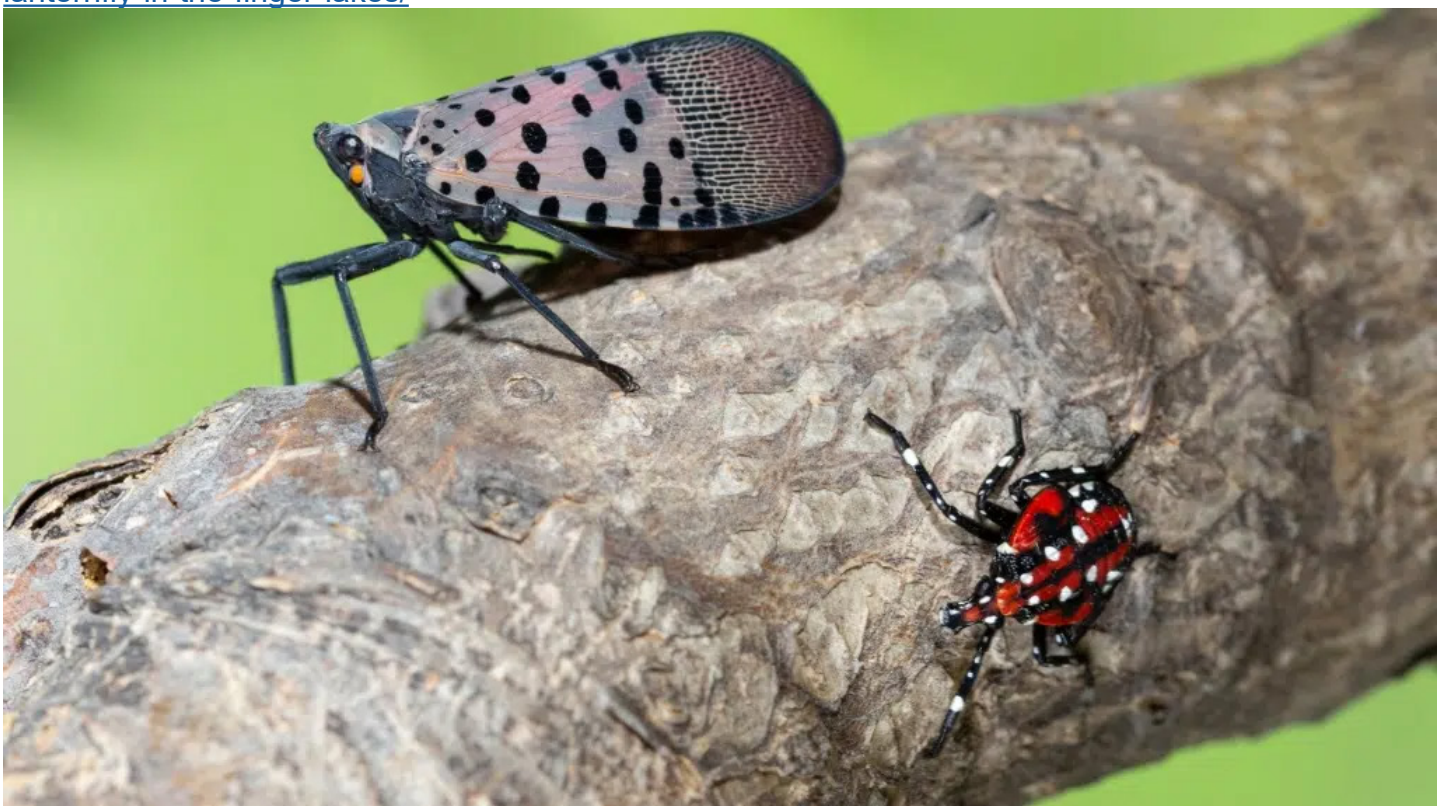
NASS is the federal statistical agency responsible for producing official data about U.S. agriculture and is committed to providing timely, accurate and useful statistics in service to U.S. agriculture.

Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

In The Vineyard
SLF in FLX

State Agriculture Department Confirms New Find of Spotted Lanternfly in the Finger Lakes Asks visitors to thoroughly inspect vehicles before leaving the area
PUBLISHED ON JULY 18, 2024
https://www.morningagclips.com/state-agriculture-department-confirms-new-find-of-spotted-lanternfly-in-the-finger-lakes/



1. Spotted Lanternfly adult and 4th instar. To help the Department identify the extent of the established population in the area, the Department is urging grape growers and residents to report any sightings by visiting agriculture.ny.gov/reportslf. (Photo: USDA, Public domain)

ALBANY — The New York State Department of Agriculture and Markets today announced that it has detected Spotted Lanternfly (SLF) in the grape-growing region of the Finger Lakes. Department inspectors from the Division of Plant Industry confirmed the presence of SLF in Romulus following reports it received from its partners at the Integrated Pest Management (IPM) Program at Cornell University. To help the Department identify the extent of the established population in the area, the Department is urging grape growers and residents to report any sightings by visiting agriculture.ny.gov/reportslf.

State Agriculture Commissioner Richard A. Ball said, "We have been working with our partners for years to contain SLF and slow the spread of this invasive species. With this new detection,

we are certainly concerned as SLF is known to feed on plants and crops that are critical to New York's agricultural economy, such as grapevine, which is abundant in this area of the Finger Lakes. However, we are also optimistic that through education, a number of control methods, and with the public's help, we will be able to manage SLF and mitigate the impact to the grape growing industry." Since the first detection of SLF in New York on Staten Island in 2020, the New York State Department of Agriculture and Markets has been working closely with its partners statewide, such as New York State Department of Environmental Conservation (DEC), Office of Parks, Recreation and Historic Preservation, Department of Transportation, Thruway Authority, the United States Department of Agriculture, Cornell University and its IPM Program, and the Cornell Cooperative Extension network to slow the spread of this invasive insect. It has since been reported in all New York City boroughs, Long Island, and several areas in Upstate New York; however, this is the first detection in proximity to commercial vineyards in the Finger Lakes.

