





CROP UPDATE August 5, 2021

photo credit-Kim Knappenberger

Cornell Cooperative Extension Lake Erie Regional Grape Program



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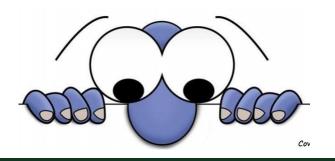
The Lake Erie Regional Grape Program is a Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extensions in Chautauqua, Erie and Niagara county NY and in Erie County PA.

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Check out the new video that Dr. Bates posted on

MyEV on variable rate fruit thinning.





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Eastern Viticulture and Enology Forum

Grower and Winemaker Town Hall: Questions From the Field and Cellar

A webinar series for Eastern Growers and Winemakers in collaboration with viticulture and enology extension programs at: Ohio State University, University of Maryland, Rutgers University, North Carolina State University, University of Georgia, University of Tennessee, Mississippi State University, Texas Tech, Texas A&M, Colorado State University, New Mexico State University, University of Nebraska, Iowa State University, Purdue University, University of Minnesota, Michigan State University, and University of Wisconsin

Regional viticulture and enology specialists will present a Grower and Winemaker Town Hall virtual meeting series to give seasonal updates and answer pre-submitted and live questions from grape and wine industry stakeholders.

The structure of these meetings depends on pre-submitted questions. Use this link to pre-submit questions for viticulture and enology specialists to answer live during the meeting. <u>Please feel free to submit</u> <u>questions related to any topic by August 9</u>th. But please see below for the topic area suggestions for the August 10th meeting.

<u>Viticulture focus area</u>: véraison to pre-harvest (crop adjustment, fruit zone management, late season diseases and insects, vertebrate pest management

Enology focus area: winemaking additions (SO2, yeast nutrients, etc.) & secondary fermentation

There will be a total of four town hall meetings throughout the growing season. Meetings will be held from 3PM to 5PM on the following Tuesdays: June 8th, July 13th, August 10th, and September 7th. The first two meetings will be hosted by Cornell University and the second two meetings will be hosted by Penn State Extension. *Meetings will not be recorded*.

<u>Register using this link</u> and choose your breakout room (viticulture or enology) for the August 10th meeting. After registering, you will receive a confirmation email containing information about joining the meeting.

Chautauqua County Soil Health Field Day

Wednesday, August 25, 2021 9:15 am – 12:30 pm

Lesch Farms, LLC

4893 West Main Road (Tent in Field)

Fredonia, New York Hosted by: Dave, Irene, John, and Heather Lesch & Family

FREE to attend, no pre-registration required NYS DEC Pesticide Recertification Credits Available

Field Day Agenda:

9:15 am: Registration, Donuts, Coffee & Beverages provided

9:30 am: Welcome & Introductions

•Discussion on programs available from USDA-Natural Resources Conservation Service

and Chautauqua County Soil and Water Conservation District to assist with implementing soil health practices.

•Overview of Lesch Farms tillage and cover crop practices. View cover crop interseeder, planters,

and strip till equipment - Lesch Farms, LLC Field Day Hosts

10:00 am: NY Soil Health Trailer Demonstrations - Healthy soil can reduce nutrient

loss from intense rainfall events which keeps crops productive and our water cleaner -

Fay Benson, Extension Educator, Cornell University SCNY Regional Dairy Team, Cortland, NY **11:00 am: Weed, Insect and Disease Challenges with Tillage Practice Changes -** Farmers make changes to their rotations and tillage practices and utilize more cover crops to create a healthier environment for soil microbes and crops. However, those changes often create an environment that is more desirable to unwanted pests as well. Dan will discuss some of those pests and management considerations to control them -*Dan Steward, Field Crop Consultant, WNY Crop Management Association, Randolph, NY*

11:45 am: View and Discuss Soil Pits Highlighting Soil Health Indicators and How Soil Properties Influence Soil Function - Matt Havens, Soil Scientist, USDA-Natural Resources Conservation Service, Belmont, NY

12:30 pm: Opportunity to ask additional questions and receive Pesticide and CCA credits Please note: Moderate walking required at the field day to view demonstrations. Seating will NOT be provided - please bring your own lawn chair if needed.

