Cornell Cooperative Extension

Lake Erie Regional Grape Program

PennState Extension

Figure 1. Dead primary Concord bud and 3" secondary shoot. Photo – Andy Muza, Penn State

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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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How to join a Zoom meeting video (1 minute):
https://www.youtube.com/embed/vFhAEoCF7jg?rel=0&autoplay=1&cc_load_policy=1

Joining and Configuring Audio & Video (1 minute):
https://www.youtube.com/embed/HqncX7RE0wM?rel=0&autoplay=1&cc_load_policy=1

We look forward to seeing you at
Zoom Coffee Pot Meetings

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Business Management

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

Virtual Office Hours: Indefinitely postponed

Virtual coffee pot meetings have been a success! At least in terms of attendance, growers are connecting, participating and getting the pesticide credits they need. With the ability to zoom in speakers from outside areas, the breadth of knowledge and access to information is substantially improved. If you have not already registered, please do so. The information truly is valuable and using a cell phone to connect from a tractor has been doable for many growers. Without video, you might not earn credits, but your operation will benefit from the available expertise. That promise being made; I'll take it back for next week. For next week, it'll just be your regularly scheduled LERGP programming. We will still be there to help you with your vineyard questions.

As far as virtual office hours go, attendance was fairly minimal. As you've no doubt heard, they've been temporarily cancelled. We want to continue to interact with growers and please feel free to contact us with questions. We are available via e-mail and phone. Also, we want to make sure you do not want virtual office hours. I've put together this survey to make sure the reason you were not connecting is that you're not interested or things are just too busy right now. Please let us know that virtual office hours don't work for you. If there is a way they could work, perhaps a different time or day, make sure you fill out this survey and let us know.

I won't take this personally, we all know how virtual life has become since COVID started. Many office people are doing nothing but video conferencing all day, every day. In the midst of that, your grapes still need the time and care that is always required at this time of year.

As NY and PA both begin to open, it's happening slowly and cautiously. We're excited to resume face to face meetings but also concerned that it will not happen during this growing season. Thank you to those that continue to engage, I hope you find it as helpful as we do rewarding. For those that haven't, please consider filling out the survey or registering for a coffee pot.

Virtual Office Hours Survey:
https://cornell.qualtrics.com/jfe/form/SV_bxPVtHHCaDP7FYx

Coffee Pot Registration:
https://cornell.zoom.us/meeting/register/tJYpdeyoqD8uE9LvZWrt3eNpaoI4r7BSFRUx
As always you can reach us via phone or email:

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EPA Releases Temporary Guidance on Respiratory Protection for Agricultural Pesticide Handlers During COVID-19

There is no higher priority for EPA than protecting the health and safety of Americans, especially during the COVID-19 public health emergency. EPA has heard from states and stakeholders about Personal Protective Equipment shortages in the agricultural sector. To respond to these reports and to help ensure the health and safety of America's farmers, EPA is providing temporary guidance regarding respiratory protection requirements for agricultural pesticide handlers. Our guidance aligns with recent OSHA memos on respirators while addressing EPA's responsibilities under FIFRA and the Agricultural Worker Protection Standard (WPS).

Additional Information

The **temporary** guidance outlines approaches to address the unavailability of required respiratory protection and respiratory fit testing that should **first be exhausted before considering any alternative options. Options include:**

- Use alternative NIOSH-approved respirators offering equivalent or greater respiratory protection than those required on the pesticide label;
- Hire commercial applicator services with enough respirators and respiratory protection capabilities;
- Opt to use agricultural pesticide products that do not require respirators; or
- Delay pesticide applications until another compliant option is available.

If the above options are exhausted, EPA's guidance provides additional options with strict terms, conditions, and exhaustion requirements to minimize potential incremental risks to workers:

- Reuse and extended use of disposable N95 filter facepiece respirator;
- Use of "expired" respirators;
- Use of respirators certified in certain other countries or jurisdictions meeting protective conditions outlined; or
- Delay the annual respirator "fit test."

- This is a temporary policy. EPA will assess the continued need for and scope of this temporary guidance on a regular basis. To read the guidance in full and to learn more about EPA's Worker Protection Standard, visit this webpage.

Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

And They're Off!

As I drove around the region this last week, it is quite evident that canopies are filling in. And if you suffer springtime allergies, you may already be aware of the blooming locust trees without visually noticing it. Please be certain to reference your NY and PA Pest Management Guidelines for Grapes to stay on top of your spray program, understanding that primary and secondary shoots may be at different stages due to frost damage. Research dictates that starting now and for four weeks after bloom is the time to get your fertilizer down.