DEC Interim Commissioner Sean Mahar said, "DEC is working with the New York State Department of Agriculture and Markets and our federal, state, and local partners to investigate this detection and work rapidly to mitigate the impacts of this new infestation. Public awareness and stewardship are essential to our efforts to manage the spread of Spotted Lanternfly, including destroying adults and eggs whenever and wherever they are encountered, in order to protect our vital agriculture, tourism, and recreation industries."

Sam Filler, Executive Director of the New York Wine & Grape Foundation, said, "The Spotted Lanternfly poses a significant threat to the future of the grape industry in New York. Since 2020, the New York Wine & Grape Foundation (NYWGF), in collaboration with the New York State Department of Agriculture and Markets, the United States Department of Agriculture, Cornell University, and elected officials, has been preparing for the potential spread of SLF into New York's vineyards. NYWGF commends the efforts of both state and federal governments to be ready for this situation, as well as the research conducted by Cornell University to control the spread of SLF."

Brian Eshenaur, Senior Extension Associate, New York State Integrated Pest Management at Cornell University, said, "We appreciate the opportunity to collaborate with the New York State Department of Agriculture and Markets on the detection and follow up with this new find in the Finger Lakes. With this news, I encourage everyone to remain vigilant for Spotted Lanternfly and report any sightings. Early detection is crucial as it allows producers in the area to prepare for managing this new invasive species."

Hans Walter-Peterson, Senior Viticulture Extension Specialist at Cornell Cooperative Extension, said, "While we have anticipated the appearance

of Spotted Lanternfly in the Finger Lakes grape growing region for several years, its arrival is still concerning because of its potential impact to the health and productivity of our vineyards. Fortunately, we have access to extensive resources from Cornell, Penn State, New York's IPM Program, and other organizations, which will help us provide growers with the best possible information on managing and minimizing the effects of SLF. Although this isn't welcome news, I am confident that the Finger Lakes will remain a world-class grape and wine region despite the presence of this new pest."

Over the next few weeks, the Department will be conducting a thorough survey in Romulus and the surrounding area. **It also encourages grape growers and residents to report any sightings to the Department by following these steps:**

- take a photo,
- collect a sample and place it in a freezer or in a jar with rubbing alcohol or hand sanitizer,
- contact the SLF responders and report SLF directly at agriculture.ny.gov/reportslf, and
- after reporting SLF in your area and collecting a sample, kill any additional SLF you see by stepping on it or crushing it.
-

The Department is also urging any travelers to the area to thoroughly inspect vehicles, luggage and gear, and all outdoor items for SLF. If SLF adults are found, travelers should report and destroy them.

Residents can use at-home control methods to help manage SLF on their properties. Examples include:

- Traps: Sticky band traps encircling the trunk can be effective, **but they must be accompanied by a barrier, such as a wire mesh or screen, to prevent the capture of beneficial insects and animals, such as birds.**
- Circle traps: Circle traps consist of screening that encircles the trunk of a tree, which funnels climbing SLF into a container at the top from which they cannot escape. Watch a video on how to build a circle trap here: extension.psu.edu/how-to-build-a-spotted-lanternfly-circle-trap.
- Insecticides: Since SLF rarely cause damage to landscape trees, treatment is not necessary for the health of the tree; but if they become a nuisance, insecticides can be used. Residents may choose to hire a certified applicator who is equipped to use methods such as tree injection, bark sprays, or soil drenches.
- Vacuum removal: Hand-held, backpack style rechargeables and even big shop vacuums all can be useful in managing SLF.
-

For more information and photos on these control methods, please visit the Cornell IPM website at: cals.cornell.edu/new-york-state-integrated-pest-management/outreach-education/whats-bugging-you/spotted-lanternfly/spotted-lanternfly-management#biocontrol

Identifying SLF

SLF is a destructive pest that feeds on more than 100 plant species, including tree-of-heaven, and plants and crops that are critical to New York's agricultural economy, such as grapevine, apple trees, and hops. It is currently in the nymph stage, with black bodies and white spots, and, as it matures, will turn red with white spots. SLF will enter the adult stage later in July/August. Adult SLF are easy to identify and are approximately one inch long and half an inch wide at rest, with eye-catching wings. Photos of both the nymph and adult phases can be seen here.
Adults are active from July to December and begin laying eggs in September. Signs of an SLF

infestation may include:

- One-inch-long egg masses that are brownish-gray, waxy and mud-like when new. Old egg masses are brown and scaly.
- Massive honeydew build-up under plants, sometimes with black sooty mold developing.

While these insects can jump and fly short distances, they spread primarily through human activity. SLF can lay their eggs on any number of surfaces, such as vehicles, stone, rusty metal, outdoor furniture, and firewood. Adult SLF can hitch rides in vehicles, on any outdoor item, or cling to clothing or hats, and be easily transported into and throughout New York, so residents are asked to be vigilant.

SLF Impacts to New York Agriculture

SLF feeding can stress plants, making them vulnerable to disease and attacks from other insects. SLF also excretes large amounts of sticky "honeydew," which attracts sooty molds that interfere with plant photosynthesis, negatively affecting the growth and fruit yield of plants and negatively impacting agriculture and forest health.

The estimated total economic impact of invasive insects in the United States exceeds $70 billion per year, and if not contained, SLF could have an impact to New York State of at least $300 million annually, mainly to the grape and wine industry, which ranks third in the country in production. SLF also has the potential to significantly hinder quality of life and recreational activities due to the honeydew and the swarms of insects it attracts.

Learn more on the Department's website at https://agriculture.ny.gov/spottedlanternfly. Additional information about preventing the spread of terrestrial invasive species can be found on DEC's website.