NYS DEC Pesticide Recertification Credits are available: Category 1A- Ag Plant, 0.75 points and Category 21-Field and Forage, 0.75 points. Bring your NYS DEC Pesticide Applicator License to receive credits.

This informational program is being organized by: Chautauqua County Soil & Water Conservation District; USDA-Natural Resources Conservation Service; and Cornell Cooperative Extension of Chautauqua County in cooperation with Lesch Farms, LLC; Western NY Crop Management Association; Pioneer Seeds; Preferred Seed and Lamb & Webster.

Plan to join us to learn more about Soil Health for your farm on Wednesday, August 25th from 9:15 am until 12:30 pm at Lesch Farms, LLC in Fredonia, NY.

Business Management

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

Herbicide Update

It looks like our late spring fears have come home to roost. Rumors of Interline shortages were circulating in June and have now hit the market. Many growers timed purchases and have adequate supply. Small amounts are still available at higher prices. It's also possible that all this water has increased the use of herbicides as conditions for weed growth have been excellent. Round-up in row middles is a mostly excellent alternative. It will require careful management practices this time of year. You'll want to avoid contact with foliage so planting a cover crop may remove foliage on the floor of row middles. Mowing is also an effective method of removing grape foliage. Acreage with round up resistant weeds, particularly marestial, follow-up mowing will control weed seed development that round-up does not control. A hooded boom should also be considered essential and inexpensive. ½ a 50 gallon barrel and some old carpet should do the trick. In this situation cover-crop is an ideal solution. For growers without experience, the best solution is going to be mowing and probably repeated mowing for this year.

A bit of good news on the berry moth front. Growers are in a position to continue scouting and manage berry moth relative to their level of risk. Many weather stations seem to indicate that a 4th generation will not happen. This will result in some meaningful savings of time, labor and even material cost. A few stations did already hit 1620 growing degree days. Be careful in those areas and make sure you read Andy's article this week. If those stations are close to you but not right next door, hopefully you can improve the date accuracy with your own wild grape bloom.



Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

Winter Cover Crops

I glad to notice seeders driving down some vineyard rows the last couple of days. Now is the time to get your winter cover crops planted. Having green middle rows certainly helps with tractor and foot traffic during the soggy months. There are many seed options depending on what your vineyard floor management goals are, but some suggested species are Cereal Rye, Winter Peas, Buckwheat, Red Clover, and Diakon Radish. The general idea is to allow vineyards and cover crops to adapt to specific conditions. For instance, sandy soils can benefit from having more organic material added to them to increase water and nutrient holding capacity. And heavy clay soils can benefit from radish and other plants with deep roots, which break up the soil and allow it to breathe and manage water better.

Here are some of the benefits of cover crops:

- Provide organic matter that breaks down in the soil to slowly release nutrients necessary for healthy vine growth
- Suppress weeds
- Increase biodiversity from additional vine friendly micro-flora and fauna
- Prevent soil erosion
- Improve soil structure for water retention and root development
- Provide habitat for beneficial insects
- Allow the soil to hold more moisture from the winter/spring precipitation
- Permit easier access to vineyards during wet weather

NOAA's National Weather Service Forecast by 12 Hour Period for Portland, NY

Notes: Weather forecasts are sourced from National Oceanic and Atmospheric Administration's (NOAA) National Weather Service.

National Weather Service Forecast (click to link)

NOAA's Disclaimer (click to link)

UTC Forecast Time: 2021-08-05T05:38:17+00:00

Overnight: Mostly clear, with a low around 62. South wind around 5 mph. Thursday: Sunny, with a high near 78. Northwest wind 3 to 8 mph.

Thursday Night: Mostly clear, with a low around 64. Southwest wind 3 to 8 mph. Friday: Mostly sunny, with a high near 81. Southwest wind around 10 mph.