I included the Growing Degree Day and Precipitation graphs and information below provided by Dr. Jim Meyers for CLEREL and the Lake Erie Grape Belt. We are running a little behind the past 5-year average for GDDs and above the past 5-year average for Precipitation. Per Dr. Terry Bates, "the Lake Erie GDD model suggests bloom will be on June 12th, 2020. At this point, air GDD and lake GDD are both about the same in predicting bloom (about 70% accurate). Unusually warm or cold temps at this time can swing the bloom prediction in either direction. Temps for the next 10 days, although cooler than the past week, are more normal (50-70F)…

Although secondary shoots can catch up, I would predict with the late bud break and late frost that bloom on secondaries will be later than the primaries this year. If bud break and frost had been earlier, the secondaries would have more time and heat to catch up…things are just too compressed this season."

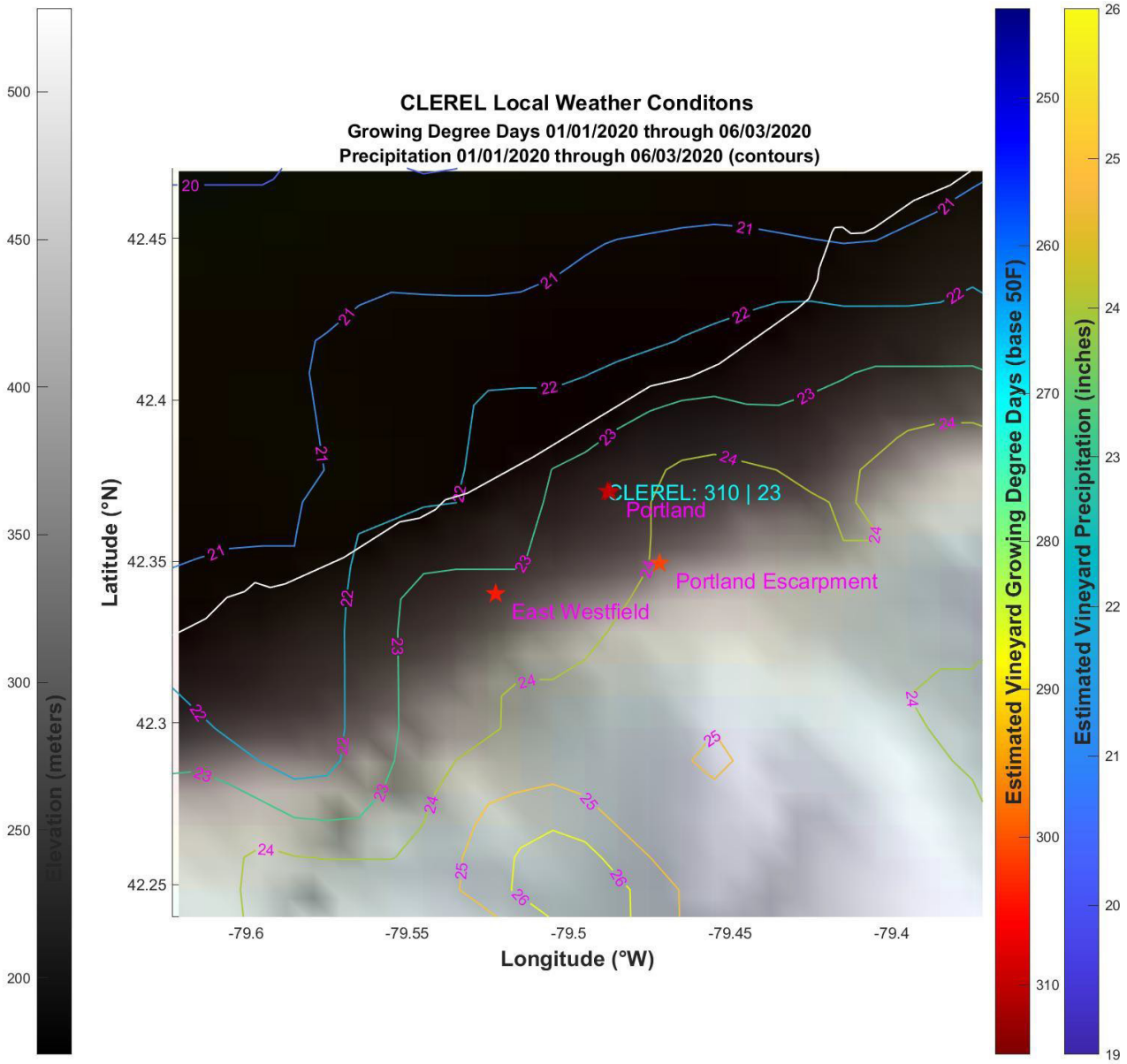


Figure 1. Cornell Lake Erie Research and Extension Laboratory Local Weather Conditions. GDD and Precipitation for 1/2020-6/3/2020

Notes: Year-to-date Growing Degree Days (GDDs) are reported as color-coded symbols your vineyard (star), nearby vineyards(circles), and CCE offices (squares). Year-to- date precipitation is reported as color-coded contours. Site symbols are annotated with GDD and precipitation (e.g. 110 | 12 indicates 110 GDDs and 12 inches of rain). Yellow circles are NEWA stations closest to your site. GDDs and precipitation are sourced from Cornell's Northeast Regional Climate Center (NRCC) high resolution gridded data service which calculates **GDD using daily high/low temperatures, not hourly**. Elevation data is sourced from United States Geographical Survey (USGS) digital elevation model.

