



## Cornell Cooperative Extension Lake Erie Regional Grape Program

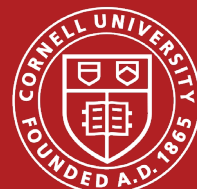


**PennState Extension**



*Healthy pink bud at CLEREL-  
Kim Knappenberger*

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## In this Crop Update: Reminders for Important Events

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- **Risk Management: High Node Pruning- Kevin Martin**
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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](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](https://www.youtube.com/embed/HqncX7RE0wM?rel=0&autoplay=1&cc_load_policy=1)

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Virtual Office Hours & Coffee Pot Meetings



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# Business Management

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

## Risk Management: High Node Pruning

It is difficult to manage risk of 100% primary bud loss. Crop insurance is a great tool. Pruning practices effectively manage risk of less severe losses. Traditional pruning strategies will reduce yield below 5 tons per acre quickly. Typically, primary losses of just 40% will result in these low yields. More and more growers have pushed bud counts higher and have followed through with effective crop thinning.

### High Node

While there are some reports of 85% - 100% primary loss, many growers with 50% loss will see no reduction in harvest yield. For these lucky and well managed blocks, the frost simply eliminates fruit thinning. 12-ton crop estimates have been very regular the last 5 years. Yields in that area, with 50% primary mortality will still yield 8 tons per acre.

The constant pressure on price and labor costs have driven growers to manage blocks this way. Industry consolidation has led to smaller growers unable to find custom operators to effectively fruit thin grapes. Hand pruning results in high expenses that may make regular fruit thinning cost prohibitive. These variables will depend on the likelihood of frost. That varies from location to location. Also, we have a fairly small sample size, so the likelihood of frost in any given block is hard to know with certainty. With all of this uncertainty, it is easy to see why all growers are managing risk differently.

### Hybrid

If this talk of high node pruning, potentially justified by mechanical pre-pruning sounds like a fairly ineffective strategy to you, crop insurance does become an essential tool. Any large growers that are skeptical of high-node, delayed crop load management should consider a hybrid strategy. Instead of aiming for 15 tons per acre (which could yield more than 5 tons with 100% of primary death), aim for 10. Yields this year would be adequate in some areas and fairly poor in others. Where yield is poor, crop insurance can be an adequate supplement in this strategy.

### Traditional

Traditional pruning runs the risk of lower than desired yields, even with extremely moderate damage. Moderate to high levels of bud damage expose a grower to an extremely high risk of financial loss. Nearly all large farms should abandon this strategy unless risk is successfully mitigated through a crop insurance policy. When average yields fall below 7 tons per acre, attributed wholly to frost events, a hybrid strategy should be implemented.

## COVID Update

As areas begin to reopen, growers should pay careful attention to state guidance. Restrictions will remain in place as both PA and NY are committed to gradual reopening. In particular, being informed is essential when managing a workforce. You'll have to follow regional and state level guidance to



ensure a safe work environment for employees.

In NY this means developing a written plan. Cornell is working on providing materials to assist growers in developing a plan. For now, NYS has issued a blank template. All employers, including essential employers must have a plan completed and posted. You can find the blank template here: [https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/NYS\\_BusinessReopeningSafetyPlanTemplate.pdf](https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/NYS_BusinessReopeningSafetyPlanTemplate.pdf) You can find more information about the requirements here: <http://agworkforce.cals.cornell.edu/2020/05/19/covid-19-safety-plans-required-for-all-businesses-in-new-york-forward/>

PA is gradually reopening in 3 phases. Closed is considered red. A restricted yellow opening will start regionally, followed by a green. You can find more information here: <https://www.governor.pa.gov/process-to-reopen-pennsylvania/> Even in the green phase CDC and DOH guidelines must be followed. Employers should provide the resource find to employees to follow CDC and DOH guidelines.

Regulations and executive orders that require postings, plans, and following CDC guidelines may potentially open up significant liability concerns for employers that attempt to operate business as usual. Lawsuits and complaints to labor associations and regulators should be expected and considered a significant risk that employers should manage. As areas begin to reopen, growers should pay careful attention to state guidance. Restrictions will remain in place as both PA and NY are committed to gradual reopening. In particular, being informed is essential when managing a workforce. You'll have to follow regional and state level guidance to ensure a safe work environment for employees.

