



Lake
Erie
Regional
Grape
Program

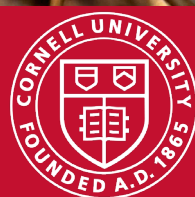
2024 Harvest Wrap Up Newsletter

Cornell Cooperative Extension
Lake Erie Regional Grape Program



PennState Extension

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[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.

*Pruning School at CLEREL
Tuesday, November 19, 2024
12:30pm-4:00pm
FREE*

Come join us for an afternoon of pruning technique demonstrations. This includes classroom instruction, mechanical, hand follow up and hand pruning techniques.

Lunch is provided at 12:30pm. The program is free but you must register so there will be an adequate amount of lunch for participants.

[REGISTER NOW!](#)

Or type this link in: https://lergp.cce.cornell.edu/event_preregistration_new.php?id=617

***Call Katie at 716-792-2800 ext 201 if you are unable to register on-line.*

*2025
What is Your Spray Program?
Tuesday, December 3, 2024
9:00am- Noon via ZOOM*

We are pleased to announce that we will be holding our 2025 Spray Preparation Program on December 3, 2024, from 9AM -12 PM. This program will be similar to previous years with Penn State University's Bryan Hed discussing current research on spray programs and presenting options for next year's growing season for vinifera, juice grapes, and organic systems. It is our hope that growers will be able to make informed decisions based off of research when purchasing next year's spray products. Penn State University's Megan Luke will also present on the EPA's Endangered Species Act regulation changes for pesticide management and her sprayer calibration work and the importance of regular calibrations. We also will have a presentation by Dave Combs, a research support specialist in Dr. Katie Gold's Grape Pathology Laboratory at Cornell AgriTech, who will share his take on what grape disease management will look like in a post-broad-spectrum world.

NYSDEC Credits have been approved: 2 in categories 10,1a and 22. One half (.5) credit has been approved for CORE credit.

PA Credits have been applied for.

[REGISTER NOW! \(you must register on-line for this course\)](#)

Or type this link in: https://lergp.cce.cornell.edu/event_preregistration_new.php?id=616

*****If you are looking for credits, please make sure you send Katie a copy of your current pesticide license.*****



PLEASE JOIN US FOR A

PRUNING SCHOOL EVENT AT CLEREL

Including Classroom Instruction, Mechanical,
Hand Follow-up and Hand Pruning Techniques

**TUESDAY
NOVEMBER 19, 2024
12:30-4:00 PM**

Invite your vineyard managers,
crews, or family members to learn
about this important management
strategy in vineyard operations.

**LUNCH WILL BE PROVIDED
FOR REGISTRANTS!**

To register, please click [here](#).
For questions, call/email us at:

☎ 716-792-2800 ext. 201

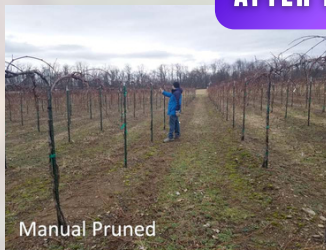
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AFTER PRUNING



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2025 Spray Preparation **PROGRAM**



PEST MANAGEMENT SPRAY SCHEDULE - WHAT'S YOUR PLAN?



Tuesday, December 3, 2024



Webinar (ZOOM Meeting)

Click [here](#) to register!



9:00 AM - 12:00 PM

\$25 per attendee

NYSDEC approved:

0.50 CORE credits
2.00 credits for either of
the following Categories:
10, 1a, or 22



BRYAN HED

Research Technologist
(Plant Pathology), Lake Erie
Regional Grape Research
and Extension Center



MEGAN LUKE

Lake Erie Regional
Grape Program Penn State
University Viticulture Educator



DAVE COMBS

Research Support Specialist
in Dr. Katie Gold's Grape
Pathology Laboratory
at Cornell Agritech

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Business Management

Andrew Holden, Penn State Extension Business Management Educator

Farm Management Harvest Wrap Up: 2024

A Tale of Two Grape Belts

The 2024 grape harvest is just about wrapped up. Depending on location, this year brought two distinct experiences to the grape belt. The difference of only a few miles and a few degrees meant some growers had an above average year, while others had to contend with a killing frost and very low yields. The impacts of this year's freeze and resulting yields are likely to extend past 2024 and affect all growers, even those who did not receive the frost.

A major challenge for the east side of the belt during the season was how to manage their vineyard in the most economical fashion to combat their low yields. Mitigating cost to manage low yielding grapes, while not jeopardizing future plant health and future yields proved difficult. The excellent weather during harvest softened the blow slightly as grapes were able to be picked quickly and efficiently.