–NYS Department of Agriculture and Markets

Mechanization Coffee Pot Demo Day

At our July 24, 2024 Coffee Pot Meeting held at the Cornell Lake Erie Research and Extension Laboratory (CLEREL), we had a mechanization demonstration day with Dr. Terry Bates giving an overview of the mechanization trial results followed by an opportunity to see the equipment at the lab that is used for mechanization and precision viticulture. This event was well attended and started inside with a presentation of the study and another presentation by Andrew Holden, on the economics of steel vs wooden posts (please see his article).

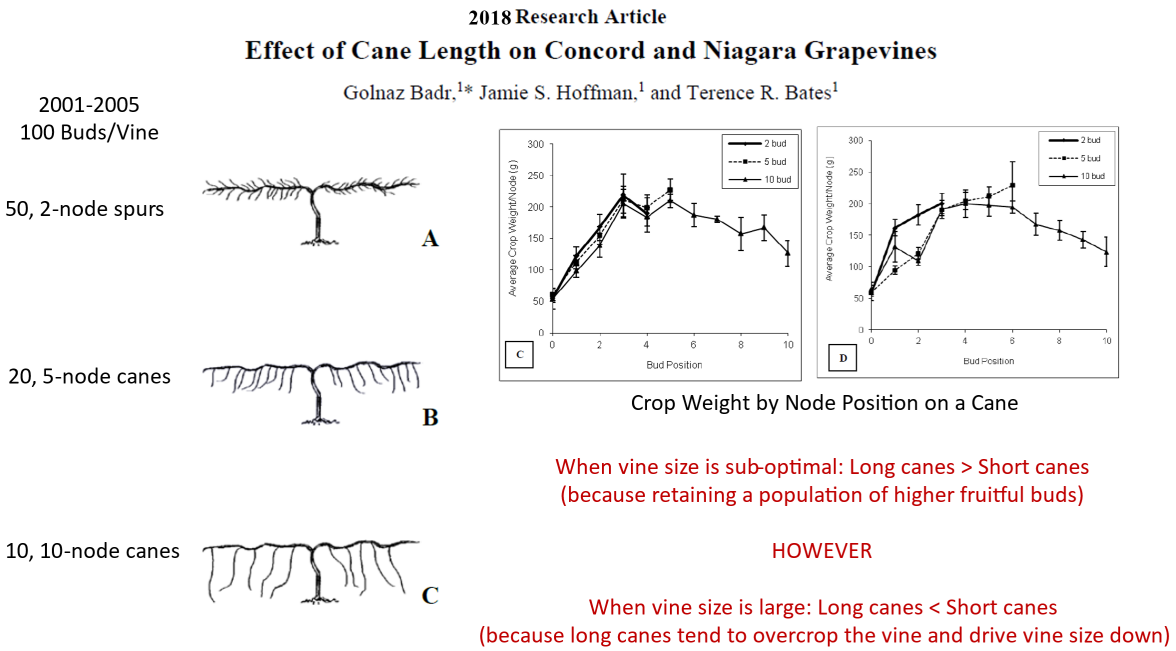


Figure 1. Dr. Bates slide of research about the effect of cane length on Concord and Niagara bud fruitfulness

In the above Figure 1, Dr. Bates summarized research from 2001-2005 on different bud configurations that leave 100 buds on the vine. They tested leaving 50, 2-node spurs, 20, 5-node canes, and 10, 10-node canes. They described that when vine size is sub-optimal, then long canes are better than short canes because retaining a population of higher fruitful buds in the 3-7 node position. However, when vine size is large, long canes were not better than short canes because the longer canes tend to overcrop the vines, which drives down vine size.

Terry and his team decided to use a metal pole at every vine to optimize operations under fully mechanized conditions for the new plantings at CLEREL. This strategy allows for uniform trellis height and straight trunks that eliminate 'dog-legged' or crooked vines that sometimes get sheared off by equipment. This trial have been ongoing for six years. Using his previous research mentioned above, Terry began a mechanization trial testing mechanically pre-pruned vines in four different configurations versus manual pruning and replicated it in rows with metal posts at every vine and traditional wooden post panels. Terry presented the following slides with photos of what the vine looks like at for each (Figure 2.)

Figure 2. Photos of the 2020 Concord Mechanized Pruning Trial

The next slide in this article has photos of a side-by-side comparison of spur-pruned Concord vine canopy development versus cane-pruned canopy development (Figure 3.)

