

Concord Cluster 08/15/2022-Kim Knappenberger

CROP UPDATE August 18, 2022

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.

LERGP Research Demo Day at CLEREL! Wednesday, August 31, 2022 9:00am-1:00pm

Come spend the morning with us on Wednesday, August 31st. We will have coffee and snacks for you in the morning before we get started with vineyard tours and research demonstrations. You can either ride a haywagon or walk the farm with us and catch up on what we are doing here at CLEREL. We are excited to have you here and share what we have been up to.

This event is free of charge but we need a head count so it is greatly appreciated if you would register by either <u>registering on line</u>, calling (716) 792-2800 ext 201 or e-mailing Katie (<u>kjr45@cornell.</u> <u>edu</u>)

Please come spend the morning with us and then join us for a cookout lunch. One NYSDEC Pesticide credit has been approved!











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Viticulture Jennifer Russo, Viticulture Extension Specialist, LERGP

In the Vineyard

The Cornell Lake Erie Research and Extension Laboratory officially called Concord veraison on August 17, 2022, 70 days after bloom. In our phenology block the vines are checked on a weekly basis and veraison occurs when 5% of berries on 50% of the clusters show color change. You should check your blocks and record your veraison date in the LERGP Planning Calendar that was provided to our members as a resource for timely viticulture, business, and integrated pest management, as well as a record keeping tool. As a rule of thumb, harvest usually begins 30-34 days after veraison so we are anticipating the week of September 19th as the beginning of the 2022 harvest season.



Photo 1 Concord grape clusters showing signs of berry ripening and color development submitted by Bob Betts



With Concord veraison officially called, there is a MyEV tutorial that may be helpful in the upcoming harvest that you could start watching now and use to help with your harvest efforts <u>Click Here to watch the tutorial</u>. This video walks through how you can use myEV collectors to track where a job was left off out in the field. You can download the <u>collector template here</u>.

PA Update

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

<u>Weather:</u> At our location by the lake, our August rainfall to date is 2.9", the vast majority of which fell over 2 weeks ago. Growing degree day accumulations (gdds) for August are at about 390, and we have accumulated 2027 gdds since April 1 (about 4-5 days ahead of our long-term average?). Our short-term forecast is dry tomorrow (August 19), 20% chance for rain on Saturday, increasing to 50% by Saturday evening, and 60-70% chance for rain on Sunday and Monday. Temperature highs will be in the low 80s (above average) through the weekend.

Here at our location by the lake, we are seeing plenty of color in Concord with veraison called on August 16/17. Veraison in our Chancellor occurred about August 12, followed by Vignoles on the 13th, Chambourcin on the 15th, Riesling and Vidal on the 17th.

<u>Diseases:</u> Weather conditions on August 8th and 9th have produced a little downy mildew development at some locations, and symptoms incited by more recent rainfall on August 16/17 should become visible early next week. Scouting susceptible varieties here at our farm (Vidal, Niagara, any V. vinifera) has not turned up anything, but I have seen downy mildew on leaves of Vidal at other locations, mostly on the younger, more vulnerable leaves. Do your best to maintain a tight grip on this disease on susceptible varieties. I'm not concerned about it on Concord. For more information on this disease, I've reposted from one of last year's crop updates:

How do I tell downy mildew from powdery mildew?

Niagara leaves: upper left is powdery; upper right is downy; lower center is healthy.

Note that downy mildew lesions are more clearly defined, more vivid, sharper edges. Powdery mildew lesions have "blurry" or more diffuse edges.



The pathogen that causes downy mildew is dependent on wet conditions; without a wet plant surface through which spores need to swim to reach infection sites (stomates), no infection takes place. Scouting for the distinctive white 'downy' sporulation on the undersides of leaves yields valuable information with regard to future need to spray. Growers of susceptible varieties do well to keep closely monitoring their vineyards for active sporulation.