Juice Grapes

On the juice side, going into 2024, the concern was an oversupply of juice and what that would mean for grape prices at harvest. This issue was largely avoided this year as the overall concord crop (NY/PA, MI, WA) was down across the board due to frost events. There is still concern that the market is over saturated and that a large yield next year could bring oversupply issues back. This is especially concerning with the potential for frosted vines to produce huge crops in 2025. The concord market has also taken a major hit from the trends in the wine sector as less volume is being purchased for fermentation. The focus for the next few years will be on juice and jelly sales as we wait for the wine market to correct itself.

Wine Grapes

Speaking of wine, many studies have shown that consumption is trending downwards, citing negative views of alcohol and increased competition in the beverage space. Paired with an over supply of grapes, juice, and wine that has been building up over the past few years, means wine grape prices have decreased significantly, and some growers struggled this year to find a buyer for their grapes. Reports of major wine regions in California and France removing large acres of vineyards show the reality of the situation and how many are predicting that this issue is a long term one. Growers have shared that they plan on focusing on profitable varieties and quality to give them a competitive advantage. Wineries seeing less off-site sales are focusing on "at winery" sales by offering more experiences and specials to get customers in the doors.

Highlights

There were a few silver linings to this year's season that should be highlighted.

Transitions to Bulk Harvest: As more processors transition to bulk delivery, growers who have switched over have noted the increased efficiency on their farms by doing so. It seems that labor needed during harvest can be reduced with the bulk system. In a normal year, this could lead to more scheduling flexibility.

Grape Quality: Many processors and growers shared that the grapes that were harvested

this year were fantastic in quality with high brix and clean fruit. Wineries were impressed with the grape quality and believe this year will produce some excellent quality wine.

Looking forward

In the immediate future, growers who experienced the freeze will need to focus on cash flow and limiting spending in the coming years. Avoiding extreme swings in yields following a frost will be important in mitigating fluctuations in cash flow. Access to lower interest loans and grants will be extremely useful for growers to weather the storm. I plan to make cash flow and farm management a major topic in my winter conference presentation in March.

2024 Programming Recap

Since joining the Lake Erie Regional Grape Program in March I have had the pleasure to meet many of the growers and learn more about the grape belt from generations of growers. I appreciate the warm welcome and I look forward to making more connections this winter. I will continue to address industry needs and provide education that will assist growers and give them the tools they need to have success. Please give me a call or email with any questions or suggestions for programming, I can be reached at (716) 640-2656 (call or text) or email: AZH6192@psu.edu.

As for this past year, I have had many opportunities to meet with growers. From farm visits to weekly coffee pot meetings in the summer to field days. Many requests have involved transition/succession planning. This is an important area of farm management, and I will focus on helping farms navigate the issue going forward. I was also able to provide resources on the many grants that were available this year for farms and processors. I published a handout with current grant information (which is available on our website) for both NY & PA growers. A new edition will be out shortly as there have been new grants announced since. Another highlight for me was looking at the research that Dr. Bates and his team did on metal t posts at every vine in the vineyard and calculating the cost of metal vs wood posts. The research showed that over 30 years metal posts would be more cost effective and would offer benefits to those adopting more mechanical/autonomous technologies. Established vineyards would not see the cost savings of switching all posts to metal, but there is a compelling argument for replacing broken wood posts with two metal t posts at every other vine. We hope to get more data on this for growers to make more informed decisions.

As I mentioned, I am planning to continue to listen to grower's needs and questions to provide the best resources possible. This winter I am planning to offer programming/resources on managing cash flow over the next few years, grant writing, and looking at benchmarking/custom rate surveys. If you have any information or concerns you would like to share regarding those topics please reach out. Again, thank you all for the warm welcome and look forward to being a resource you can trust.

Pennsylvania - The Agricultural Innovation Grant is NOW OPEN

The Agricultural Innovation Grant should be available to growers, processors, and other entities involved in agriculture in the state.

Eligible Projects

A person or cooperative association who utilizes innovation:

- to improve energy efficiency, improve water quality, reduce water consumption, reduce odors, or address solid waste concerns.
- to improve production, processing, commercialization, or utilization of agricultural

commodities.

- technology that assists eligible applicants with the management of their farms, including diagnostic tools and services.
- technology that assists a packer, processor or cooperative in more efficient sorting, grading, or processing of agricultural commodities.
- that supports cybersecurity or data analytics.
- *See website for more*

Onsite project grant

An eligible applicant may apply for a grant for a project that focuses on implementing innovation practices, technologies or approaches on an individual farm or property producing or processing an agricultural commodity. The following shall apply to a grant under this subsection:

- The amount of the grant should be no less than \$5,000 and no more than \$200,000.
- A grantee must use non-State sourced matching funds equal to at least 50% of the grant amount for the project.

Application Timeline

Applications must be submitted through the [Single Application for Assistance online application system](#) **before 11:59 p.m. on November 15, 2024**. Applications received outside of that application window will not be considered or reviewed.