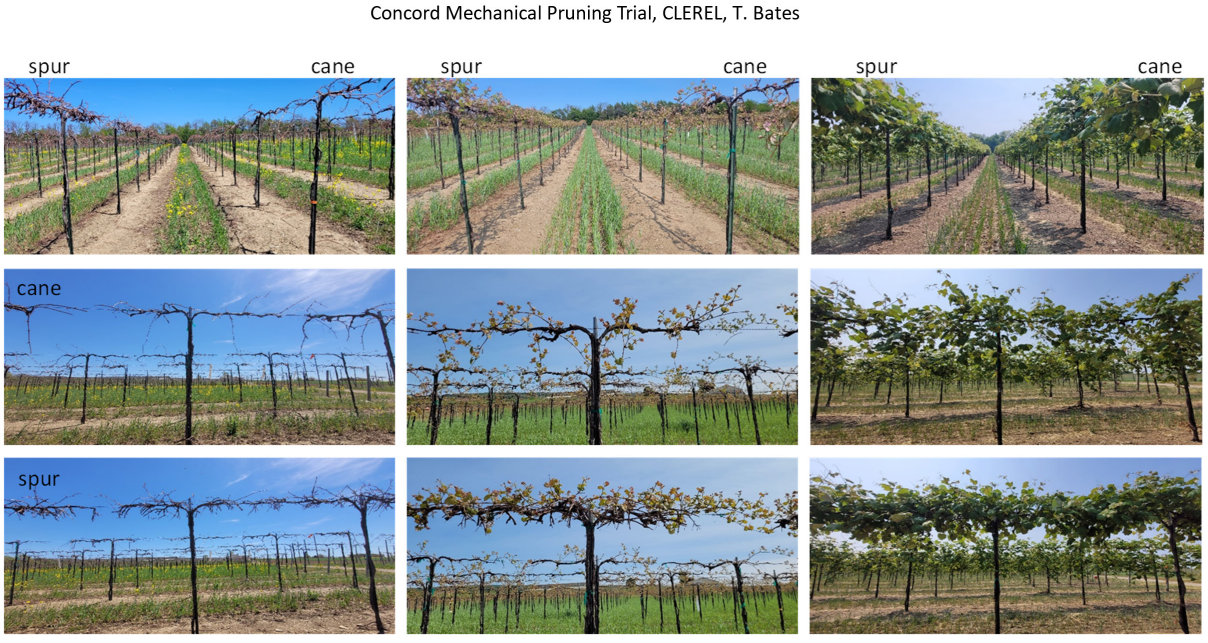


Figure 3. Photo comparison of spur versus cane mechanically pruned Concord canopy development

Dr. Bates then measured yield and soluble solids (sugars) on each of the trial treatments and the results are in Figure 4. Below. Previous research has shown that the Concord node numbers of 3-7 are more fruitful than the basal nodes, or bud number 1 and 2. This was a concern when

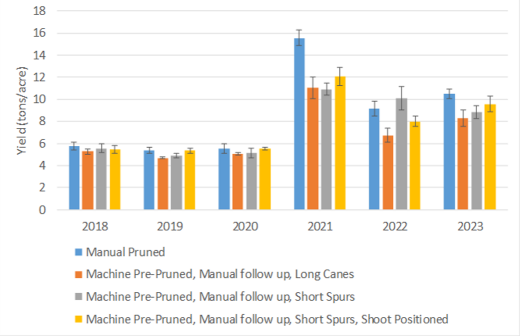
implementing short cane pruning due to the fact that the more fruitful buds would be taken off. To our surprise, there was no significant difference between the yields or soluble solids for 2018 through 2020; each treatment performed just as well as the others. In 2021, the manually pruned vines tons/acres when compared to the mechanically pruned vines (which were not significantly different from each other) where Machined Pruned Short Spurs outperformed the others with 12.07 ton/acre, but keep in mind that the difference was not significant. In 2022 and 2023, the trend continued with Short Spur mechanically pruned vines outperforming the mechanically pruned long canes, albeit not significantly. The vines with the most fruitful nodes cut off compensated for the loss and outperformed the longer canes.

Effect of pruning treatment on Concord yield at CLEREL

	Yield (tons/acre)					
Treatment	2018	2019	2020	2021	2022	2023
Manual Pruned	5.77	5.34	5.54	15.55 A	9.14 A	10.47
Machine Pre-Pruned, Manual follow up, Long Canes	5.27	4.68	5.06	11.03 B	6.75 B	8.31
Machine Pre-Pruned, Manual follow up, Short Spurs	5.54	4.90	5.11	10.92 B	10.09 A	8.81
Machine Pre-Pruned, Manual follow up, Short Spurs, Shoot Positioned	5.45	5.37	5.55	12.07 B	7.99 AB	9.58
Sig (p)	NS	NS	NS	0.004	0.04	NS

Effect of pruning treatment on Concord juice soluble solids at CLEREL

	JSS (degrees BRIX)					
Treatment	2018	2019	2020	2021	2022	2023
Manual Pruned	16.8	18.1	18.4	14.7		
Machine Pre-Pruned, Manual follow up, Long Canes	16.7	18.0	18.5	14.8		
Machine Pre-Pruned, Manual follow up, Short Spurs	16.5	17.9	18.4	14.8		
Machine Pre-Pruned, Manual follow up, Short Spurs, Shoot Positioned	16.8	18.0	18.6	15.0		
Sig (p)	NS	NS	NS	NS		



No relevant effect of treatment on yield or BRIX

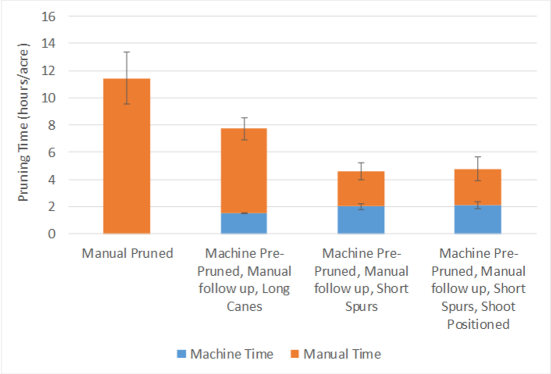
- Manual pruned had higher yield in 2021 (possibly overcropped at 15.5 tons/acre)
- Mechanical pruning to long canes had lower yield in 2022
- No difference in any of the other data

Brix monitor dismantled in 2022 -2023, so no treatment data collected.

Figure 4. Effects of Pruning Treatment in Mechanization Trial on Concord Yield

Mechanization was implemented partly due to the labor shortage and need to get through all of the vineyard operations in a single with less labor force. With this in mind, Dr. Bates had his team record how long each of the pruning treatments took to accomplish. The team recorded their efforts for the last 2023 season and the results are below in Figure 5. Take your attention to the far column on the right that has Total Pruning Time in hours/acre for each of the pruning trials. Manually pruned vines took 11.45 hours per acre compared to 7.73 hours per acre for Machine Pre-Pruned with manual follow up on Long Canes and 4.60 hours for Machine Pre-Pruned with manual follow up on Short Spurs. In conclusion, Machine pre-pruning reduces overall pruning time. Long cane with follow up takes longer than spur pruning with hand follow up, and shoot positioning does nothing. When Dr. Bates looked at all of these results together, he concluded that for the same yield and Brix (soluble solids), Machine pre-pruning and hand follow up to target the short canes/ spurs reduced pruning time by 60% over the manual pruning and 40% over the machine pre-pruning and hand follow up to target long canes.