Friday Night: Mostly cloudy, with a low around 68. South wind 2 to 9 mph.

Saturday: A chance of rain showers between 8am and 11am, then a chance of showers and thunderstorms between 11am and 2pm, then a chance of showers and thunderstorms. Partly sunny, with a high near 82. Chance of precipitation is 40%. New rainfall amounts less than a tenth of an inch possible.

Saturday Night: A chance of showers and thunderstorms before 8pm, then a chance of showers and thunderstorms. Partly cloudy, with a low around 67. Chance of precipitation is 40%. Sunday: A slight chance of rain showers before 8am, then a slight chance of showers and

thunderstorms. Mostly sunny, with a high near 82.

Sunday Night: A slight chance of showers and thunderstorms before 8pm. Partly cloudy, with a low around 70.

Monday: A slight chance of rain showers between 8am and 2pm, then a chance of showers and thunderstorms. Mostly sunny, with a high near 86. Chance of precipitation is 30%.

Historical Growing Degree Days (base 50) for CLEREL

Notes: Current season accumulation is reported as the thick blue line from January 1 through date of this report. Historical season data is reported between January 1 and December 31 of each year. The legend indicates how many GDDs had accumulated by the same date in previous years and the final total for the year on December 31.

Data is sourced from Cornell's Northeast Regional Climate Center (NRCC) high resolution gridded data service.

In Figure 1 below, the cumulative growing degree days for this year are denoted by a thick blue line and total 1620 from January 1, 2021, which is just ahead of the five-year average of 1605.

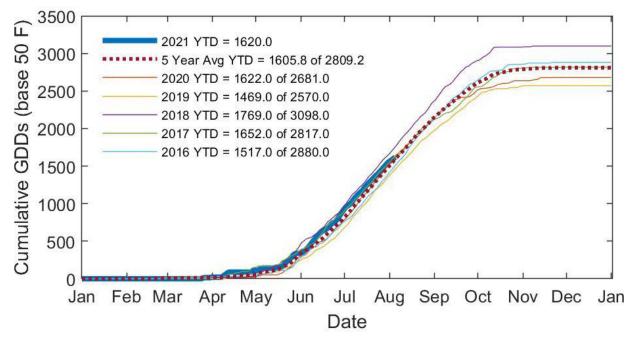


Figure 1. Historical Growing Degree Days (base 50) for Cornell Lake Erie Research and Extension Laboratory in Portland, NY

Historical Precipitation (inches) for CLEREL

Notes: Current season accumulation is reported as the thick blue line from January 1 through date of this report. Historical season data is reported between January 1 and December 31 of each year. The legend indicates how many inches of precipitation had accumulated by the same date in previous years and the final total for the year on December 31. Data is sourced from Cornell's Northeast Regional Climate Center (NRCC) high resolution gridded data service. Everyone is aware that June was a dry month and we were well below the average rainfall for the last five years.

July, on the other hand, was not. In Figure 2 below, follow the thick blue line that represents 2021. We are almost caught up to the five-year average (dotted red line), trailing only by only 2.3 inches.

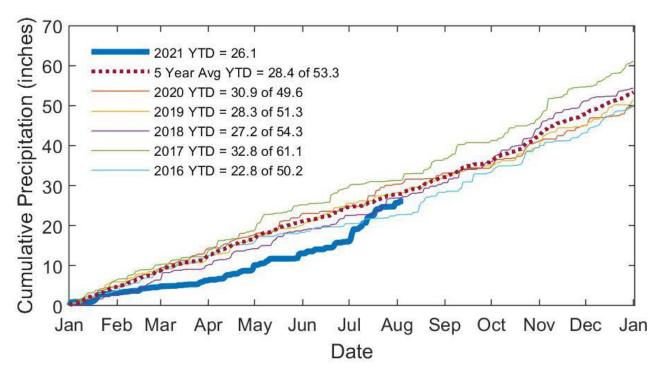


Figure 2. Cumulative Precipitation in inches for Cornell Lake Erie Research and Extension Laboratory in Portland, NY