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Hybrid Stragety	Damage		
	Minor	Moderate	Severe
Crop Before Frost	10	10	10
Target Crop	8	8	8
Primary Bud Survival	80%	50%	0%
Secondary Bud	7%	18%	35%
Primary Crop	8.00	5.00	-
Secondary Crop	0.7	1.75	3.5
Total Crop	8.70	6.75	3.50

High Node Stragety	Damage		
	Minor	Moderate	Severe
Crop Before Frost	15	15	15
Target Crop	8	8	8
Primary Bud Survival	80%	50%	0%
Secondary Bud	7%	18%	35%
Primary Crop	12.00	7.50	-
Secondary Crop	1.05	2.625	5.25
Total Crop	13.05	10.13	5.25

Traditional Pruning	Damage		
	Minor	Moderate	Severe
Crop Before Frost	8	8	8
Target Crop	8	8	8
Primary Bud Survival	80%	50%	0%
Secondary Bud	7%	18%	35%
Primary Crop	6.40	4.00	-
Secondary Crop	0.56	1.4	2.8
Total Crop	6.96	5.40	2.80



## NY FORWARD SAFETY PLAN TEMPLATE

Each business or entity, including those that have been designated as essential under Empire State Development's Essential Business Guidance, must develop a written Safety Plan outlining how its workplace will prevent the spread of COVID-19. A business may fill out this template to fulfill the requirement, or may develop its own Safety Plan. **This plan does not need to be submitted to a state agency for approval** but must be retained on the premises of the business and must be made available to the New York State Department of Health (DOH) or local health or safety authorities in the event of an inspection.

Business owners should refer to the State's industry-specific guidance for more information on how to safely operate. For a list of regions and sectors that are authorized to re-open, as well as detailed guidance for each sector, please visit: [forward.ny.gov](https://forward.ny.gov). If your industry is not included in the posted guidance but your business has been operating as essential, please refer to ESD's [Essential Business Guidance](#). Please continue to regularly check the New York Forward site for guidance that is applicable to your business or certain parts of your business functions.

### COVID-19 Reopening Safety Plan

Name of Business:

Industry:

Address:

Contact Information:

Owner/Manager of Business:

Human Resources Representative and Contact Information, if applicable:

### I. PEOPLE

**A. Physical Distancing.** To ensure employees comply with physical distancing requirements, you agree that you will do the following:








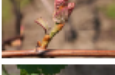








- ☐ Ensure 6 ft. distance between personnel, unless safety or core function of the work activity requires a shorter distance. Any time personnel are less than 6 ft. apart from one another, personnel must wear acceptable face coverings.
- ☐ Tightly confined spaces will be occupied by only one individual at a time, unless all occupants are wearing face coverings. If occupied by more than one person, will keep occupancy under 50% of maximum capacity.

# Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

At CLEREL in Portland, NY we officially called Concord bud break on May 15, 2020. This is called when 50% of the buds are at a Modified Shaulis Field Score of 4.0, when half or more of the leaf edge is exposed (see photo 1. also found on <https://lergp.com/>). I anticipate that with the forecasted weather of above 70°F for most of next week, we will see rapid shoot growth.

photo 1. Modified Shaulis Field Score

Modified Shaulis Field Score		
	1.0	Dormant Bud
	2.0	First Swell brownish wool clearly visible
	2.5	Intermediate Swell half or more of bud doeskin visible
	3.0	Full Swell pink on side of bud
	4.0	Budbreak half or more of leaf edge exposed
	4.5	Leaf Emergence
	4.8	Full Leaf Blade Visible
	5.1	Flat Leaf Stage one leaf perpendicular to shoot
	9.05	First Bloom 5% florets open
	9.50	Bloom 50% florets open
	9.80	80% Bloom majority of caps off
	10.2	Fruit Set berry abscission fruit >2mm diameter
	10.7	Pea-sized Berries fruit 7mm diameter
	10.9	Berry Touch
	11.5	Veraison 5% of berries have color
	12.0	Maturity Fruit ripe for harvest

Shoot and Inflorescence Development

Flowering

Berry Development

Ripening

## Frost Damage

Our region has experienced unseasonably cooler temperatures throughout April, and in the beginning of May frost and freeze events occurred. There are reports of bud damage across the belt in varying degrees. Some initial reports were 90% damaged, but after a few days the growers took a closer look and the damage wasn't as severe as they thought. My suggestion to you would be to walk your blocks, don't just observe from the perimeter, because damage is variable. Take some assessment by choosing 100 buds in representative areas in your vineyard (use spatial maps if you have them to capture zones) and count how many primaries are damage within those 100 buds. That will give you a better understanding of the extent. So far it looks like we're not at the damage level of 2012, but we are finding more damage than 2016.