NOAA's National Weather Service Forecast by 12 Hour Period for CLEREL

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: 2020-06-03T02:08:32-04:00
Overnight: A slight chance of showers. Mostly cloudy, with a low around 64. Southwest wind around 11 mph. Chance of precipitation is 20%.

Wednesday: Showers and possibly a thunderstorm before 11am, then a chance of showers. High near 72. Southwest wind 5 to 15 mph, with gusts as high as 26 mph. Chance of precipitation is 90%. New precipitation amounts between a half and three quarters of an inch possible.
Wednesday Night: A slight chance of showers before 11pm. Partly cloudy, with a low around 59. Southwest wind 6 to 9 mph. Chance of precipitation is 20%.

Thursday: Mostly sunny, with a high near 79. South wind 5 to 7 mph becoming west in the afternoon.
Thursday Night: Mostly clear, with a low around 63. South wind 3 to 5 mph.

Friday: A slight chance of showers, then a chance of showers and thunderstorms after 2pm. Mostly sunny, with a high near 77. Chance of precipitation is 40%. New rainfall amounts of less than a tenth of an inch, except higher amounts possible in thunderstorms.
Friday Night: A chance of showers before 2am. Partly cloudy, with a low around 61. Chance of precipitation is 30%.

Saturday: Mostly sunny, with a high near 73.

Historical Growing Degree Days (base 50)
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.