PA Update

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

Weather: Rainfall for July at our location was 6.2 inches, making July 2021 the wettest since July 2009. Heat accumulation for July at our location by the lake, was 641.3 growing degree days (gdds), leaving us just slightly cooler than average for the month. Our August rainfall total is now 0.48". Our gdd total from April 1 through July 31 is about 1644, which is still well above our 20 year average for the season. We have accumulated about 71.5 growing degree days so far during August. The short-term, weekend forecast looks mostly dry, with a 40% chance of rain on Saturday, and highs in the lower to upper 80s.

Disease: The rain on August 1st does not appear to have generated a downy mildew infection period at our location, but did at others along the belt, according to DMCast. Scout your vineyards for downy mildew on leaves. Scouting at our site has turned up downy mildew on some of our table grapes, that are very susceptible to it (namely Marquis). However, I've not found any on our unsprayed Concord, and don't anticipate problems with downy mildew on Concord. However, our wetter conditions will contribute to the development and maintenance of this disease in area vineyards, among susceptible varieties.

To avoid reinventing the wheel, I've borrowed some information from a previous update about downy mildew: The presence of active white sporulation on the undersides of leaves means the downy mildew pathogen is capable of spreading guickly under wet conditions and can spiral out of control, strip vines of their leaves and effectively end the season (and the ripening of canes for next year's crop). If you find yourself trying to control this disease well into the ripening period (especially on wine grapes) be aware that your list of chemical control options will become shorter as we get within 30 (Ranman, Reason), then 21 (Ziram), then 14 (Revus, Revus Top, Zampro) days of harvest, until in the end you'll be left with some formulations of Captan, copper, and phosphorous acid products (0 day pre-harvest interval). It's also important to remember that materials like Ranman, Reason, Revus/Revus Top, and Zampro contain chemistries that are prone to the development of resistance. These materials should not be used to put down an epidemic - which will speed up the resistance development process - but rather to maintain a clean vineyard. And, although phosphorous acid products are less prone to resistance development, you will enhance the chances of losing this technology to resistance as well, by using these materials on a heavily diseased vineyard; limit your use of phosphorous acid products to three applications per season. Copper formulations would be least risky in terms of the development of resistance and can be an effective means of controlling downy and powdery mildew on juice grapes late into the growing season. Just be mindful of varieties that may be injured by copper applications, and that copper injury will be exacerbated by application under slow drying conditions and application to wet canopies (for example, don't make applications to dew covered canopies in the early morning). For wine grapes, be aware that excessive copper residues on fruit at harvest can cause problems with fermentation (copper kills yeast). If you are protecting a non-bearing, young vineyard from downy mildew (you're not selling/harvesting a crop), you probably can continue to use mancozeb products, which are very effective against downy mildew, carry a low (no?) risk of resistance development, and will not burn the leaves.

Late season sprays for powdery mildew on juice grapes should be based on crop size (the more above average the crop, the more necessary it will be to keep canopies clean, longer) and anticipated weather conditions. At this point in time, the weather has pushed us a bit ahead of average

in terms of growing degree days. In our experience over the years, we have always managed to harvest an average Concord crop in an average year, with spray programs that were terminated after the 2nd post bloom spray for powdery mildew. That spray program included a couple of tebuco-nazole materials at the outer ends of the program (10-12" pre-bloom, 2nd post bloom) with the best materials (like Quintec or Endura) at the core of the program (immediately before bloom and 10-14 days later (1st post bloom)).