Fruit are resistant by now, but leaves will remain susceptible all season, though they do become less susceptible as they age. For this reason, the limiting or elimination of new shoot growth by veraison, through good nutrient and/or canopy management, can help to reduce the supply of susceptible tissue in the vineyard during ripening, and make post veraison control of this disease more manageable. I have gone into vineyards in late August-early September and observed that downy mildew was largely present on new shoot growth, but not on mature leaves at older nodes. There were at least two reasons for this: i) new shoot growth is more susceptible than older, mature growth, and ii) new shoot growth, unless just sprayed, is unprotected or less protected by previous fungicide applications. Symptoms on mature leaves in late summer may appear different from those on young leaves in early spring.

The sight of active, white sporulation on green vine tissues means the downy mildew pathogen is capable of spreading quickly under wet conditions, and that sprays for downy mildew should continue for susceptible varieties. Even humid nights that result in heavy dews by morning, can continue to fuel downy mildew development, generating fresh sporulation that can spread the disease rapidly when plant surfaces are wet. If you let downy mildew get out of control, it can strip vines of their leaves and in the worst cases, effectively end fruit ripening for the year, and shoot ripening for next year's crop. Your grapevines go into winter dormancy in poor condition, and are more vulnerable to damage by severe cold, leading to crown gall and expensive trunk renewal the following season, with little or no crop to pay for it; all that stuff is connected, so <u>you want to keep downy mildew</u> <u>under very tight control, especially on Vitis vinifera.</u>

<u>Chemical control of downy mildew</u>: Your list of chemical control options will start to dwindle as we get within 66 (Mancozeb products, Ridomil MZ), 42 (Ridomil copper), 30 (Ranman, Reason), 21 (Zi-ram), and finally 14 (Revus, Revus Top, Zampro) days of harvest. There is also the list of strobilurin containing fungicides that control downy, mainly Abound (not in Erie county PA) and Pristine. How-ever, be aware that widespread resistance to strobilurins by the downy mildew pathogen has been documented in many places in the Northeast, and so this class of fungicides may not be among your best options. In the end you'll be left with Captan, copper, and phosphorous acid products (0-day pre-harvest interval), which have their own shortcomings, discussed below.

Products like Ridomil (the mefanoxam component), Ranman, Reason, Revus/Revus Top, Phos acid products, and Zampro, are more rainfast than the 'old standard' surface protectants like copper, mancozeb, ziram, and captan, but contain chemistries that are prone to the development of resistance. Therefore, they should not be used to put down an epidemic, which will only speed up the resistance development process. Even phosphorous acid products can be lost to resistance through repeated applications on a diseased vineyard, so keep downy mildew well under control. <u>The resistance prone materials (Ridomil, Ranman, Reason, Revus/Revus Top, Zampro, Phos Acid products) are best used to maintain a clean vineyard, NOT to put down an epidemic</u>. Conversely, the surface protectants would be least risky in terms of the development of resistance and can be an effective means of controlling downy mildew late into the growing season. Just be aware of seasonal limits, so plan ahead as best you can.

Here are some precautions to consider with use of the 'old standard' surface protectants:

 Captan is toxic to plants, and for that reason, is formulated to remain on the surface of the plant as a protectant. Tank mix partners, like oils, solvent based insecticides, and emulsifiable concentrates, may enable captan to penetrate into plant tissues which can lead to plant injury. Therefore, oils and some liquid insecticides should not be applied with Captan or within 14 days of a Captan application. Check out this link from Dan Ward:

https://plant-pest-advisory.rutgers.edu/grape-injury-from-captan-mixed-with-oil-containing-products/ Always read the label carefully.