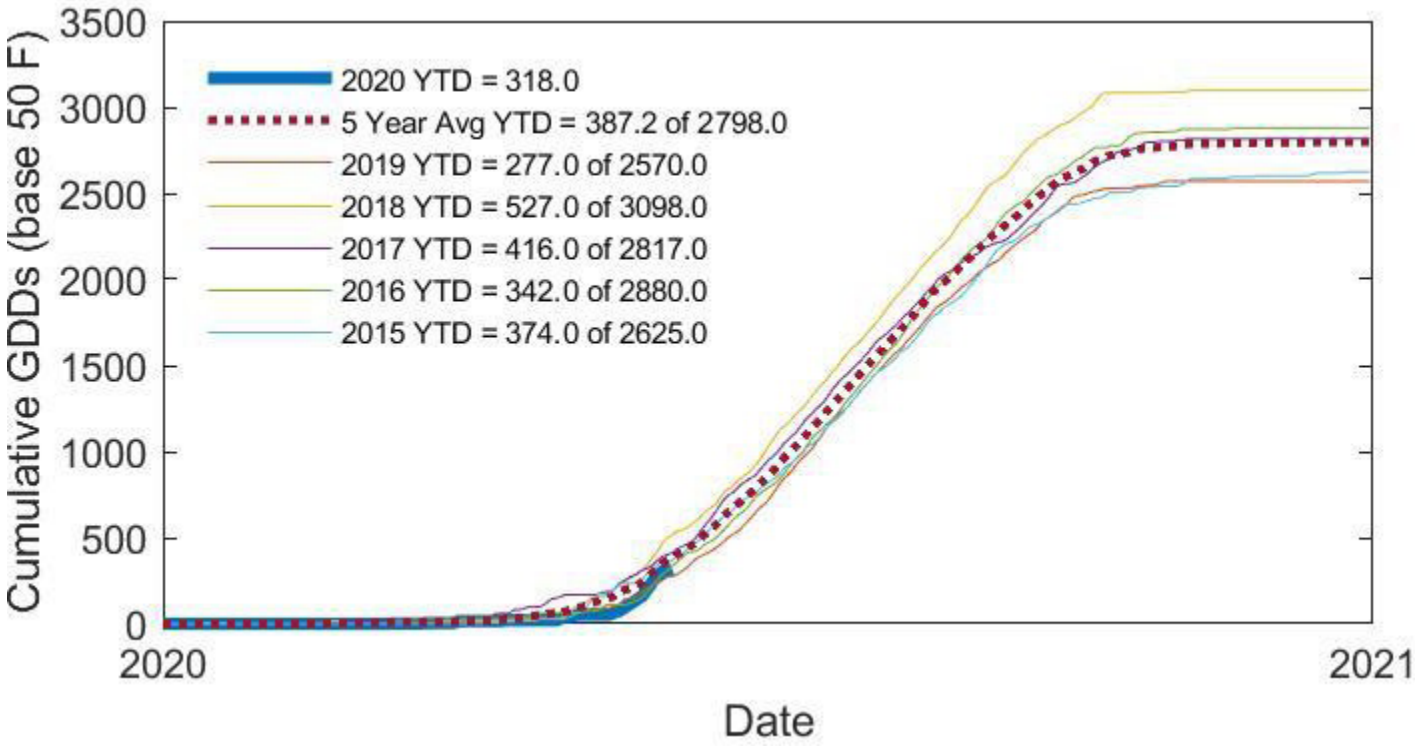


Figure 2. CLEREL Historical Growing Degree Days (base 50)

7-Day GDD Forecast

Future GDD total accumulations are estimated using temperature forecasts sourced from National Oceanic and Atmospheric Administration's (NOAA) National Weather Service. If you report a date (send me an email) for wild grape bloom near you the GBM model will use it, otherwise wild bloom date will be estimated.

Date	Phenology (GDD base 50F)	Grape Berry Moth Model (GDD base 47F, after wild bloom) New Generations (start scouting at 750 and 1470)
6/3/2020	334	0
6/4/2020	352	0
6/5/2020	372	0
6/6/2020	387	0
6/7/2020	400	0
6/8/2020	414	0
6/9/2020	433	0

Historical Precipitation (inches)

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.

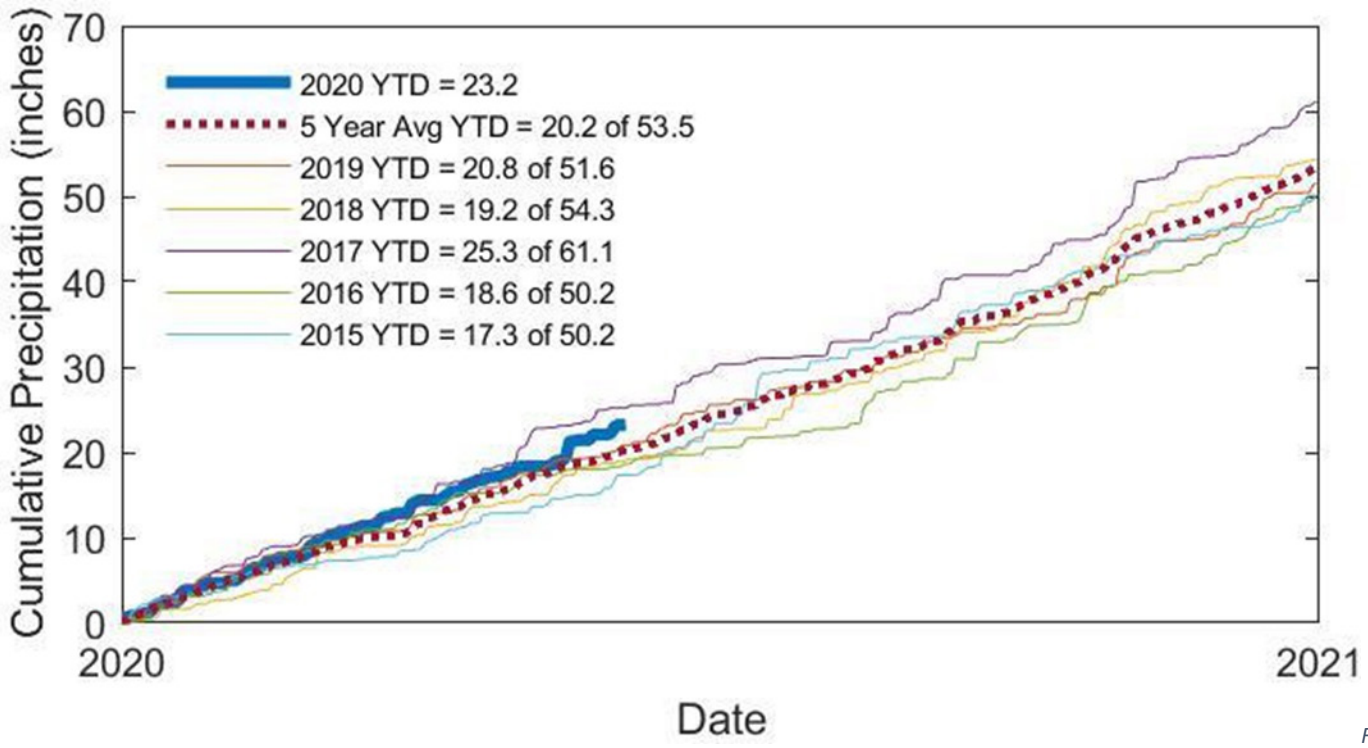


Figure 3. CLEREL Historical Precipitation (inches)