Pruning times for different pruning strategies of Concord at CLEREL in 2023						
	2023 Pruning Time					
Treatment	Mechanical Pre-Pruning (h/acre)		Manual Pruning (h/acre)		Total Pruning Time (h/acre)	
Manual Pruned	0.00	C	11.45	A	11.45	A
Machine Pre-Pruned, Manual follow up, Long Canes	1.55	B	6.20	B	7.73	AB
Machine Pre-Pruned, Manual follow up, Short Spurs	2.00	AB	2.58	C	4.60	B
Machine Pre-Pruned, Manual follow up, Short Spurs, Shoot Positioned	2.10	A	2.68	BC	4.78	B
Sig (p)	<0.0001		0.0005		0.007	



- Machine pre-pruning reduces overall pruning time.
- Long cane follow-up takes longer than spur pruning follow -up.
- Shoot positioning does nothing.

Conclusion: For the same yield and BRIX, Machine pre -pruning and hand follow-up to target short canes/spurs reduced pruning time by 60% over manual pruning and by 40% over machine pre -pruning and hand follow -up to target long canes.

Figure 5. Concord pruning times for different pruning strategies at CLEREL 2023

After the presentations, attendees where able to walk through the pruning trial to see the differences in canopy development and metal poles at every vine versus traditional wooden post configuration. The weather held off for us and it was a successful event. Many thanks to Dr. Terry Bates for his research to continually improve operations for a sustainable and productive viticultural practice that has positive impacts to our industry and for his generosity to share this data at our grower meetings.

Growing Degree Days (GDD)

I just wanted to take a look at the growing degree days for all of our weather stations in the Lake Erie Grape Region. Take a look at Table 1 below that Kim Knappenberger, LERGP Support Specialist, put together for this article. This year's numbers to date are in yellow or the first column. I asked for last year and 2022's GDDs for this date and the total GDDs for those seasons as well. 2023 is colored blue and 2022 in green. Last year, we were behind in growing degree days through harvest when compared to 2022 and that was evident to growers who had large tonnage and struggled to meet sugar standards. This year we are ahead of both 2023 and 2022 and for thousands of acres of Concord in Chautauqua and Cattaraugus County there are very small tonnages due to the April Frost Event.

Station	Current GDD Base 50F 7/25/24	GDD Base 50F 7/25/23	GDD Base 50F 10/31/23	GDD Base 50F 7/25/22	GDD Base 50F 10/30/22
Burt (NY Mesonet)					
North Appleton	1451	1243	2528	1323	2570
Newfane (Chateau Niag)	1573	1280	2585	1400	2674
Ransomville	1685	1397	2782	1517	2911
Lockport	1682	711	2063	1475	2770
Brant	1688	1415	2772	1513	2799
Versailles	1554	1245	2482	1382	2613
Sheridan	1657	1352	2683	1514	2871
Silver Creek (RT5)	1569	1232	2593	1449	2861
Silver Creek (Double A)	1676	1352	2695	1519	2881
Hanover	1577	1265	2528	1425	2699
Forestville	1582	1325	2607	1459	2767
East Fredonia	1565	1279	2554	1418	2678
Fredonia (NY Mesonet)					
Brocton	1611	1303	2597	1444	2727
Portland (CLEREL)	1570	1279	2587	1457	2779
Westfield (South)	1598	1289	2595	1409	2718
East Westfield	1587	1301	2601	1444	2733
Westfield	1564	1220	2539	1427	2756
East Ripley	1632	1138	2538	1326	2818
Ripley	1624	1315	2671	1488	2845
Ripley (State Line)	1672	1337	2716	1494	2850
Ripley (Escarpment)	1622	1360	2719	1494	2833
North East (State Line)	1598	1321	2617	1457	2730
North East Lab	1595	1280	2726	1507	2940
North East (Escarpment)	1639	1350	2670	1502	2807
North East (Side Hill)	1610	1332	2637	1451	2733
Harborcreek Escarpment	1536	1269	2504	1392	2609
Harborcreek	1663	1331	2704	1455	2783
Lake City	1640	1264	2660	1453	2799
Lake City (Mason Farms)	1633	1317	2675	1499	2807
Base 50 from 4/1 of each year as reported on NEWA					

Downy Mildew or Not?

Jessica Clippinger, Lake Erie Grape Research and Extension Center

Test your ID skills! Is it or is it not… Downy Mildew?

The first step in an effective management program is identifying your disease or pest accurately. Getting the diagnosis correct helps to ensure you do not waste money and time applying the wrong spray or treatment.

Below are pictures of leaves infected with two separate pathogens (one pathogen on the left and the other on the right) taken from the same site and variety (Delaware) on July 24, 2024. Both sets of leaves display yellow chlorotic spots on the upper leaf surface, but one set is downy mildew caused by Plasmopara viticola and the other is not. Can you tell by looking at the upper leaf surface whether the leaves on the left or the leaves on the right are downy mildew? Can you identify the look-alike mystery pathogen?

Let’s see if looking at the lower leaf surface can help us determine which is the real downy mildew. After a wetting period or a period of very high humidity, white downy sporulation can be observed on the underside of a leaf corresponding with the choloric spots on the top.

Still not sure? Or maybe you’re confident in you’re choice? Diagnosis may still be difficult as there is not a lot of downy mildew sporulation. To make things harder, the mystery pathogen is also displaying growth on the bottom of the leaf. Before we reveal the mystery pathogen, let’s see if you identified the downy mildew leaves correctly. If you chose the leaves on the right side as downy mildew, then you are correct!

In determining the mystery pathogen, a hand lens can help to view the growth on the underside of the leaf. At the lab, we use a microscope. This allows us to see the structure of the pathogen on the leaf. The downy mildew pictures on the right show the sporangiophores that appear very downy white on the underside of the downy mildew leaf.