[Click here for more information](#)

My contact information:

Andrew Holden, Business Management Educator
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Office: (716) 792-2800
Email: AZH6192@psu.edu

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***Interested in hosting a Coffee Pot Meeting for the
2025 growing season?***

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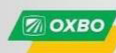
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Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

Eastern Viticulture and Enology Forum (EVEF) Webinar Series

The Eastern Viticulture and Enology Forum (EVEF) hosted a webinar: Optimizing Vineyard Spray Programs: Insights from FRAME Networks Project. Eastern Viticulture and Enology Forum Series (EVEF) is a collaborative effort between the Penn State Extension Grape and Wine Team and several viticulture and enology Extension programs from the following U.S. land grant institutions: Colorado State University, Cornell University, University of Georgia, Iowa State University, University of Maryland, Ohio State University, and Rutgers University. As part of the Eastern Viticulture and Enology Forum Webinar Series, this session is a collaborative effort between these viticulture and enology extension programs coordinated for grape growers and winemakers. On January 10, 2024 we held a viticulture session - Building Better Spray Programs: practical outcomes from the FRAME networks project, January 24, 2024 was an enology session - An Acid Management Toolkit for Eastern Wines, February 14, 2024 viticulture session – A current review of Spotted Lanternfly updates and findings in vineyards, and February 28, 2024 enology session - Management of Malolactic Fermentation: impact factors. The speakers discussed the biggest takeaways for grape growers across the United States. These events were very well attended.

MyEV Workshop

Dr. Terry Bates and Jennifer Phillips Russo held a MyEV Workshop as a direct result of our advisory committee suggestions. Our growers asked for more opportunities to come in and learn more about the MyEV Tool and how it may benefit them in their operations. MyEV Tool is a precision agricultural tool that was developed for the grape industry through the 6.2 million dollar Specialty Crop Research Initiative grant the Efficient Vineyard Project. This led to another grant with Dr. Terry Bates through NIFA's AFRI grant, Cost effective spatial data visualization and decision support for small and medium-sized vineyards. It is our goal to engage producers to use personalized digital agriculture solutions in their own operations. The problem is that most small producers do not have the tools (process) or information (content) or experience (high impact activities) to achieve transformational education in digital agriculture. By integrating research-based digital agriculture education, new spatial processing tools, and producer-led on-farm activities will lead to transformational education in spatial-data driven variable-rate farm management. We held several one-on-one meetings with growers to get them started this quarter and had 18 attendees at our first two MyEV Workshops in January and February 2024.



Cold Hardiness Monitoring

The New York Wine and Grape Foundation has funded our cold hardiness research for years. Each fall and winter, grapevine tissues produced during the growing season transition from a cold-tender to cold-hardy state. This process, known as cold acclimation, allows vines to survive low winter temperatures. Winter low temperatures that fall below a critical value can damage grapevine buds. The critical temperature for bud injury varies over the dormant season and responds to daily

changes in temperature. As temperatures rise after mid-winter, grapevine tissues deacclimate in a gradual process, culminating in bud burst and active growth at the start of the growing season. How fast this process happens, and to what extent vine tissues survive extreme winter low temperatures, depends upon the cultivar, seasonal temperatures and how they vary, and the vine's condition as it enters the dormant season. We measure this critical temperature through a procedure called differential thermal analysis, which involves controlled freezing of a sample of buds collected from vineyards and reporting the Lethal Temperature where growers can experience 50% bud loss, or LT50, and posted on our website as well as in crop updates and podcasts. This information can be used to help guided management practices to compensate for potential losses. In 2023-2024, we monitored and reported cold hardiness for 15 cultivars. We monitor samples weekly from November to March.



Photo 1. Cold Concord buds

Bud Hardiness Data Website

Our cold hardiness research of weekly monitoring of LTE's during acclimation, dormancy, and deacclimation across the Lake Erie Grape Region was posted to the Bud Hardiness Data Website [Click Here](#) Here, where winter hardiness data from differential thermal analysis has been shared with industry since 2009, and is posted continually during the dormant season, providing growers with up to date information about potential winter injury to buds. Dr. Londo and his lab were tasked to develop a temperature-driven model that is based on real measurements of the physical response of vines to different deacclimation temperatures. They used data collected from this project to validate the model, which we hope will provide New York and Pennsylvania growers with accurate predictions of bud freezing temperatures (based on daily min/max temperatures) and will be accessible region- wide through the NEWA weather site. We have succeeded at this research objective and have presented it to growers to make better management decisions.