2020 Cold Injury Diagnostic Data

January 1 through May 30, 2020 Daily Low Temperatures and GDDs vs Daily Distribution of 15 Year History

This chart displays the daily low temperatures between January 1st and May 30, 2020 and compares them to the previous 15 years. The elements of the chart are as follows: 1) The red line plot is the daily low temperature; 2) The vertical dashed lines are the range of values for each day over the previous 15 year; 3) the blue area in the center of each vertical dash represents to middle 50th percentile of the historical data; 4) the dashed blue plot at the top of the middle 50th percentile represents the 25th percentile of the warmest temperatures; 5) the yellow shaded area above the warmest 25th percentile plot represents days in 2020 that were in the top 25th percentile of historical low temperatures; 6) the dashed blue plot at the bottom of the middle 50 percentile represents the 25th percentile of the coldest temperatures; 7) the red shaded area below the coldest 25th percentile plot represents days in 2019 that were in the bottom 25th percentile of historical temperatures; 8) the green line plot represents the GDD accumulation in 2020; 9) the dashed brown plot represents the historical average of GDD accumulation over the previous 15 years.

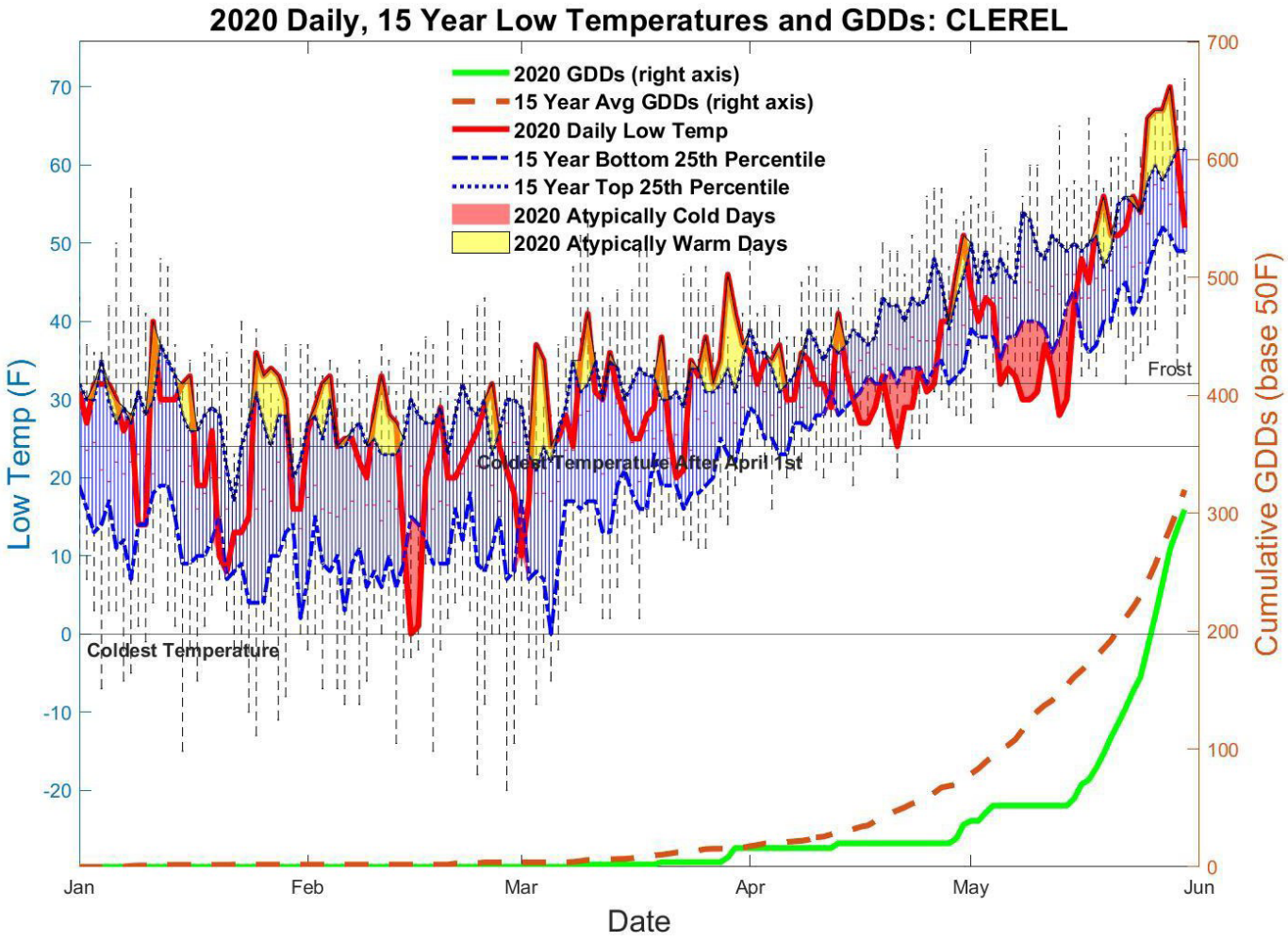


Figure 4. CLEREL 2020 Cold Injury Diagnostic Data - January 1 through May 30, 2020 Daily Low Temperatures and GDDs vs Daily Distribution of 15 Year History