The mystery pathogen is on the left and downy mildew is on the right:

Pictures by Jessica Clippinger.

What is the mystery pathogen on the left side? If you said powdery mildew (causal agent Erysiphe necator), you are right! When asked to describe powdery mildew on grapevine leaves, people will often focus on the powdery mildew colonies on the upper leaf surface that are most obvious later in the season. What we are seeing in these pictures is the primary infection of leaves that takes place earlier in the season and can look a lot like downy mildew. Powdery mildew overwinters in the wood of the vine as chasmothecia. Chasmothecia release ascospores *during rain events or heavy due* in the spring and early summer. These ascospores mostly infect the lower leaf surface as well as fruit and other green tissue. This primary infection produces colonies of conidiophores on the underside of the leaf that release conidia (visible in the pictures above on the left) for secondary infection. These conidiophore colonies on the underside of the leaf appear grayish-white and may even have a silvery or metallic sheen. This slight color variation is a good way to tell downy mildew from powdery mildew as downy has very white sporulation compared to powdery colonies that tend to appear grayish. Powdery mildew on the underside of the leaf can sometimes cause the leaf to crinkle or deform which is another way to tell them apart.

It is the secondary infection which does *not require rain or a wetting period,* that most typically occurs on the upper surface of the leaf with a powdery grayish-white appearance. These secondary

infections can occur in as little as five days and continue throughout the summer. We are starting to see secondary infections on the upper leaf surface in vineyards now, but primary infections are still more visible. Hopefully, these pictures and descriptions will help you during your scouting to distinguish between downy and powdery mildew infected leaves during midseason.

It is important to note that downy and powdery mildew can present slightly varying symptoms in different varieties.

Contact Information:
Jessica Clippinger
Lake Erie Regional Grape Research and Extension Center
662 N. Cemetery Rd
North East, PA 16428
jib5787@psu.edu

We need your DOWNY MILDEW infected leaves!

In **2023**, in **PA Lake Erie Region**, high rates of Downy Mildew resistance were found to:

- **stobilurins** (Abound)
- **carboxylic acid amides** (Revus)
- **phosphorous acid** (Rampart)

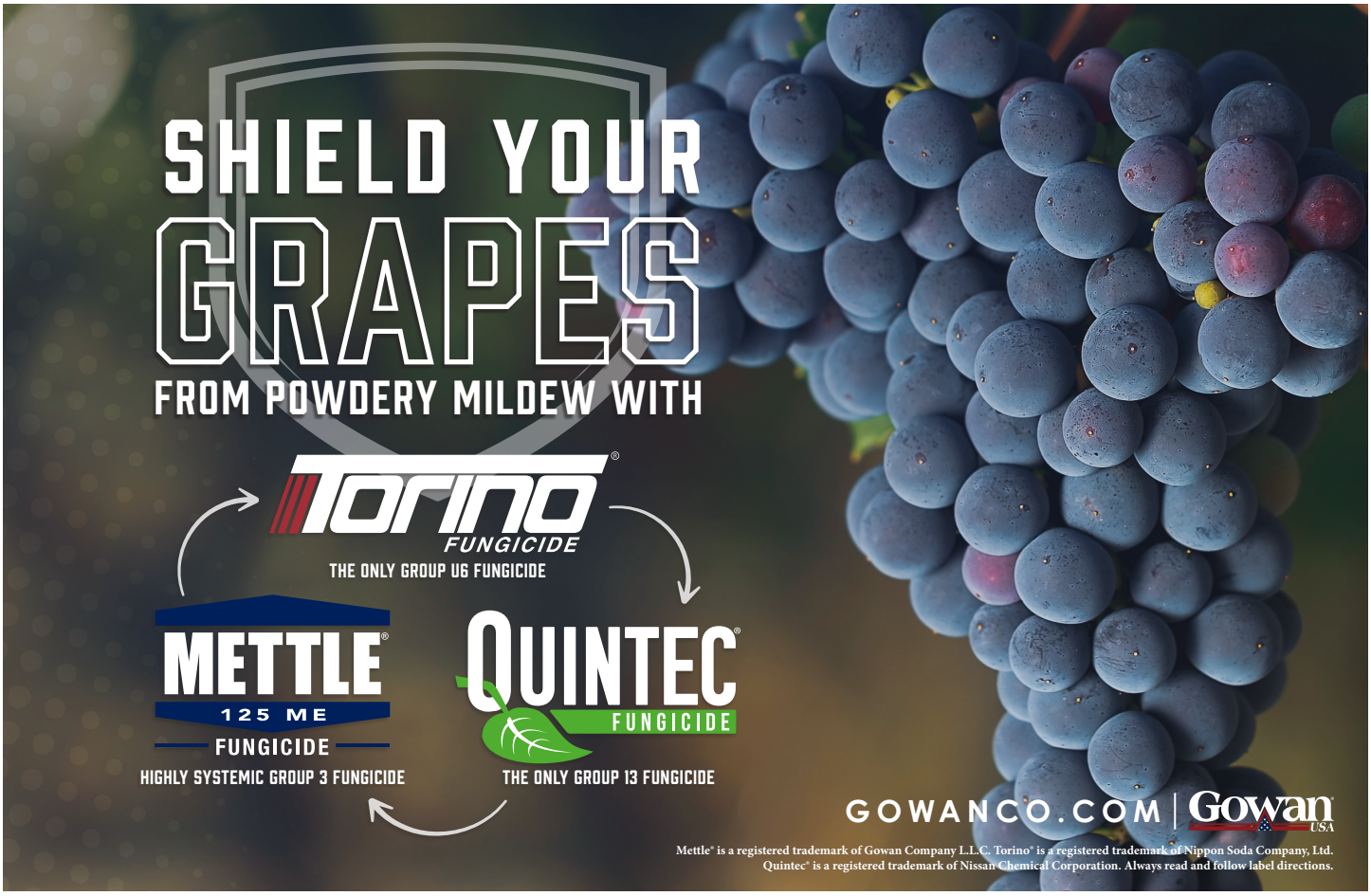
Resistance!