If secondary buds are viable, research demonstrates that they can catch up to average bloom dates within reason. If some of your blocks have experienced severe damage, there are a few management practices that you could cut back on since you might be expecting reduced crop this year. Nitrogen applications can be reduced in severely damaged areas, however, in our grape belt region we struggle to achieve large vine size and push our vines to large yields. Take this year to build vine size in heavily damaged areas (building vine size should be a priority in all blocks). Due to the cost of potash being lower than usual, continue with maintenance applications but do not overload because the yield is reduced. Immediate pre-bloom and then post bloom sprays are still crucially important this year and you can watch from that point to decide if more are needed. Even when building vine size only, it is important to keep your leaves clean to achieve maximum photosynthesis. Keep your weed competition at bay so that they do not compete with the vine for water and nutrients when focusing on building your vine size. You should have a good idea of your crop potential by conducting cluster counts in both the affected and non-affected areas.



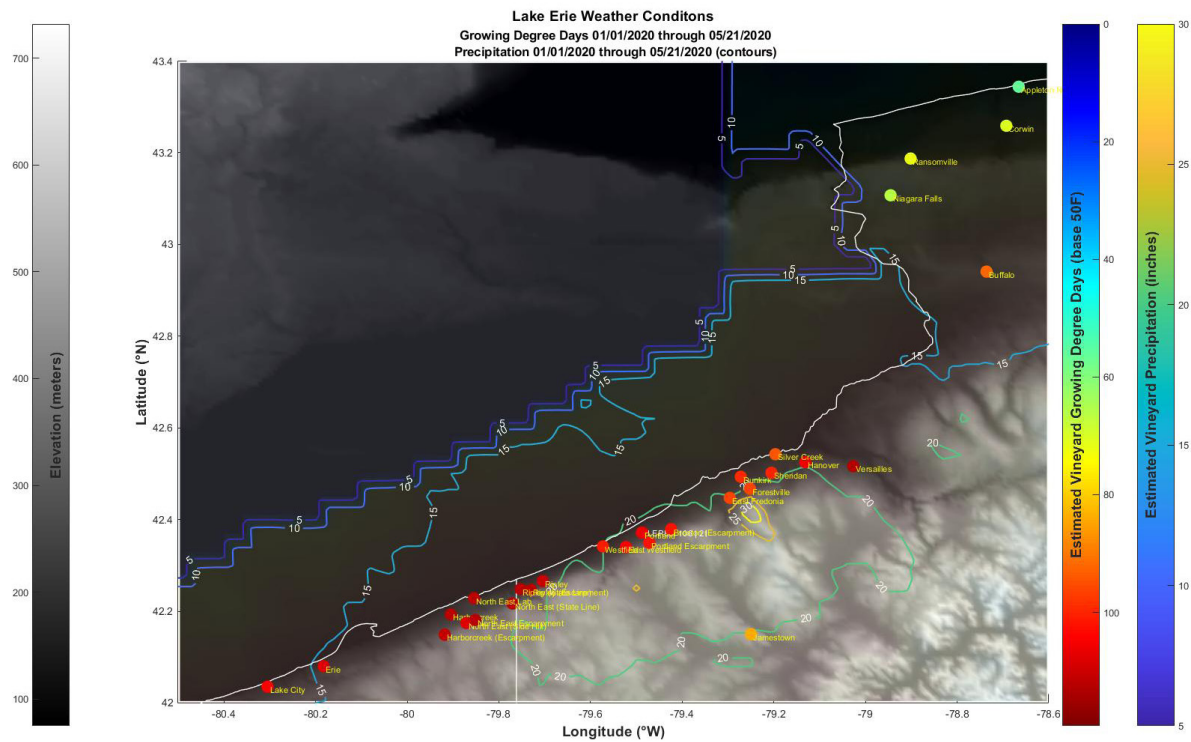


photo 2. Lake Erie Region Growing Degree Days and Precipitation from 1/1/2020 through 5/21/2020