Microclimate Sensor Grant

Dr. Jason Londo and Jennifer Phillips Russo collaborate on tracking grapevine cold hardiness and phenology across the region with microclimate sensors deployed in 15 grower collaborator vineyards. We are collecting data from five locations on Lake Erie, five locations located on the bench, and five locations on the escarpment. The team collects data weekly to help achieve the objectives of this study to conduct phenological assays for Concord grapes in multiple locations, to determine the variability between vineyards, and to provide updated field cold hardiness/phenology and hopefully begin to build phenology predictions for the New York grapevine industry. We have concluded the cold hardiness collections for this year.

2024 Spotted Lanternfly Summit

Organizers of the 2024 Spotted Lanternfly (SLF) Summit reached out to the Lake Erie Regional Grape Program to invite us to present our industry's needs, concerns, and upcoming challenges that we will face when the Spotted Lanternfly reaches our region. This 8th Annual SLF Summit was an event that provides research and regulatory information to parties interested in learning more about spotted lanternfly. It was an opportunity to be in front of funding agencies, researchers, and

decision makers to introduce them to what a highly mechanized industry will encounter when this agricultural pest invades our vineyard blocks. We gave a powerful panel discussion that included a representative from the juice industry, the wine industry, and the nursery industry in our region to convey concerns of management strategies, potential delays in operations, and the potential economic impact nationally and globally should those disruptions occur due to SLF. This was a very important meeting for the future of our Integrated Pest Management, not only on a regional level, but also nationally how this invasive will affect other mechanized regions that will soon be threatened by SLF as well. We were officially thanked in front of the attendees for bringing industry concerns and interactions to the Spotted Lanternfly Summit, a piece that has been missing from the inception of these summits. I am very proud of the exposure, recognition, and support that we received after our presentation and panel discussion, and I am hopeful for future outcomes. As a result of the Pennsylvania Department of Agriculture's 2024 Spotted Lanternfly Summit, Megan Luke and Jennifer Phillips Russo began preliminary research on SLF and Mechanized Harvest. They formed a research team with PSU researchers and traveled to Southeast PA to a Merlot vineyard that was mechanically harvested. Our intentions were to count the bugs on the vines that were to be harvested, the vines adjacent to the harvested row to see if the motion of the harvester caused the SLF to jump off, and the SLF that were collected in the harvested fruit in the bin. This work is extremely important to our industry especially the juice, jam, and jelly industry. The results will be communicated in future presentations, but it has already resulted in many presentations with the United States Department of Agriculture and state officials from PA and NY and university departments to spark further research. We are very proud to be the catalyst to this research and advocates for our industry.

Spotted Lanternfly Grower Summit

May 1st kicked off our Coffee Pot Series with a full day symposium for growers on the Spotted Lanternfly. This meeting brought together researchers, policy makers, agricultural departments, industry stakeholders, and growers to learn about this invasive species with many informative presentations about the realities of what our industry may experience when spotted lanternfly makes its appearance in our vineyards. There were over 100 in attendance, and it was an opportunity to learn firsthand from the researchers and ask questions of the regulatory agencies about our industry concerns when this invasive species makes its way into our region. This was the first place that we handed out our new Spotted Lanternfly Pocket Guide resource.

Spotted Lanternfly Monitoring and Education: Spotted Lanternfly (SLF) is an invasive pest in the United States. The greatest agricultural concern falls on grapes, which are highly important for both the juice and wine industries in New York State. SLF was first detected in Pennsylvania in 2014 and has been spreading since that time, having been found on Staten Island, NY in 2020. As of 2023, SLF has become established in 18 counties in NYS [Spotted Lanternfly Reported Distribution Map | CALS \(cornell.edu\)](#). Members of three regional teams in NYS (Eastern, Western, and Finger Lakes) conducted SLF monitoring and grower education in 2022 and 2023 with roughly 2,000 direct contacts. Viticulture Extension Specialist, Jennifer Phillips Russo, has developed a public service announcement (PSA) to educate New York state residents of the threat the Spotted Lanternfly poses to the agricultural community and how they can fight back. Please help [protect New York state agriculture by sharing this PSA widely](#). The SLF Public Service Announcement video currently has 5.1K views in English and 488 views in Spanish.

In early September 2023, SLF was found at a vineyard in Ulster Co., which triggered a flurry of questions and concerns. In addition to the PSA, a Spotted Lanternfly Pocket Guide was created by the Lake Erie Regional Grape Program in collaboration with NYSIPM and PSU. This resource provides each life stage of SLF and Tree of Heaven identification photos, how and when to scout for

it, management strategies, and QR codes for the latest updates. There were 295 English versions and 20 Spanish versions printed professionally and distributed across NYS grape growing regions including Long Island, Hudson Valley, the Finger Lakes Region, and the Lake Erie Region. This resource is also posted on the LERGP website for others to download and print [Click Here for the SLF English Guide](#) and [Click Here for the SLF Spanish Guide](#). This resource was presented at all in-person grower meetings throughout the 2024 growing season in the Lake Erie Grape Region for a total of 15 meetings with total of 600 contacts.