Many samples showed resistance to *all three* fungicides. No resistance to phenylamides (Ridomil) was detected.

In 2024, NYWGF is funding a survey of New York Lake Erie region vineyards for fungicide resistance.

---NY Growers: contact us when **downy mildew is present in your vineyard** and we will come out to collect 10 or more infected, sporulating leaves. Isolates from the leaves will be grown in the lab to conduct bioassays and genetic testing to determine if resistance is present.
---You will receive information regarding the **percentage and types of resistance** present
on your farm. A regional summary will be made available to all growers (farms sampled remain anonymous).

- **Contact *Bryan Hed at 814-725-4601 (bxh38@psu.edu) or Jessica Clippinger (jib5787@psu.edu)* or Jennifer Phillips Russo at *716-640-5350* to get samples collected or with questions. Thank you!**



MILITELLO FARM SUPPLY INC.

Now in our 40th year, we have a tradition of providing quality products, education and superior service to both farm and home growers. Our products and spray programs are tried and tested in our own vineyards, ensuring you have a solid program for your own vineyard. We deliver products, programs and services to our customers in an efficient and personal way to enhance their growth and profit opportunities for the long term.

We are a proud dealer for -

INFACO FELCO DRYSHOD BAHCO

PRODUCTS & SERVICES

- ☑ Herbicides, Fungicides & Insecticides
- ☑ Bulk & Bagged Fertilizer
- ☑ Soil and Petiole Testing
- ☑ Customized Pesticide and Fertilizer Programs
- ☑ Infaco, Felco and Bahco Shear and Lopper Repair
- ☑ Supplies for Trellis, Pruning, Tying and so much more!

Call us
716-679-1240

Visit our website
www.militellofarmsupply.com

Our location
2929 Route 39, Forestville

PA Update

Megan Luke, Penn State Extension Viticulture and Tree Fruit Educator

PA Update

Reminder: The comment period regarding label changes to captan has been extended: comments are now due by July 31st 2024: You have more time to contribute to the discussion!

Captan- Captan has been added to the review process and has a docket number. While it doesn't look like we are at risk of losing this chemistry, the EPA is proposing increased PPE, a closed-cab requirement for air-blast applications, a reduced rate/application/season, and a few other label changes.

Comment on changes to the captan label: here

Read proposed label changes: here

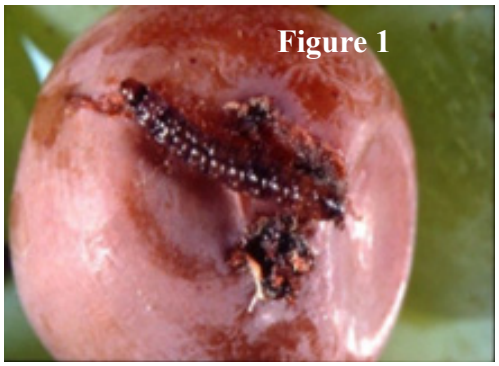
*Relevant information starts on page 44 of the downloaded document

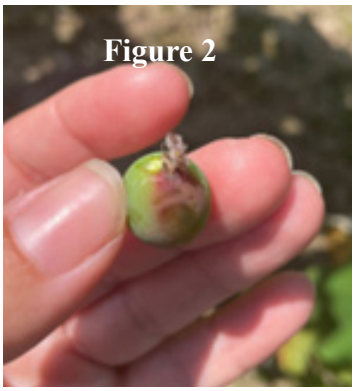
Insect and scouting update

As per Kim and Jenn's updates this week, most areas will reach the 1620-degree day marker for grape berry moth by the end of July- check out Kim Knappenberger's article for more information on NEWA models regarding this pest.

Grape berry moth (GBM): The primary insect pest of concern at this time of year is of course grape berry moth (GBM) (Figure 1). At this time, damage is visible as small holes in berries with a purplish discoloration and sometimes a split in the skin with frass or webbing (Figure 2). In warm years and at high-risk sites, growers need to continue chemical control on a 10-to-14-day interval from mid-August to mid-September. This is due to the fact that while our degree-day model can predict an average hatch date for GBM larvae, this event is, in reality, spread out over several weeks for each flight. That being said- it is a good idea to choose materials that have some staying power on your vines to provide coverage beyond a singular event. Materials that are short acting such as zeta-cypermethrin (Mustang Maxx, etc.) are only efficacious for 1-2 days. If you are looking for a pyrethrin insecticide that has a longer coverage period, you might want a material like bifenthrin which lasts a week or more under optimum conditions. Reminder that grape berry moth has exhibited resistance to danitol in the Finger Lakes region! There are several other classes of insecticide that can be used, be mindful of your rotation and your pre-harvest intervals if you have any early ripening wine grapes in your acreage.

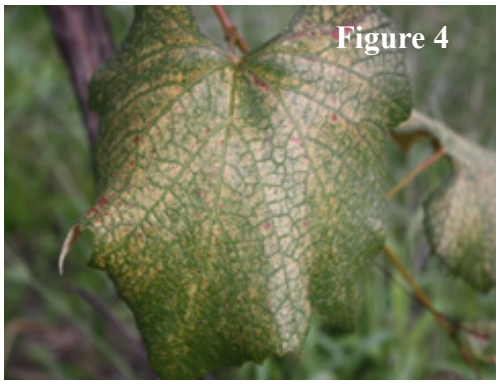
Remember when scouting that the goal is to get a handle on potential damage levels and whether you are exceeding economic thresholds. For Concord grapes, if the percent of clusters that show some GBM damage to berries is **greater than 6% at second flight** and **greater than 15% at third flight**, then a treatment is recommended.