Foliar nutrient sprays like Nutrol (with a surfactant) or Harvestmore will provide some added deterrent to buildup of powdery mildew on leaves. Trials we've run with Harvestmore show that this product, applied as a foliar nutrient at 5 lbs/A, will provide about 30% suppression of mildew on Concord leaves. If you have an enormous crop and you're still applying a resistance prone material to a 'clean' canopy (one of the sterol inhibitor fungicides or something like Quintec, Vivando, or Torino), you should tank mix these materials with a Nutrol or Harvestmore-like material or sulfur (for varieties that are not damaged by it) for resistance management. And make sure to limit your applications of resistance prone materials to two per season. Another option for mid/late summer powdery mildew on leaves is copper/lime. I know some of you cringe at the thought of applying copper/ lime, but in our trials here at the North East lab we have had very good control of leaf infections with copper/lime applications to Concord. And with copper, there are no resistance issues. Just be careful to apply copper/lime only when you have good drying conditions to limit the odds that leaf injury may occur; ideal conditions are clear, sunny, low humidity with some air movement. Avoid applying copper to dew-covered leaves in the morning.

As for black rot, we are done with needing to control this disease. However, you may continue to see symptoms of the disease show up over the next week or so, a result of infection periods that occurred around the middle of July, near the end of the susceptibility period.

Vineyard Technician Position available at the North East Lab

The Penn State Lake Erie Regional Grape Research and Extension Center in North East, PA is looking for a full-time person to help manage a 40-acre research vineyard. In addition to maintaining the vineyard the responsibilities will also include working with the research and extension staff to examine novel approaches to viticulture that address the needs of the grape industry. The ideal candidate should have sufficient experience in viticulture and a PA pesticide applicators license.

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PA Update

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

In the Vineyard (8 -5- 21)

Grape Berry Moth (GBM) – Time to spray for High Risk sites

This week (8/2-3) while scouting, I was finding GBM eggs on berries at a few High Risk sites in both Lake City and North East PA (Figure 1).

Depending on where your vineyards are located in the region, 1620 GBM DD will be reached either sometime this week or next week. (See the Table below of NEWA stations around the Lake Erie Region, provided by Kim Knappenberger). For specific timings for an insecticide application, it is important to check the GBM Degree Day Model in NEWA <u>http://newa.cornell.edu</u>, choosing the closest station near your vineyard. All High and Severe Risk sites should receive an

insecticide application for the Third Generation.

Ingested and Contact Insecticides – See Table 4.2.2 on pages 63-64 in the <u>2021 New York and Pennsylvania Pest</u> <u>Management Guidelines for Grapes</u> to determine which insecticides are designated as ingestion required (I), contact activity (C) or both (I,C).



Figure 1. Two grape berry moth eggs on a Concord berry. Photo – Andy Muza, Penn State.

<u>Ingested Insecticides:</u> If you are using insecticides that must be ingested, (i.e., Intrepid, Altacor, Verdepryn, Delegate) the most effective timing to apply these materials is before egg laying begins, so as close as possible to 1620 DD. This may require applying these insecticides as early as 3 days before1620 DD is reached at your site if many acres need to be covered.

<u>Contact Insecticides:</u> If you are using contact insecticides, (e.g. Imidan, pyrethroids such as Danitol, Baythroid, Brigade, Mustang Maxx, Sniper, etc.) then these insecticides should be applied between 1621 - 1710 DD.

DO NOT neglect scouting low and intermediate risk vineyards. Scout when GBM DD accumulation reaches 1470-1620 DD. If more than 15% damaged clusters are found, then also apply an insecticide in these areas.