Photo 2. Spotted Lanternfly photo

Lake Erie Regional Grape Program Vacancy

This Lake Erie Regional Grape Program welcomed Andrew Holden, LERGP's Business Management Specialist, to our team on March 1, 2024, filling the vacancy since May 2024. Andrew pursued his education at Ohio State University, earning a B.S. in Agribusiness and Applied Economics and later obtaining an M.S. in Agricultural and Extension Education. In his previous role he served as the Ashtabula County Agricultural Extension Educator with Ohio State University Extension for the past 5 years. Andrew is eager to bring his passion for agriculture, grapes, and wine along with his economic knowledge to this new position and to the growers in the Lake Erie Grape Region. He is looking forward to engaging with growers to help him understand their needs to ensure that his role equips them with the tools needed for success. His office is located at the Cornell AgriTech campus in Portland, NY (CLEREL).



Photo 2. Andrew Holden



2024 Lake Erie Regional Grape Program Winter Grower Conference

We held an excellent program on March 14, 2024, at the New York State University of New York at Fredonia. Winter Grower Conference featured experts from many fields. The grower advisory panel had many suggestions of important topics that they wanted information on. As always, the day was full of information on the latest research-based tools that can be taken home and applied to your vineyard. Our regional growers and industry stakeholders come to the LERGP Growers Conference in

March of each year to hear the research-

based information developed by Cornell and Penn State faculty and extension staff as well as other speakers from across the country. This event was very well attended with over 100 in attendance.



Evaluating Osmotic Protectant, Glycine Betaine, as a Multifaceted Approach to Enhance Grapevine Stress Tolerance and Productivity grant began. Grape growers face the risk each season in their vineyards withstanding injury and loss of production from biotic and abiotic stresses whose severity is dependent on the current season's weather conditions. Frost, disease, water availability, and extreme temperatures are just a few of the challenges grapevines face with climate change. Glycine Betaine, an osmotic protectant, uses methods existing in nature for the prevention of plant diseases and pests and may improve plant productivity and vitality without releasing undesirable

pesticide residues into the environment. Through foliar applications, this bio-stimulation product improves plant resistance to stress, but also stimulates natural processes to improve crop yield and quality. With the threat of frost in late April, we were able to get a spray on three different cultivars on April 22, 2024.

Frost/Freeze Event

Low temperatures in the Lake Erie Region dropped below freezing in many locations April 24-25, 2024, that affected approximately 70% of the 16,000 acres of Concord grapes in the hardest hit area of Chautauqua and Cattaraugus Counties. Lake Erie Regional Grape Program team and Dr. Terry Bates coordinated efforts between New York Ag and Markets, Farm Bureau, growers, crop insurance agencies, industry stakeholders, and government officials to begin the process of disaster declaration. We established a survey to get grower input asking how many acres they have, what varieties, and what their assessment of the levels of damage that might have occurred is. <https://>

cornell.ca1.qualtrics.com/jfe/form/SV_aXjG8XJKP1fiPn8

Through our coffee pot meetings connections were made and a collaborative effort between Farm Bureau, CLEREL, and the Lake Erie Regional Grape Program to bring legislatures and growers together to discuss their concerns and how they may be able to assist our industry as we navigate this damage. That meeting was well attended, and your voices have been heard.

Wine Sensory Evaluation Workshops

The LERGP collaborated with the Cornell Craft Beverage Institute to bring programming to our winery stakeholders! There were two opportunities in our region to learn from presentations and a sensory workshop from our Enology Extension Specialists, Anna Katharine Mansfield and Chris Gerling, with a wine production focus. This was an interactive workshop on sensory evaluation that presented wine flaws to educate winemakers on recognizing them in their operations. Both workshops were well attended with 35 attendees in total.



Photo: Senator George Borrello talking to our growers and listening to their concerns.

Precision and Digital Viticulture Tools Demonstration Day

On June 6, 2024, from 10 AM – 4 PM LERGP hosted a Precision and Digital Viticulture Demonstration Day at the Cornell Lake Erie Research and Extension Laboratory with brief updates on the research behind the tools.

Artificial intelligence (AI), autonomous platforms, and novel pest management tools and strategies have the potential to dramatically alter grape production systems. This includes technology to assist with phenotyping and selection efforts, the detection and treatment

of diseases, and the elimination of weeds under vine rows using fewer herbicides and less soil disturbance. Carnegie Mellon also demonstrated their robotic pruner. We hosted Haggerty Ag Robotics/Naio Technologies and demonstrated the TED robot (Ted - Naïo Technologies (naio-technologies.com)). We also discussed the potential for autonomous tool carriers to assist with breeding and pest management efforts. The labs of Dr. Yu Jiang (Digital Agriculture), Dr. Katie Gold (Plant Pathology), and Dr. Lynn Sosnoskie (Weed Science) also showcased their own research with respect to crop and disease mapping and using electrical weeders and targeted, precision sprayers to suppress unwanted vegetation. Drs Jiang, Gold, and Sosnoskie, as well as representative for Haggerty Creek Ag Robotics/Naio Technologies took the opportunity to talk with stakeholders about current and future needs regarding novel technologies in perennial crops, which will help shape local, regional, and national research efforts. This event was well attended, and the attendees



Photo 3 Drone flight demonstration at CLEREL

learned about tools and research that may be a part of our management in coming years.