- There is the concern for plant injury by copper applications, which 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). The addition of lime to the application raises the pH of the spray solution, reduces the solubility of the copper, and reduces the chances for plant injury by copper.
- Consider that copper is poisonous to yeasts and that excessive copper residues at harvest can
 interfere with fermentation, and wine stability and quality. Unfortunately, it's impossible to predict
 how high residues will be on fruit at harvest; that's going to depend on the copper formulation
 (some of the newer coppers utilize lower copper concentrations, but may also be more rainfast),
 rate of material used, number and timing of applications made, spray coverage, and amount of
 rainfall from application to harvest. I am not aware of any information that establishes a nice,
 clean cut-off date or pre-harvest interval for avoiding excessive copper residues at harvest, but
 I have heard that cutting off copper use about a month before harvest may be sufficient in most
 cases.
- There is also evidence that late Captan sprays can delay fermentation and have negative effects on wine quality, but the consequences seem less severe and irreversible than those associated with copper use. For more on this, consider this online article by Annemiek Schilder, former fruit pathologist at Michigan State University: <u>https://www.canr.msu.edu/news/late_season_fungicide_sprays_in_grapes_and_potential_effects_on_fermentatio</u>

If you are protecting a non-bearing, young vineyard from downy mildew (you're not selling/harvesting a crop), you can continue to use mancozeb products to control downy mildew past the 66-day pre-harvest interval. You can also consider using mancozeb after harvest to keep canopies clean of downy mildew and 'firing on all cylinders' until that first frost. The longer your vines can continue to produce and store carbohydrates after harvest, the better prepared they'll be to withstand winter cold without damage (and the crown gall that follows).

For **<u>powdery mildew</u>** on natives, it's all about keeping canopies functional to the point where the crop will get ripe on time. At this point in the season, I suspect there are few cases where continued protection of Concord (or Niagara) leaves from powdery is still needed. <u>*I'm more concerned about poor ripening conditions* (cloudy, wet weather) than anything else, and its critical for ripening of very large crops that we get some sunny, dry weather over the next 2-4 weeks. In overcropped vine-yards, we cannot spray our way out of poor ripening weather.</u>

In wine varieties, especially those that produce tight clusters, a Botrytis specific fungicide spray at veraison and about 2-3 weeks later can help manage **bunch rots** but will only be effective if you're spraying for Botrytis. In warm, wet harvest seasons, we can also see some sour rot caused by non-Botrytis microbes that cannot be controlled with Botrytis specific fungicides. Fruit zone leaf removal, applied earlier around bloom, can significantly reduce bunch rot development now in these

varieties. Research has shown that the benefits of leaf removal tend to diminish the later its applied.

Controlling fruit flies (with insecticides) during the latter part of the ripening period (beginning around 15 brix) can significantly reduce sour rot development. Applying insecticides with sterilants or antimicrobials like Oxidate or Fracture can further improve control over insecticides alone. However, always rotate insecticide chemical classes to delay the development of resisitance.





Updates and Information

Kimberly Knappenberger, Viticulture Assistant, LERGP

Spotted Lanternfly

We have been talking a lot about the Spotted Lanternfly for quite some time, and are glad to hear that so many of you are keeping watch for them. The good news is that we have not found any adults or nymphs in the seven traps that we have set up between Ripley and Silver Creek! The bad news is that there are only those seven traps, and even though we check them weekly, it is possible that their presence would escape detection with so few traps.

With many people looking for them we have a greater chance of catching them early before the population is established. We are including a pdf created by the NY State DEC Ag and Markets. This shows in detail not only the life cycle stages of the Spotted Lanternfly, but also some of the most common insects that are misidentified as Spotted Lanternfly. We hope this helps! In Pennsylvania you can report SLF sightings to <u>Online SLF Reporting</u> or at 1-888-4BAD-FLY (1-888-422-3359).

In New York you can send a photo and the location to spottedlanternfly@agriculture.ny.gov.