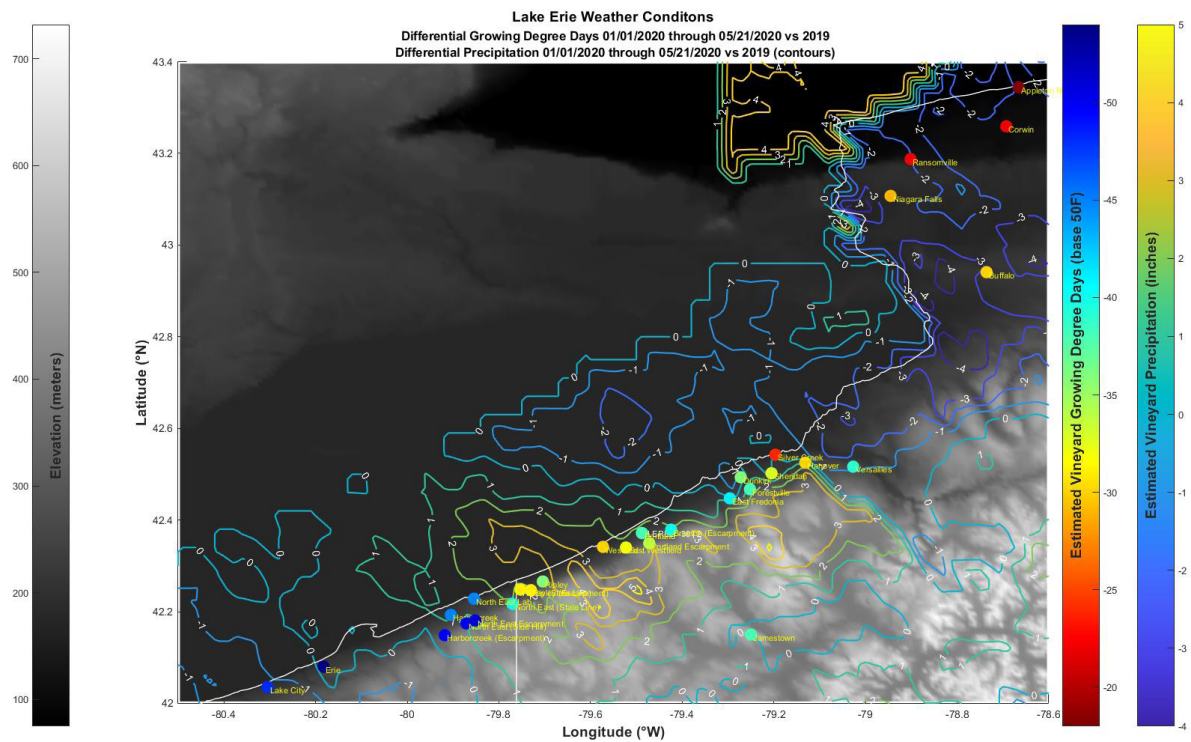


photo 3. Lake Erie Region Different Growing Degree days and Precipitation this year compared to this time 2019

## Regional Resources & Activities (10 pesticide recertification credits available):

I would like to take this moment to say Thank You to Dr. Terry Bates, Dr. Greg Loeb, and all of the attendees of the last two Virtual Coffee Pot Meetings. Both of the guest speakers gave informative presentations and entertained questions and comments from our attendees. Both of the meetings were a success and we received thank you emails and comments from our grower attendants. There are more opportunities to join us listed below and I hope that you take advantage of the opportunities to connect with researchers in our field and ask questions. See you on May 27<sup>th</sup> for Dr. Katie Gold and Bryan Hed for an informal presentation on early season disease management.

- **(Upcoming)** [What if I Can't Sell All of My Grapes? Tools for Evaluating the Impact of COVID-19 Market Disruptions on NY Vineyards](#) | *Virtual Tuesday Timely Topics* | May-26
- [Early Season Disease Management](#) | *Lake Erie Virtual Coffee Pot Meeting* | May-27 (1 DEC credit)
- [Grape Berry Moth and Mealybug Management Tips](#) | *Virtual Tuesday Timely Topics* | Jun-02
- [Spotted Lanternfly](#) | *Lake Erie Virtual Coffee Pot Meeting* | Jun-03 (1 DEC credit)
- [Open Topic, Questions From the Field](#) | *Lake Erie Virtual Coffee Pot Meeting* | Jun-10 (1 DEC credit)
- [Questions from the Field, Virtual Tailgate Meeting](#) | *Virtual Tuesday Timely Topics* | Jun-16
- [Early Season Canopy Management/Under Trellis Floor Management](#) | *Lake Erie Virtual Coffee Pot Meeting* | Jun-17 (1 DEC credit)
- [Enology Discussion, Winemaking Issues](#) | *Lake Erie Virtual Coffee Pot Meeting* | Jun-24 (1 DEC credit)
- [Vineyard Establishment, Vineyard care in the first 3 years](#) | *Virtual Tuesday Timely Topics* | Jun-30
- [Open Topic, Questions From the Field](#) | *Lake Erie Virtual Coffee Pot Meeting* | Jul-01 (1 DEC credit)
- [Open Topic, Questions From the Field](#) | *Lake Erie Virtual Coffee Pot Meeting* | Jul-08 (1 DEC credit)
- [Winemaking topic TBD](#) | *Virtual Tuesday Timely Topics* | Jul-14
- [Labor Relations](#) | *Lake Erie Virtual Coffee Pot Meeting* | Jul-15 (1 DEC credit)
- [Open Topic, Questions From the Field](#) | *Lake Erie Virtual Coffee Pot Meeting* | Jul-22 (1 DEC credit)
- [Topic TBD](#) | *Virtual Tuesday Timely Topics* | Jul-28
- [Weed Management](#) | *Lake Erie Virtual Coffee Pot Meeting* | Jul-29 (1 DEC credit)
- [Botrytis, Cluster/Sour Rot Management](#) | *Virtual Tuesday Timely Topics* | Aug-11