Hand Sanitizer and Mask Available to Farmers

Update to Distribution of Hand Sanitizer and Masks:

We are expecting another shipment of the small bottles of hand sanitizer in the near future. No promises for this coming Monday, but it is a possibility. We also still have plenty of gallon jugs as well as face masks.
If you are interested in picking up some supplies please **sign up for your free product at** chautauqua.cce.cornell.edu/resources/hand-sanitizer-and-face-maks-request.

Production farms of any type are welcome to come pick up supplies. These farms can include dairy, livestock, grapes, vegetables, farm stands, U-Pick, nursery, equine, and craft beverage.
Supplies can then be picked up at CLEREL; 6592 West Main Road; Portland, NY on Mondays by appointment. You will be contacted by the number left on the online request form to set up a time.

Cornell Cooperative Extension Chautauqua County is distributing free hand sanitizer and face masks to producers in Chautauqua County. Sanitizer and face coverings from the NYS Department of Agriculture have been brought to Chautauqua County through a partnership with CCE Chautauqua and Chautauqua County department of Building and grounds.

For those of you who have already picked up gallon jugs of hand sanitizer with the hand pump, I'm sure you have noticed how fast and how much comes out. A simple trick that some have tried is to put a piece of a pool noodle or pipe insulator on the pump to keep it from pressing all the way. This will reduce the amount of sanitizer dispensed.