2024 New York Soil Health Field Days

New York Soil Health Alliance Field Day held at the Betts Farm in Westfield, NY. The LERGP partnered with NRCS soil scientists, and the New York Soil Health Alliance for a day of learning about the benefits of soil health. The program began with presentations in the morning to explain the benefits of soil health in vineyard operations, introduce current research for best management practices in cover cropping in non-irrigated vineyards for water and nutrient conservation, and more. After lunch, NRCS soil scientists gave soil pit demonstrations and discussed how compacted soils affect grapevine root growth and water infiltration. Dr. Debbie Aller from Cornell's New York Soil Health Alliance demonstrated the rain simulation truck that allows growers to visually understand runoff, infiltration, and leachate. We ended the afternoon with a demonstration of the mow and throw technique by Bob Betts as a termination tool for cover crops using the biomass as a mulch under vine. Attendees were able to listen to an overview of the floor management research for nutrient and water conservation in non-irrigated commercial vineyards that the New York Farm Viability Institute funded and see how the treatments perform.



Photo 4. NRCS soil scientists discussion soil profiles, compaction, and infiltration

Photo 5. Soil health rain simulation station to demonstration runoff, infiltration, and leachate.



ASEV-ES Hangtime on Nutrition

Jennifer Phillips Russo was asked to be a panelist on the American Society of Enology and Viticulture Eastern Section's podcast series on Nutrition. She and other panelists educated on the proper way to take tissue testing, preparation, and analysis. This podcast is far reaching and the Lake Erie Regional Grape Program was honored to be included.

NASA Acres Leadership Tour

In August the LERGP and CLEREL staff were involved with a tour to collaborate and learn from NASA. NASA leadership joined us in Geneva and then at the Cornell Lake Erie Research and Extension Laboratory for the 'Space for Ag Tour' to have conversations with growers, stakeholders, and researchers about their needs and challenges. The goal of this visit

is to have two-way dialogue with end users, stakeholders, and researchers to improve NASA Earth Science's research portfolio in specialty crop agriculture and viticulture while fostering a broader conversation about effective research translation into practice. We continue to foster this relationship and work towards collaborating to improve data for our grower stakeholders. This visit and listening tour are supported by Cornell AgriTech and the Cornell Institute for Digital Agriculture.



Evaluating Osmotic Protectant

Glycine Betaine, as a Multifaceted Approach to Enhance Grapevine Stress Tolerance and Productivity grant began. Grape growers face the risk each season in their vineyards withstanding injury and loss of production from biotic and abiotic stresses whose severity is dependent on the current season's weather conditions. Frost, disease, water availability, and extreme temperatures are just a few of the challenges grapevines face with climate change. Glycine Betaine, an osmotic protectant, uses methods existing in nature for the prevention of plant diseases and pests and may improve plant productivity and vitality without releasing undesirable pesticide residues into the environment. Through foliar applications, this bio-stimulation product improves plant resistance to stress, but also stimulates natural processes to improve crop yield and quality. We continued to conduct research on three different cultivars: Concord, Marquette, and Chardonnay applying timely sprays and evaluated the effect on cluster diseases.



New York Farm Viability Funded Floor Management Research

Research for nutrient and water conservation in non-irrigated juice grapes using floor management strategies continued with data collection throughout the growing season on both gravel and heavy clay soils. Weekly data collection was made throughout most of the third quarter. This data will help inform growers of best floor management strategies to implement into their operations to increase soil and vine health.

1. Glycine Betaine osmotic protection grant work on Marquette as frost protection

Microclimate Sensor Grant

Dr. Jason Londo and Jennifer Phillips Russo collaborate on tracking grapevine cold hardiness and phenology across the region with microclimate sensors deployed in 15 grower collaborator vineyards. We are collecting data from five locations on Lake Erie, five locations located on the bench, and five locations on the escarpment. The team collects data weekly to help achieve the objectives of this study to conduct phenological assays for Concord grapes in multiple locations, to determine the variability between vineyards, and to provide updated field cold hardiness/phenology and hopefully begin to build phenology predictions for the New York grapevine industry. This collection continued throughout the third quarter.