# PA Update

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

## In the Vineyard (5-21-20)

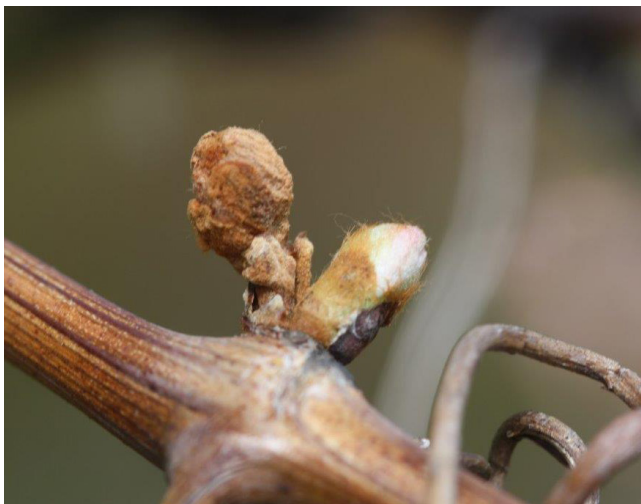
This past week I talked with 3 growers on the west side of Erie (Lake City area) and each indicated that they have 80 – 90% primary bud injury in some vineyard blocks. So far, I have only had a chance to check one of these frost injured Concord blocks (due continuous Zoom meetings). I randomly selected shoots and counted dead and live primary buds to assess the injury level. The assessment revealed that 92% (92/100) of primary buds were dead (Figure 1). Shoots that did survive are at 2 1/4 inches and clusters are visible. Secondary buds were starting to push and at this point look healthy (Figure 2). In Concord, secondary buds can provide 1/3 to possibly 1/2 of a full crop. I plan to get out and check more vineyards in the next few days to better assess primary bud injury levels.

I checked the NEWA weather station in Lake City and on the morning of May 13th the temperature dipped to a low of 28.8 F at 6 A.M. I assume that temperatures in some vineyard blocks dipped a bit lower. At my place, on the morning of May 13th, there was a hard frost on the lawn and my hummingbird feeders had chunks of floating ice. I have a Max/Min thermometer in a cold pocket in the back yard and recorded a low of 25 F.

I suggest that growers check their vineyards within the next week to assess primary bud damage. Randomly select shoots throughout blocks and record the number of dead and live



*Figure 1. Dead primary Concord bud due to frost. Photo – Andy Muza, Penn State.*



*Figure 2. Dead primary and live secondary Concord buds. Photo – Andy Muza, Penn State.*

primary buds to get an idea of injury levels (the more buds checked the more reliable the estimate). Contact your crop insurance agent to report frost injury levels.

In hard hit blocks delay your decision whether to apply a nitrogen application until just after bloom when you will have a better idea, than now, 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.

It is also important to continue to apply crop protection sprays (e.g., herbicides, fungicides, insecticides) in blocks with injury to avoid a buildup in pest population levels for next season.



# PA Update

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

Weather: We have accumulated 2.24" of rainfall and 74 gdds (below average) so far in May at our site by the lake. We have accumulated about 102 gdd as of April 1. Though May has been cold, the forecast does not indicate that the month will result in any record cold for May, but rather, that we'll start catching up to average. In the short-term forecast, there will be rain on Friday night (May 22), but just a chance of precipitation beyond that, with scattered showers, the greater threat of precipitation being in New York, rather than Pennsylvania. It appears we are finally beyond any below freezing events; the last one was Wednesday of last week (May 13). Unfortunately, the later than average bud break was not enough to keep all vineyards safe from damage. A drive around the east end of Erie county PA revealed some serious frost damage in some Concord vineyards in Harborcreek and North East.