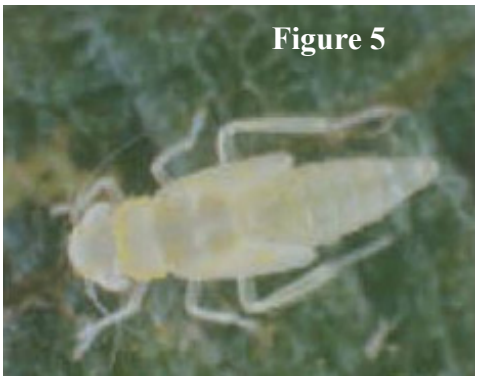




Grape Berry Moth Larvae and Damage Photos courtesy of Penn State Extension, Andy Muza & Megan Luke

Grape leaf hopper: Another pest which may become problematic in late-July is the grape leaf hopper (Figure 3). If you see stippling (white dots on leaves caused by leafhopper feeding) throughout the vineyard block scouting should be conducted to determine if an insecticide treatment is recommended (Figure 4). Sampling period for leafhoppers is focused on the abundance or quantity of first-generation nymphs. Check four different areas in the vineyard (two exterior and two interior). At each area look at five lower (basal) leaves (leaves #3-#7 when counting from base of shoot) per shoot on five different shoots at each location and check for leaf feeding. If no damage or minimal injury is observed, proceed to the next sampling site. If moderate to heavy leaf stippling is observed, then begin counting nymphs on the undersides of leaves. If a threshold of five nymphs/ leaf is reached, then an insecticide application is recommended.





Grape leaf hopper adults, leaf damage, and nymph Photos courtesy of Penn State Extension, Andy Muza

Japanese beetles: Finally, many folks have issues with Japanese beetles in the vineyard and overall landscape in the mid- to late-summer. While these pests can be quite destructive to the foliage of plants, they are unlikely to cause enough harm to vines to warrant treatment in most cases. However- if you are choosing an insecticide for GMB or leafhopper control, that material should knock down the number of Japanese beetles as well.

Be aware of your rotation of chemistries throughout the growing season, use these links to check your materials before application:

Mode of action (MOA)- This is the method that a specific product uses to kill a pest. Every pesticide on the market has a code for the mode of action. When you rotate your products, you should choose products with different modes of action. The standard recommendation is to rotate between three products with different modes of action. When a pest population becomes resistant to a specific product, it is likely to be resistant to **all** products with that mode of action.

Modes of action for fungicides can be found here: FRAC

Modes of action for insecticides can be found here: IRAC

Modes of action for herbicides can be found here: HRAC

If you suspect that a specific material is losing its effectiveness in your vineyard, contact us to assess your program. Spray tank pH, spray coverage, and tank mix contents can play a role in the effectiveness of a spray application. In the case of true resistance, it is important to document cases so that research can be conducted into how widespread an issue may be. Catching resistant pest populations early is critical to retaining the effectiveness of our chemistries, please help us guide the research accordingly!

Contact information:

Mobile (*call or text*): (716) 397-9674 (*preferred*)

Office: (814) 825-0900

Email: MFL5873@psu.edu

Updates and Information

Kimberly Knappenberger, Extension Support Specialist, LERGP

NEWA

We are at that time of year when the rain buckets on our weather stations seem to have issues with being plugged from anything from bird droppings, nest materials, other natural debris, to wasp nests. If you notice that your favorite station does not seem to be recording precipitation during these showers we have been experiencing lately, please contact Kim at ksk76@cornell.edu so we can get that taken care of. The models are only as good as the information going into them!

Figure 2 Wasp nest on under side of rain bucket

Figure 1 Standing water in rain bucket

VIP

As the program is drawing to a close, we still have money available for projects to remove Concord vineyards in New York. If you have been on the fence about a project, now is the time. All removal work will need to be completed by the end of the growing season. The ground does need to be kept in agriculture and have a crop growing to get the final approval. This would include cover crops, hay, whatever late season crop you could get established before the end of the season.

If you think you can get it done I encourage you to visit https://lergp.com/vip-application to complete the application. If you have questions please feel free to reach out to Kim at ksk76@cornell.edu.

Figure 3 Weak Concord vineyard with no weed control

2024
LERGP Coffee Pot Meeting Schedule

May 1, 2024 9:00am	**SLF Meeting- Burch Farms** **9210 Sidehill Rd. North East, PA 16428**
May 8, 2024 10:00am	**Sprague Farms** **12435 Versailles Rd. Irving NY 14081**
May 15, 2024 10:00am	**Brian Chess Farm** **10289 West Main Rd. Ripley NY 14775**
May 22, 2024 10:00am	**Schulze Vineyards & Winery** **2090 Coomer Rd. Burt, NY 14028**
May 29, 2024 10:00am	**Kirk Hutchinson** **4720 W. Main St. Fredonia, NY 14063**
June 5, 2024 10:00am	**LERGREC Field Day** **662 N. Cemetery Rd, North East, PA 16428**
June 12, 2024 10:00am	**Betts' Farm- Soil Health Day** **7366 East Route 20 Westfield, NY 14787**
June 19, 2024 10:00am	**NO COFFEE POT MEETING**
June 26, 2024 10:00am	**Zach & Alicia Schneider** **771 Bradley Rd. Silver Creek, NY 14136**
July 3, 2024 10:00am	**Liberty Winery** **2861 US Route 20 Sheridan, NY 14135**
July 10, 2024 10:00am	**NO COFFEE POT MEETING**
July 17, 2024 10:00am	**Chateau Niagara Winery** **2466 West Creek Rd. Newfane, NY 14108**
July 24, 2024 10:00am	**Grower Demo Day at CLEREL** **6592 West Main Rd. Portland, NY 14769**
July 31, 2024 10:00am	**Mason Farms** **8603 West Lake Rd. Lake City, PA 16423**

Questions? 716-792-2800 or kjr45@cornell.edu