Guest Speakers

The first quarter was extremely successful for sharing the research that we are conducting in the Lake Erie Grape Region. Jennifer Phillips Russo was asked to give 10 research-based presentations to industry stakeholders and researchers across the US and in Ontario, Canada. This is testament to the great work being conducted in our region that is relevant for other grape industries.

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PA Update

Megan Luke, Penn State Extension Viticulture and Tree Fruit Educator

Pesticide Sprayer Calibration

Calibration services were offered for the first time beginning in June of 2024 after some delays in obtaining a trailer to move the equipment to field sites. Eight on-site calibrations were performed on grower equipment throughout the season, with follow-up visits in some cases where new nozzle arrays were needed. This service will open in March of 2025 to expand grower access in the pre-growing season.

In addition to one-on-one calibration support, several trainings and demonstrations on calibration best practices were held throughout NY and PA. Two three-hour workshops were held in collaboration with the Cornell regional vegetable team in preparation for the NY Dept. of Environmental Conservation exam held at CLEREL on April xx. Equipment demonstrations were conducted at the Penn State Lake Erie Grape Research and Extension Center and CLEREL Field Days.



A utility knife found inside an air blast sprayer during a routine calibration



Megan Luke demonstrates specialized calibration equipment at a grower meeting



Calibration demonstrations for pesticide applicator credits were given at Militello Farms Grower Outreach Day (approximately 120 attendees) and a Twilight Meeting at Yerico Farms in Dunkirk, NY (approximately 16 attendees).

Field Day at the LERGREC

The Lake Erie Regional Grape Program collaborated with Penn State's Lake Erie Region Grape Research and Extension Center in North East, PA, to bring an educational program and tour of the new greenhouse. Pennsylvania Dept. of Ag (PDA) and DEC credits were offered, including core credits. Presentations by LERGP Team members and the Penn State Pesticide Education team included scouting, vine nutrition sampling, worker protection standards, and a seasonal disease pressure update for bloom time. This event reached 83 attendees.

Community Outreach

Megan Luke served as an advisor to the Board of the Erie County Horticulture Society and helped to organize the Annual Gravel Pit Park Chicken BBQ. This event (located in North East, PA) hosted the LERGP as speakers, as well as guest Brian Walsh from the Penn State Extension spotted lanternfly task force, to bring timely updates on spotted lanternfly management strategies and information regarding the cancellation of the pesticide mancozeb in grape production. Attendance at this event was approximately 174 individuals.

Environmental Protection Agency (EPA) Timely Updates

A primary focus for the past year has been following EPA updates regarding pesticide label changes and the re-registration process for many products used in grape production. Articles regarding the status of ziram, captan, and mancozeb have been published on the Penn State Extension website and in LERGP Crop Updates and Newsletters. In addition, reviews of the status of the EPA's new herbicide and insecticide strategies and what these new mitigation measures mean for growers have been an ongoing review and discussion. This information is shared and corroborated with Cornell and Penn State faculty and research staff.

This information was delivered at all Coffee Pot Meetings throughout the growing season.

Spotted Lanternfly

The LERGP has become a significant presence at all regional and national meetings and research regarding spotted lanternfly due to the risks to the Lake Erie region. On the Penn State side, regular communication with the local PDA task force was maintained, allowing for rapid response to potential risks at local sites. Several public-facing interviews were conducted, including two print interviews (Farm and Dairy, Erie Times), two recorded interviews (WJET and Erie News Now), and one live interview (Erie News Now: Winey Wednesday focus piece). An informational booth was maintained by a LERGP member at the Erie Master Gardener's Annual Pumpkin Walk with an estimated reach of 5,000 attendees. The risk of SLF in the Lake Erie Region was emphasized in contacts.

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Extension Programs

Kimberly Knappenberger, Viticulture Assistant, LERGP

NEWA

This growing season brought a few updates/additions to our NEWA fleet of stations for the Lake Erie Region. An important update was made to the Portland station at CLEREL. This is a Rainwise station that had originally been installed in January 2010 and due to its age was losing accuracy from the sensors. We decided to replace it with a more recently purchased station that had been in operation at a different site but was replaced in 2022. This “new” station is collecting much more accurate weather data and much more reliably. Our Portland (R Block) station is still not connecting to the Wi-Fi at the lab and a solution is being sought to get it back online in the original spot near the railroad tracks. Stay tuned for that one!

Thanks to the relatively low amounts of precipitation over the past couple of months, it seems that the rain buckets have been having issues with wasps and spiders setting up camp and other debris blocking the water flow, not allowing the sensors to accurately measure the precipitation. These issues are addressed as they arise.

There have been reed switches, solar radiation sensors, batteries and even a modem replacement on stations through the season to keep the data coming into NEWA to help ensure the accuracy of the models through the season.