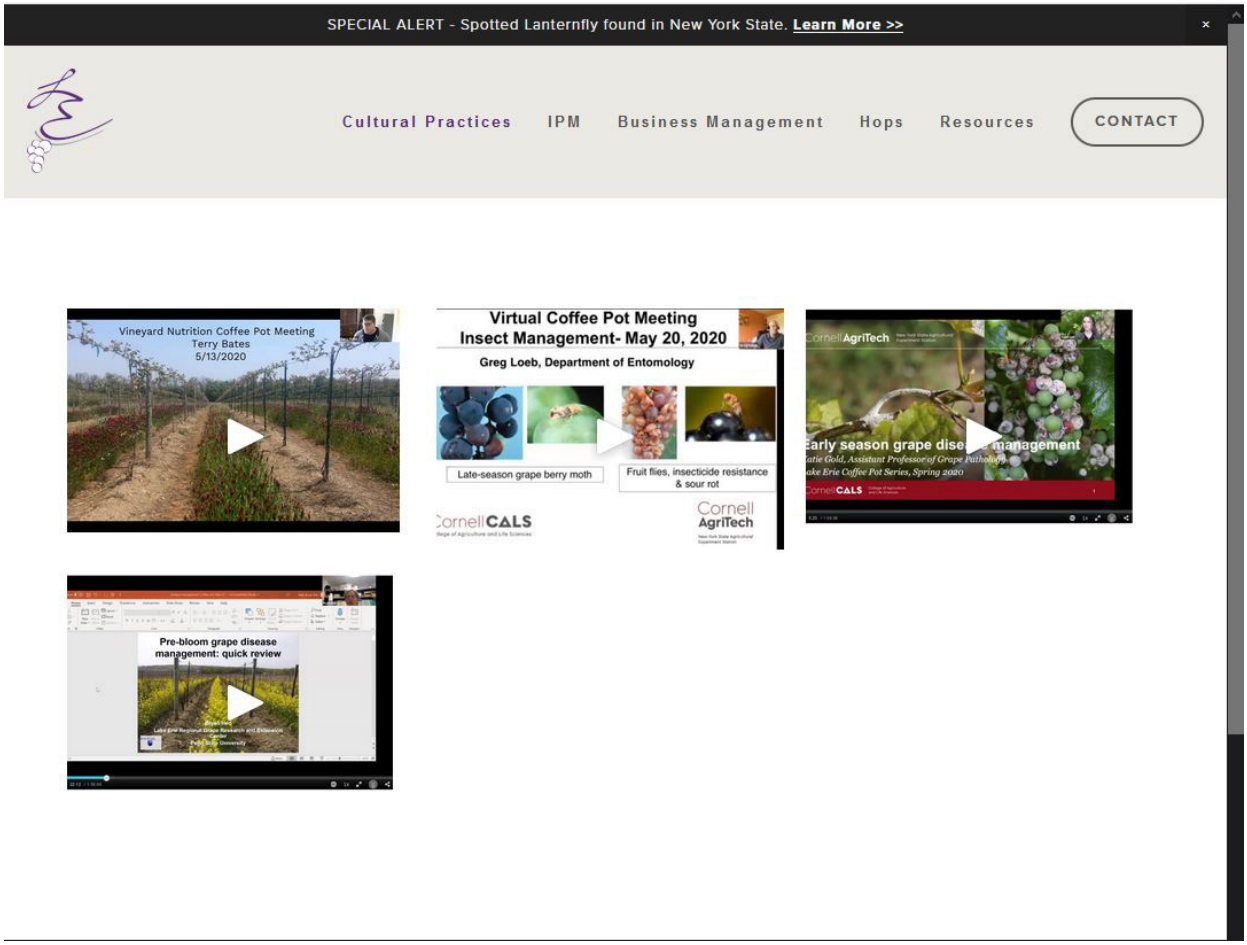
Recordings of Coffee Pot Guest Speakers

Challenges often give rise to opportunities that weren't previously available. That is exactly what has happened with our virtual coffee pot meetings. COVID-19 has caused a great deal of disruption in all of our lives, but it has also opened up some opportunities. The LERGP has been able to invite guest speakers to Coffee Pot meetings (as I am sure you all know by now!) via Zoom to bring you up to date research and innovation. We are excited to announce that we have recorded these sessions with the speakers and they are available to view on our website at https://lergp.com/2020-virtual-coffee-pot-meeting-guest-speakers . From the home page on the website you would click on Cultural Practices, and find 2020 Virtual Coffee Pot Meeting Guest Speakers. There you will find recordings from:

- 5.13.2020 Dr. Terry Bates on Vineyard Nutrition
- 5.20.2020 Dr. Greg Loeb on Insect Management
- 5.27.2020 Katie Gold on Early Season Grape Disease Management
- 5.27.2020 Bryan Hed on Early Season Grape Disease Management
    - We got a two-fer on the 27th with Katie and Bryan!
- 6.3.2020 Heather Leach on Spotted Lanternfly

We hope you will take advantage of this resource. This has been a very special opportunity to provide outside expertise for our grower community.

Recertification credits are not available for watching these recordings online, however they are available to those who attend the Virtual Coffee Pot meetings on Wednesday mornings at 10:00. If you still haven't registered, you can do so by clicking this link.



PA Update

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

In the Vineyard (6- 4- 20) – *Andy Muza*, *LERGP Extension Team* & *Penn State Extension – Erie County*

Over the last 2 weeks I have assessed a total of 13 Concord blocks in the eastern and western areas of Erie County, PA. for primary bud injury caused by the frost event on May 13th. At each block I randomly selected shoots and counted 100 primary buds to assess injury levels.

May 20 – Area assessed – Lake City (just South of Rt. 5)

Only one block examined with 92% (92/100) of primary buds dead. Primary shoots that did survive were at 2 1/4 inches and clusters were visible. Secondary buds were starting to push.

May 22 – Area assessed - North East & Harborcreek

Harborcreek – (Highmeyer and Dutton Roads) – three blocks examined with 62%, 80% and 96% primary buds dead.

North East – (just north and south of Rt. 5) – two blocks examined with only 4% primary buds dead at both sites. Primary shoots were at 1 - 2 1/2 inches in length.

North East – (just north of Middle Rd.) – three blocks examined with 38%, 48% and 61% primary buds dead.
Primary shoots were at 2 - 2 1/2 inches in length.

North East – (south of I-90) – only one block examined with 0% primary buds dead. Primary shoots were between 2- 4 inches in length.

May 26 – Lake City & Fairview Areas

Lake City – (north of Rt. 5) – only one block examined with 26% primary buds dead. Primary shoots were between 5 - 8 inches in length.

Fairview (just south of Rt. 5) – two blocks examined with 70% and 92% primary buds dead. Primary shoots that survived were between 7-10 inches in length.

In summary, frost injury was highly variable throughout the region and severe injury was not widespread across the grape belt. However, vineyards in areas south of Rt. 5 to about midway to Rt. 20 in PA (especially in Harborcreek/Lake City/ Fairview, PA) had more blocks that were impacted with high levels of primary bud injury.

If you have blocks with primary bud injury levels that you believe will impact crop size then contact your crop insurance agent.