NEWA location	Wild Grape Bloom date*	GBM GDD total for 8/5/2021	Date expected to hit 1620
Ransomville	5/31/2021	1515	8/9/2021
Burt	6/6/2021	1366	8/15/2021
Corwin	6/2/2021	1467	8/11/2021
Brant	6/1/2021	1516	8/9/2021
Versailles	6/1/2021	1459	8/11/2021
Hanover	6/2/2021	1482	8/10/2021
Sheridan	5/22/2021	1711	8/1/2021
Silver Creek	6/3/2021	1474	8/11/2021
Silver Creek Double A	5/26/2021	1605	8/6/2021
Dunkirk Airport	5/29/2021	1594	8/6/2021
Forestville	5/27/2021	1529	8/9/2021
East Fredonia	5/31/2021	1480	8/10/2021
Fredonia	6/2/2021	1448	8/12/2021
Brocton Escarpment	5/31/2021	1476	8/11/2021
Portland	6/1/2021	1491	8/10/2021
Portland (LERGP West)	5/29/2021	1558	8/8/2021
Westfield	6/2/2021	1482	8/10/2021
Ripley	5/27/2021	1549	8/8/2021
Ripley Escarpment	5/26/2021	1542	8/8/2021
Ripley State Line	5/26/2021	1566	8/7/2021
North East State Line	5/26/2021	1513	8/10/2021
North East Escarpment	5/24/2021	1599	8/6/2021
North East Sidehill	5/25/2021	1553	8/8/2021
North East Lab	5/26/2021	1605	8/6/2021
Harborcreek	5/26/2021	1637	8/5/2021
Harborcreek Escarpment	5/30/2021	1438	8/12/2021
Lake City	5/26/2021	1594	8/6/2021

*Estimated date provided by NEWA website. Wild grape bloom occurs when 450 base 50BE degree days have accumulated from January 1st of the chosen year.

The difference in wild grape bloom between Portland and Portland LERGP is likely due to marginal differences in the readings coming off of respective sensors or even marginal differences in microclimate. A spread of 2 days falls within the margin of error and the models give advance messages that bloom is approaching."

Pre-harvest wine grape grower / winemaker round table meetings

Join PSU Grape and Wine Team members for a grower meeting before the 2021 grape harvest

Location: Lake Erie Regional Grape Research and Extension Center, 662 North Cemetery Road, North East, PA 16428

Date/Time: August 12 (Thursday), 10 AM - 4 PM

Registration is free but required. (<u>REGISTER HERE</u>).

LUNCH is provided.

Agenda: 9:15 AM - Registration, Refreshments 10:00 AM - Welcome and Introductions 10:30 AM - Host location overview, Tour, and Discussion 12:00 PM - Lunch 1:00 PM - Grower round table discussion of viticulture topics (pests, harvest decisions, cultivars) 3:00 PM - Break 3:20 PM - Update of grant-funded research and extension efforts of PSU Wine and Grape Team; Future plans for extension meetings in 2022 4:00 PM – Adjourn

Updates and Information

Kimberly Knappenberger, Viticulture Assistant, LERGP

NEWA Stations Update

Portland Escarpment is still experiencing issues with the temperature and relative humidity sensor. We would encourage you to check the Brocton Escarpment,Portland or Portland (LERGP West) stations for your pest models and forecasts. Rainfall seems to be accurate.

Both the North East Side Hill and Harborcreek stations are collecting data more reliably with recent upgrades on internet service to them. On the NEWA website that should mean fewer brown italicized data points. Thanks to both of those station hosts!

Unfortunately it looks like the Ransomville station is in need of replacement. This station was originally set up in May 2006 and is the oldest station in our network. Rainwise stations have a life expectancy of 5-10 years, making this one well beyond that range. We are currently working to see what we can do to get it replaced. The temperature appears to be accurate, but the rest of the data do not appear to be, so we would recommend checking the Corwin, Burt or Appleton stations for your model information.

Other links of interest:

LERGP Web-site:

Cornell Cooperative Extension website:

Cornell CALS Veraison to Harvest Newsletter:

Efficient Vineyard:



Appellation Cornell Newsletter:

COVID-19 resources:

Need information? View the following Cornell CALS and CCE Resource Pages Updated Regularly

General Questions & Links:

https://eden.cce.cornell.edu/

Food Production, Processing & Safety Questions:

https://instituteforfoodsafety.cornell.edu/coronavirus-covid-19/

Employment & Agricultural Workforce Questions:

http://agworkforce.cals.cornell.edu/

Cornell Small Farms Resiliency Resources:

https://smallfarms.cornell.edu/resources/farm-resilience/

Financial & Mental Health Resources for Farmers:

https://www.nyfarmnet.org/

Cornell Farmworker Program

www.farmworkers.cornell.edu

www.trabajadores.cornell.edu (en espanol)