Early in the season we were able to purchase 2 new Onset HOBO stations to add to our fleet. We are excited to say that we now have a station named Sheridan (Liberty) that can be found on NEWA, and we are in the process of getting a site for the second station. Hopefully we will have an update on that in the near future. If there is an area in the region that you feel is underrepresented on NEWA, please reach out to Kim at ksk76@cornell.edu. I would love to hear from you! And don't forget to let me know if your favorite station isn't collecting data as it should.



Figure 1 New Onset HOBO station at Sheridan (Liberty) NY

Here is a list of our stations in the region (west to east):

Lake City PA	Fredonia (NYS Mesonet) NY***
Lake City (Mason Farms) PA	East Fredonia NY
Harborcreek Escarpment PA	Forestville NY
Harborcreek PA	Sheridan (Liberty) NY – pending
North East (Side Hill) PA	Sheridan NY
North East (Escarpment) PA	Silver Creek (Route 5) NY
North East Lab PA (owned by PSU)	Silver Creek (Double A Vineyards) NY*
North East (State Line) PA	Hanover NY
Ripley (State Line) NY	Versailles NY
Ripley (Escarpment) NY	Brant NY
Ripley NY	Brant (NYS Mesonet) NY***
East Ripley NY	Ransomville NY
Westfield (South) NY*	Lockport NY*
Westfield NY	Newfane (Chautau Niagara) NY
East Westfield NY	Burt (NYS Mesonet) NY***
Portland (LERGP West) NY	*Privately owned
Portland NY	***Part of the NY Mesonet system
Brocton (Escarpment) NY	

Vineyard Improvement Program

The Vineyard Improvement Program was put in place in 2018 to remove unwanted/abandoned/underproducing Concord vineyards and replace them with grapes or other agricultural crop that would enhance farm profitability and increase environmental compatibility of the farm operation or IPM compatibility with neighboring vineyards. The grant had been extended from its initial 4 years for an additional 2 years which is ending in March 2025. With the impending end date there has been a lot of activity to finish projects started and make use of this grant.

There are 4 applicants that came in early in the season and 12 have been finalized in recent weeks. To date there are still 8 projects that need to be finalized in the coming weeks. 11 projects were withdrawn due to inability to complete by applicant or lack of communication from applicant. For more information see the most recent Crop Update.



Figure 2 VIP vineyard replant

CAPS

As in many years past, this year we again participated in the Grape Commodity-based survey to detect new infestations of target grape pest species at low population levels. These target species were selected by the national committee of the Cooperative Agricultural Pest Survey (CAPS) Program. This year we were looking for European Grapevine Moth (EGVM), *Lobesia botrana*; European Grape Berry Moth (EGBM), *Eupoecilia ambiguella*; Christmas Berry Webworm (CBW), *Cryptoblabes gnidiella*; as well as visual surveys for Grapevine Red Blotch disease and Spotted Lanternfly, *Lycorma delicatula*.

Traps for the target species were set in 10 vineyards and 2 nurseries in our region. Each trap for EGBM, EGVM, and CBW was set with a specific pheromone trap to lure in any potential target moth in the area. (Lures are not used for Spotted Lanternfly). During the course of the growing season the traps were serviced 7 times completing initial screening of all traps for the moths in the field. If any moth had been caught in the trap it was collected and examined more closely in the lab. At these services the traps are also checked to be sure they are still set properly and the lures are refreshed on a schedule to ensure maximum potential to trap any target moths.

The season began June 4th and was finalized September 10th with minimal interference with harvest. We can report that there were no target moths collected in the traps in our region this season. We also reported no presence of Grapevine Red Blotch disease or Spotted Lanternfly in those vineyards and nurseries.

Spotted Lanternfly

Spotted Lanternfly has been closing in on our region with populations being established in Buffalo, Rochester, Pittsburgh PA, Youngstown OH and Cleveland OH, so we increased our number of traps and frequency of checking them this year. Twelve traps in total were set – 3 Circle traps and 9 sticky traps were set from Ripley to Silver Creek. (Pennsylvania is being covered by the Pennsylvania Department of Agriculture, where the New York traps are covered by the Department of Ag and Markets and NYS IPM). Traps were set up on June 7th and checked weekly. These traps are still out and being checked and the plan is to collect them at the end of November when it will likely be too cold for any SLF adults to survive in our region. To date we have not collected any in our traps or seen any when scouting around each of these locations. Pheromones are not used in the traps, so for this reason scouting is just as important as checking the trap. These results are being reported to NYS Ag and Markets.



Figure 3 SLF circle trap on Tree of Heaven



In addition to these trapping efforts, we were able to create a Spotted Lanternfly Pocket Guide for easy access to information about how to identify the life stages and when to look for them. We have distributed guides in both English and Spanish.

Figure 4 SLF sticky trap on Tree of Heaven

Wishing you and yours a healthy, blessed Thanksgiving and holiday season!





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