Vineyard Improvement Program

The time is now! If you or someone you know has been wanting to apply for this program but is unable to prove that it is/was a Concord vineyard, veraison to fruit maturity is the perfect time! Concord grapes have a distinctive smell and taste that make it easy to confirm and we are happy to come take a look. We realize that most of you probably don't have those neglected vineyards that can be found driving around the area, but you might have a neighbor, friend or relative that does. Feel free to send them to the website at lergp.com and click the big purple button that says Vineyard Improvement Program, or have them contact Kim at ksk76@cornell.edu. This is only for New York state and only for Concord vineyards at least 1 acre in size. This program wraps up in March of 2023 (unless an extension is granted) which means that any project begun now will need to be finalized during this growing season - vineyard removed and cover crop planted with 4-6" of growth and zero to few grapevines regrowing in order to be finalized.





THE INVASIVE SPOTTED LANTERNFLY

SPOTTED LANTERNFLY (SLF) IS AN INVASIVE PEST from Asia that prefers to feed on tree-of-heaven, an invasive tree species, but will also feed on - and harm - important New York State crops and plants. Grapes, hops, fruit trees, maples, and walnuts are all at risk. We need your help to protect agriculture in New York State, so please report SLF if you see it.

STATE Enviro

SLF life cycle stages from nymph to adult: actual size ADULT-WINGS FOLDED EARLY NYMPH LATE NYMPH SPOTTED LANTERNFLY (SLF) Seen from May Seen from July Seen from July until July until September until December (Lycorma delicatula) If you believe you've seen the invasive spotted lanternfly, To find out more, please visit: please send a photo and the location to: www.agriculture.ny.gov/ spottedlanternfly spottedlanternfly@agriculture.ny.gov Look-Alikes: SLF is often misidentified as these other common insects LARGE MILKWEED EASTERN BOX AMERICAN BUG ELDER BUG DOG TICK (Oncopeltus fasciatus) (Dermacentor (Boisea trivittata) variabilis) FIGURED TIGER MOTH GYPSY MOTH



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	Wild grape	DD total	Forecasted
	bloom	on	GBM GDD
NEWA Location	date*	Aug 18	for Aug 22
Brant	May 27	1914	2011
Versailles	May 30	1797	1897
Hanover	May 30	1850	1952
Sheridan	May 28	1961	2063
Silver Creek (Route 5)	May 31	1894	1997
Silver Creek (Double A)	May 28	1965	2067
Dunkirk Airport	May 29	1974	2077
Forestville	May 29	1879	1980
East Fredonia	May 31	1794	1895
Fredonia	May 31	1807	1910
Brocton Escarpment	May 30	1832	1931
Portland	May 30	1868	1970
Portland (LERGP West)	May 29	1960	2064
East Westfield	May 31	1804	1906
Westfield	May 31	1838	1940
Ripley	May 30	1909	2011
Ripley Escarpment	May 30	1853	1956
Ripley State Line	May 30	1899	2003
North East State Line	May 31	1799	1896
North East Escarpment	May 29	1888	1985
North East Sidehill	May 30	1839	1935
North East Lab	May 30	1937	2042
Harborcreek	May 30	1879	1983
Harborcreek Escarpment	May 31	1745	1845
Lake City	May 31	1882	1982
Ransomville	May 30	1943	2050
Burt	June 7	1615	1721
Corwin	June 1	1781	1885
*Estimated date provided by NEWA website			
*** Not on forecast yet			

Chautauqua County Farm Bureau® is working hard to gain workforce options, retain necessary protectants, and ensure policy that benefits our growers



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Last week I included the links to getting started with myEV, and I bet you all have watched those tutorials and have your farm all set up right? No? Well, then this is yet another perfect opportunity for you to delve into the world of myEV how tos. This week's link takes you to a practical application highlighting the workflow of using myEV using early season shoot mapping as an example with an <u>instructional video</u> from start to finish. Watch this video and spend 30 minutes with our very own, Dr. Terry Bates.

Below are links to tutorials of each individual step:

Uploading a spatial NDVI file from a data logger

Creating validation points and collecting field data

Translating an NDVI spatial map into a Shoot Count spatial map

<u>Cleaning</u> and <u>trimming</u> the raw data

Interpolating the cleaned data

WORKFLOW:

Creating a block



Questions? Suggestions? Contact us!

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