Phenology: Here by the lake, we called 50% bud burst for Concord on about May 15. Our Niagara and Chancellor did not reach that point until about May 19. Most varieties here have broken bud, with the exception of Vignoles, Vidal, and Chambourcin. Concord shoots are currently about 1.5" at our site and of course, more like 2.5-3.5" farther inland...right about the time for that first mancozeb spray for Phomopsis.

Diseases: According to NEWA, rainfall on Friday night (May 22) will generate a Phomopsis and black rot infection period in western New York, but not in Pennsylvania...time will tell (?). Most vineyards will be near or into that 3-5" shoot stage; the time to protect emerging inflorescences that are very vulnerable to damage from Phomopsis, with an application of mancozeb or captan. Fortunately, shoot growth is finally picking up the pace with warmer weather, and the wetting periods may be relatively brief. It's the long, cold wetting periods that scare me the most when it comes to Phomopsis; shoot growth is suspended and vines remain wet, sometimes for days. Nevertheless, I suspect we will see some lesion development along the first and second internodes of new shoots. Those first few internode regions of shoots (and their leaves), will be susceptible to Phomopsis lesion development for as long as they are continuing to expand. The severity of lesion development will depend on the severity of the weather of course (how long shoots were wet and how warm it was during the wetting period), but also the stage of elongation those internode regions were in when they got infected. Internodes that got infected early in their expansion are likely to have more severe lesion development than internodes that were nearing the end of their expansion.

Our next fungicide application will target the 8-12" shoot stage, and then it's on to the immediate pre-bloom spray. Keep in mind that if the weather remains warm, we could go through these shoot stages very quickly...in less than 14 days at a time. The next spray should include something for Phomopsis, black rot, and downy mildew. The trigger for downy mildew is the 5-6 leaf stage. But then, a mancozeb spray for Phomopsis and black rot, will cover you for downy mildew anyway. You may also want to start spraying your juice grapes for powdery mildew (and your susceptible wine grapes!), especially if powdery mildew was a bit heavier than average on leaves last year: the amount of powdery mildew in a vineyard last year is always an important consideration when deciding how early to begin sprays for this disease.

# Hand Sanitizer and Mask Available to Farmers

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.

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. **To sign up for your free product please go to [chautauqua.cce.cornell.edu/resources/hand-sanitizer-and-face-masks-request](http://chautauqua.cce.cornell.edu/resources/hand-sanitizer-and-face-masks-request).**

Supplies can then be picked up at CLEREL; 6592 West Main Road; Portland, NY on Tuesday, May 26<sup>th</sup> from 11:00 AM until 2:30 PM.

Or

At Jamestown Community College Jamestown Campus Parking Lot, 525 Falconer Street, Tuesday, May 26<sup>th</sup>, by appointment only. Please contact Lisa at 716-664-9502 ext. 203 and leave a message. She will call back to set up a time to pick up the supplies.



## Does your jug dispense too much sanitizer at once? Try this!

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.

# Connect With Us!

The extension team has scheduled Virtual Office Hours on Mondays from 10:00 AM to 12:00 PM and Thursdays from 1:30 PM to 3:30 PM. During these hours you can join the already in progress Zoom meeting for as long as you need to get some questions answered.

The team consists of Jennifer Phillips Russo, LERGP Viticulture Extension Specialist, Kevin Martin, Business Management Specialist, and Andy Muza, IPM Extension. The team is planning to continue to hold these meetings until we are able to meet face to face again. We encourage all grape growers with questions to come and ask! The growing season will not wait, and we know there will be questions.

To access these Zoom meetings with a PC, Mac, Linux, iOS or Android go to <https://psu.zoom.us/j/8757764969>. If using an iPhone one-tap (US Toll): +16468769923,8757764969# or +13126266799,8757764969#

Or to call in dial:

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+1 312 626 6799 (US Toll)

+1 669 900 6833 (US Toll)

+1 253 215 8782 (US Toll)

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+1 346 248 7799 (US Toll)

Meeting ID: 875 776 4969

International numbers available:

<https://psu.zoom.us/j/8757764969>

Meeting ID: 875 776 4969

SIP: [8757764969@zoomcrc.com](mailto:8757764969@zoomcrc.com)



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