In hard hit blocks delay your decision whether to apply a nitrogen application until just after bloom when you will have a better idea of crop potential. Depending on injury levels, no nitrogen (or at least reduced levels) may be needed this season. If applying nitrogen with the intent of increasing vine size in a low crop year, just be sure that other factors (e.g, pH levels, poorly drained soils, high weed pressure, etc.) are not the cause of vine size limitations. Dumping on nitrogen, when other factors are limiting vine size, will do little to alleviate the problem.

Figure 1. Dead primary Concord bud and 3" secondary shoot. Photo – Andy Muza, Penn State

It is also important to continue to apply crop protection sprays (e.g., herbicides, fungicides, insecticides) in blocks with frost injury to avoid a buildup in pest population levels this year and for next season. Remember that at this point in the season, primary and secondary shoots in frost injured blocks will be at different phenological stages. Therefore, secondary shoots will also have to be protected against diseases during critical growth stages (e.g., 3" - 6" for Phomopsis – Figure 1, Immediate Prebloom, first Postbloom). Hopefully, growth of secondary shoots may become more synchronized with primary shoots as the season progresses.

This past Monday (June 1) I scouted 3 Concord blocks in the Lake City, PA area. This week, Phomopsis symptoms on leaves (Figure 2) and shoots (Figure 3) are now visible. However, infection levels were low in all 3 blocks.

The majority of primary shoots were between 10 – 15 inches in length with some shoots as much as 20 inches. Secondary shoots in frost injured vineyards ranged from 2 - 5 ½ inches.

Figure 2. Phomopsis lesions on Concord leaf. Photo – Andy Muza, Penn State

Figure 3. Phomopsis lesions on Concord shoot. Photo – Andy Muza, Penn State

PA Update

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

Weather: May finished out with 4.54" rain (above 20-year average) and 255 growing degree days (gdds) (just 21 gdds below 20-year average); wetter and cooler than average. For June, we have accumulated 0.96" of rainfall and about 45 gdds. We now have 329 gdds as of April 1. All these gdd accumulations over the past two weeks have put us just about even with last year and only about 1 day behind our 20 year average, so we're caught up for now and on track for close to an average year. For North East PA, the short-term forecast looks dry except for a chance for an afternoon shower on Friday. High temps will bounce around between the mid 60s and low 80s. The next serious chance for rain isn't until Wednesday of next week.

Phenology: Wild grapes at our location by the lake have just begun to bloom as the first caps open (trace bloom). Last year trace bloom in wild grapes was on June 6, with the berry moth biofix set on June 10. In Concord, trace bloom last year was about June 21, with full bloom on June 24. Our average for trace bloom in Concord here is about June 11. Concord at our site are currently at 9.5" shoots with 4.9 leaves per shoot; Chancellor is at 8.7" shoots and 4.9 leaves.

Diseases: We've clocked up plenty of infection periods for Phomopsis, black rot and powdery mildew since bud break, and we are observing Phomopsis lesions on the first two to three internodes of some green shoots. These lesions are most likely from infection periods shortly after bud break when shoots were only two to four inches out and only the first two to three internodes were vulnerable (rain on May 22-23).

For black rot, we're currently looking to prevent leaf lesions near the fruit zone and a little beyond. Soon those leaves will be resistant to lesion formation (once they're fully expanded) and we'll shift to controlling black rot on fruit when bloom begins. Black rot generally takes about 10-14 days to show up after infection has occurred, and so the effects of these latest infection periods will become manifest shortly before bloom, on leaves in the fruit zone. Leaf lesions in the fruit zone will be in prime position to release spores for infection of fruit during the bloom and early fruit development stages. So, the presence of tan black rot lesions on leaves in the fruit zone shortly before bloom, is a **big, red flag**; be diligent with your pre and post bloom sprays, and assume that the weather will not cooperate.

For powdery mildew, scout cluster/berry stems, where this disease typically shows up first. The presence of pre bloom powdery mildew colonies on cluster stems and leaves are **another red flag** for a potentially problematic year with this disease on fruit.

Looking at the DMcast model shows that we have not had any infection periods for that disease at our location yet, but there may have been one generated a couple days ago for areas farther inland. To interpret DMcast, remember that downy mildew generally doesn't become active until about the 5-6 leaf stage. As most places are just getting into that period (we are just at the cusp of that stage here by the lake), infection periods generated by DMcast back in mid-May, can be ignored. The effects of a downy mildew infection period can generally be seen within a week of the infection period and will appear as yellow oil spots on tops of leaves, especially leaves close to the ground (the pathogen overwinters on the ground). On the undersides of infected leaves, you'll see the classic white, downy sporulation of the pathogen.

Other links of interest:

LERGP Web-site:

Cornell Cooperative Extension website:

Cornell CALS Veraison to Harvest Newsletter:

Efficient Vineyard:

Appellation Cornell Newsletter: