



CROP UPDATE

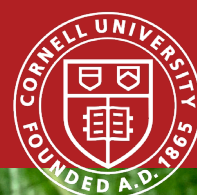
June 24, 2021

Cornell Cooperative Extension
Lake Erie Regional Grape Program



PennState Extension

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In this copy:

- Crop Estimation- Jennifer Phillips Russo
- In the Vineyard- Andy Muza
- North East, PA Update- Bryan Hed

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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Join us for a Nutrition talk by Nick Gunnar, Orbitist-

He will be walking us through the MyEV tool and its applications.

[watch this video](#) beforehand- come with questions!

Wednesday, June 30 @ 10:00am

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Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

Crop Estimation Preparation

Cornell Lake Erie Research and Extension Laboratory (CLEREL) officially called Concord bloom on June 7, 2021. Dr. Terry Bates' research on Concord berry development determined that at 30 Days After Bloom (DAB) berries reach approximately 50% of their final fresh weight. That means that on July 7th our crews will be out taking crop estimation in our blocks at CLEREL. Hopefully you recorded the bloom date for your vineyard blocks and crop estimation should be on your radar. Estimating your crop is essential to help make decisions for both the grower and the processor. Terry was our guest speaker at the June 23, 2021 Coffee Pot Meeting and mentioned using the MyEV Data Collector Tool to guide you in your crop estimation efforts. Using this tool, you can walk your vineyards and make note of where the crop is heavy and where it is lighter, then visual it on a map. That map can guide your sampling efforts to capture the variation and improve your crop estimation to be as accurate as possible. We will be having a discussion on how you can make that work for you in your vineyards next Wednesday, June 30, 2021, with Nick Gunner from Orbitist. He will walk you through tools to get you started. Here is a link to [Terry's blog post on Assess Your Freeze Damage with a MyEV data Collector](#). The same concept may be applied to crop estimation. If you still have questions, please join us for next week's Virtual Coffee Pot Series or reach out and we can get them answered for you. Below is our guidance on how to do crop estimation and the Crop Estimation Guide to help in your preparations:

Bloom date and days after bloom:

This system is based on bloom date, and in order to be accurate you need to know when your grapes were at 50% bloom. The 50-year average date for 50% bloom is June 14th. Count off starting at your bloom date and accrue the respective days-after-bloom (DAB). On the chart the DAB is found in the shaded "Time of Season" and not to be confused with "% of Final Berry Weight" directly below.

Row Spacing:

Like bloom date, you need to know your vine spacing. Row spacing determines the length of a row that will equal 1/100th of an acre. The wider the row, the shorter the sampling length. For example, sampling a block with a 10' row you will need to clean pick 45.9 feet. If your rows are at 7.5' spacing, you need to clean pick 58.1 feet. If you have 9-foot row spacing and your panels are at 24 feet then this should be easy. However, it is best to determine your row spacing and cut a length of rope to guide your sampling lengths rather than rely on post lengths that have been changed out over the years.

Sampling:

Once the row spacing and sample distance is calculated, clean pick and weigh the samples. The more samples you take, the better your prediction will be. It also helps to take samples from areas of known variation across the vineyard. For example, take 2-3 samples from high vigor, medium vigor, and low vigor sections of the vineyard and apply your predictions appropriately to those sections. If you are using a harvester to clean pick panels walk behind afterwards to assess how many grapes are still on the vine/or that are on the ground.



photo 1. Photo of length of ropes used to guide harvester on distance of crop estimation sample

Using the Chart:

Once you have the sample, the chart does the rest of the work for you. Follow the corresponding DAB down and the respective weight over and you have the estimated tons/acre at harvest. For example, let's say it's July 7th or 40 DAB (bloom on June 7th) and the average from 4 samples weighs 100 pounds. I would have an estimated 8.3 tons/acre potential crop.

Things to keep in mind:

If you have an accurate bloom date for your vineyard, follow the crop estimation chart to predict final harvest weight. If you're not and you are using the actual berry weight samples to come up with your multiplication factor, be reasonable in what you think your final berry weight will be. Some vineyards tend to have smaller average weights and some tend to be larger – and you should be starting to get an idea where your vineyard fits. Be reasonable – it is unlikely (highly

unlikely) that your Concord vineyard will average 4.0g berries at harvest even if your 30 DAB weight was 2.0 g.

Getting it right is important. Underestimating crop potential can lead to delayed harvest waiting for the grape to ripen and the BRIX to rise. Overestimating a crop load may result in unwanted thinning or unnecessary expensive chemicals being used to care for a crop that is not there.

Having an accurate crop estimation can help you make many cultural practice decisions thought the rest of the season. The following is a break-down of the process.



Length of rope cut to row spacing
(Ex. Row spacing at 9" this rope is 48.4")

1. Clean pick (harvester or by hand)
1/100 of an acre. Length of sampled area is determined by row spacing.



2. Weigh 1/100 acre sample
(Ex. Sampled weighed 68.5 lbs)



3. Use Dr. Bates: Crop Estimation and Thinning Table
(Ex. Sample weighed 68.5 lbs 30 days after bloom estimation table show 6.85 tons/acre at final berry weight)

Dr. Terry Bates: Crop Estimation and Thinning Table: 7/16/2003

Pounds of Fruit Removed in 1/100th of an Acre	Time of Season										Harvest
	20DAB	25DAB	30DAB	35DAB	40DAB	45DAB	50DAB	55DAB	60DAB	65DAB	
20	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
30	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5
40	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
50	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5
60	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
70	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5
80	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0
90	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5
100	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
110	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5
120	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0
130	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5
140	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0
150	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5
160	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0
170	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5
180	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0
190	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5
200	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0

Row spacing determines length of 1/100th of an acre
 10.0 foot row spacing = 45.4 feet = 1/100th of an acre
 9.0 foot = 40.9 feet = 1/100th of an acre
 8.0 foot = 36.4 feet = 1/100th of an acre
 7.5 foot = 34.0 feet = 1/100th of an acre
 7.0 foot = 31.6 feet = 1/100th of an acre
 6.5 foot = 29.2 feet = 1/100th of an acre
 6.0 foot = 26.8 feet = 1/100th of an acre
 5.5 foot = 24.4 feet = 1/100th of an acre
 5.0 foot = 22.0 feet = 1/100th of an acre
 4.5 foot = 19.6 feet = 1/100th of an acre
 4.0 foot = 17.2 feet = 1/100th of an acre
 3.5 foot = 14.8 feet = 1/100th of an acre
 3.0 foot = 12.4 feet = 1/100th of an acre
 2.5 foot = 10.0 feet = 1/100th of an acre
 2.0 foot = 7.6 feet = 1/100th of an acre
 1.5 foot = 5.2 feet = 1/100th of an acre
 1.0 foot = 2.8 feet = 1/100th of an acre
 0.5 foot = 0.4 feet = 1/100th of an acre

Calculation:
 45.4 foot row spacing
 45.4 foot row spacing and then
 divide by 100 to get 1/100th of an acre

Example:
 A grower has 10 foot row spacing and clean picks 40.4 feet at 25 days after bloom.
 The fruit weighs 100 pounds and the grower estimates that the berries are between
 10% and 40% of final berry weight. According to the table, the crop estimate is
 between 10.0 and 11.4 tons per acre.

Conclusion:
 This table gives the relationship between time of season and % final berry weight on
 an average year. Year to year variability in weather related berry growth adds error to
 this table. Information on current year berry growth can be obtained from the
 Fredonia Vineyard Lab (VLI) if it is strongly suggested that individual growers start
 collecting berry weight information from their own individual vineyard blocks.

photo 2. Step-by-step pictures of crop estimation process

Crop estimating at 30 DAB for 'Concords' is common for most growers. When the berries are at 50% of the final berry weight (like the example shown above) all you needed to do for final estimation is shift the decimal point over one place. However, the estimation table will work throughout the season. One thing to keep in mind when using the chart is to double check you are using time of season (DAB) in the shaded area to match up the column below.

Crop Estimation Protocol

Collecting a little bit of information from the vineyard during the growing season can greatly improve your prediction of final yields with better accuracy than the eyeball method. Know your Bloom Date. Calculate how many vines equate to 1/100th of an acre (use the Table on the back) and Days After Bloom (DAB).

Yield Components

Information you need to collect for an accurate crop estimate include:

1. Vines per acre (real count, not an estimate)
2. Spatial Maps if Available to direct sample collection
3. Know how many Days After Bloom when samples were taken
4. Average lbs fruit per vine
5. Provided Concord Crop Estimation Table

The math is easy:

vines per acre x lbs of fruit per vine x multiplier (2 if 30 DAB)/2,000 (convert tons) = yield per acre

Example: Concord planted

- **Vines per acre.** If the number is not known already, simply multiply the distance between the vines by the distance between the rows, then divide 43,560 (number of square feet in an acre) by that number to get the number of vines per acre. **In 6' x 9' row spacing (9x8 = 72); 43,560/72 = 605**
- **Clusters per vine.** 30 DAB collect and count the clusters on samples from areas of known variation across the vineyard. For example, take 2-3 samples from high vigor, medium vigor, and low vigor sections of the vineyard and apply your predictions appropriately to those sections, spatial maps can direct you to management zones. Calculate the average number of clusters per vine based on these counts. If you are using a harvester to clean pick panels walk behind afterwards to assess how many grapes are still on the vine/or that are on the ground. **Let's say 50 clusters per vine.**
- **Average cluster weight.** Weigh each sample taken above, be sure to subtract the weight of the bucket or bin used from total weight. **Let's say our average sample weight is 4.134 lbs. Divide by 50 clusters = 0.08lbs/cluster**

Let's Do the Math:

vines per acre (807) x clusters per vine (50) x 30 DAB ave. cluster weight (0.08lbs) x 2 =

807 x 50 x 0.08 x 2 = 6,456 lbs/acre (2,000 lbs/ton)

Crop Estimation is 3.23 tons/acre

Other Cultivars: clusters per vine x vines per acre x lag phase cluster weight x multiplier = yield per acre

Mechanical Crop Estimation

Like bloom date, you need to know your vine spacing. Row spacing determines the length of a row that will equal 1/100th of an acre. The wider the row, the shorter the sampling length. For example, sampling a block with a 10' row you will need to clean pick 45.9 feet. If your rows are at

7.5' spacing, you need to clean pick 58.1 feet. If you have 9-foot row spacing and your panels are at 24 feet then this should be easy. However, it is best to determine your row spacing and cut a length of rope to guide your sampling lengths rather than rely on post lengths that have been changed out over the years.

Sampling:

Once the row spacing and sample distance is calculated, clean pick and weigh the samples. The more samples you take, the better your prediction will be. It also helps to take samples from areas of known variation across the vineyard. For example, take 2-3 samples from high vigor, medium vigor, and low vigor sections of the vineyard and apply your predictions appropriately to those sections. If you are using a harvester to clean pick panels walk behind afterwards to assess how many grapes are still on the vine/or that are on the ground.

Using the Chart:

Once you have the sample, the chart does the rest of the work for you. Follow the corresponding DAB down and the respective weight over and you have the estimated tons/acre at harvest. For example, let's say it's July 25th or 40 DAB (bloom on June 15th) and the average from 4 samples weighs 100 pounds. I would have an estimated 8.3 tons/acre potential crop.

Dr. Terry Bates: Crop Estimation and Thinning Table: 7/16/2003

Time of Season	Pounds of Fruit Removed in 1/100th of an Acre	20	25	30	35	40	45	50	55	60	65	70	75	80	90	100
20DAB	25DAB	30DAB	40DAB	50DAB	Veraison	Harvest										
% of Final Berry Weight																
10	20	25	30	35	40	45	50	55	60	65	70	75	80	90	100	
10	2.5	2.0	1.7	1.4	1.3	1.1	1.0	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5	
20	5.0	4.0	3.3	2.9	2.5	2.2	2.0	1.8	1.7	1.5	1.4	1.3	1.3	1.1	1.0	
30	7.5	6.0	5.0	4.3	3.8	3.3	3.0	2.7	2.5	2.3	2.1	2.0	1.9	1.7	1.5	
40	10.0	8.0	6.7	5.7	5.0	4.4	4.0	3.6	3.3	3.1	2.9	2.7	2.5	2.2	2.0	
50	12.5	10.0	8.3	7.1	6.3	5.6	5.0	4.5	4.2	3.8	3.6	3.3	3.1	2.8	2.5	
60	15.0	12.0	10.0	8.6	7.5	6.7	6.0	5.5	5.0	4.6	4.3	4.0	3.8	3.3	3.0	
70	17.5	14.0	11.7	10.0	8.8	7.8	7.0	6.4	5.8	5.4	5.0	4.7	4.4	3.9	3.5	
80	20.0	16.0	13.3	11.4	10.0	8.9	8.0	7.3	6.7	6.2	5.7	5.3	5.0	4.4	4.0	
90	22.5	18.0	15.0	12.9	11.3	10.0	9.0	8.2	7.5	6.9	6.4	6.0	5.6	5.0	4.5	
100	25.0	20.0	16.7	14.3	12.5	11.1	10.0	9.1	8.3	7.7	7.1	6.7	6.3	5.6	5.0	
110	27.5	22.0	18.3	15.7	13.8	12.2	11.0	10.0	9.2	8.5	7.9	7.3	6.9	6.1	5.5	
120	30.0	24.0	20.0	17.1	15.0	13.3	12.0	10.9	10.0	9.2	8.6	8.0	7.5	6.7	6.0	
130	32.5	26.0	21.7	18.6	16.3	14.4	13.0	11.8	10.8	10.0	9.3	8.7	8.1	7.2	6.5	
140	35.0	28.0	23.3	20.0	17.5	15.6	14.0	12.7	11.7	10.8	10.0	9.3	8.8	7.8	7.0	
150	37.5	30.0	25.0	21.4	18.8	16.7	15.0	13.6	12.5	11.5	10.7	10.0	9.4	8.3	7.5	
160	40.0	32.0	26.7	22.9	20.0	17.8	16.0	14.5	13.3	12.3	11.4	10.7	10.0	8.9	8.0	
170	42.5	34.0	28.3	24.3	21.3	18.9	17.0	15.5	14.2	13.1	12.1	11.3	10.6	9.4	8.5	
180	45.0	36.0	30.0	25.7	22.5	20.0	18.0	16.4	15.0	13.8	12.9	12.0	11.3	10.0	9.0	
190	47.5	38.0	31.7	27.1	23.8	21.1	19.0	17.3	15.8	14.6	13.6	12.7	11.9	10.6	9.5	
200	50.0	40.0	33.3	28.6	25.0	22.2	20.0	18.2	16.7	15.4	14.3	13.3	12.5	11.1	10.0	

Row Spacing determines length of 1/100th of an acre
 10.0 feet row spacing = 43.5 feet = 1/100th of an acre
 9.5 feet = 45.9 feet = 1/100th of an acre
 9.0 feet = 48.4 feet = 1/100th of an acre
 8.5 feet = 51.2 feet = 1/100th of an acre
 8.0 feet = 54.45 feet = 1/100th of an acre
 7.5 feet = 58.1 feet = 1/100th of an acre

Calculation

43, 560 square feet per acre
 Divide by row spacing and then
 divide by 100 to get 1/100th of an acre

Example:

A grower has 9 foot row spacing and clean picks 48.4 feet at 25 days after bloom. The fruit weighs 80 pounds and the grower estimates that the berries are between 35% and 40% of final berry weight. According to the table, the crop estimate is between 10.0 and 11.4 tons per acre.

Disclaimer:

This table gives the relationship between time of season and % final berry weight on an average year. Year to year variability in weather related berry growth adds error to this table. Information on current year berry growth can be obtained from the Fredonia Vineyard Lab (or) it is strongly suggested that individual growers start collecting berry weight information from their own individual vineyard blocks.

Figure 1. Dr. Terry Bates Concord Crop Estimation and Thinning Table 7/16/2003

Grower Survey Results and Sustainability Advisory Committee Nominations

Written by Whitney Beaman for New York Wine & Grape Foundation

June 21, 2021

This has been an exciting year for sustainable winegrowing in New York! The development of a statewide **sustainable winegrowing certification program** is finally under way. This program is the culmination of numerous efforts by growers, extension agents, and industry associations over the past decade. We have now reached a critical mass of consumer demand, industry support, and institutional backing to make it happen.

Earlier this year, we conducted a Grower Sustainability Survey, and I am excited to report that almost a quarter of the New York grape industry responded, representing 7,538 total acres across all seven major American Viticultural Areas (AVAs). The goal of the survey was to assess how many grape growers across the state practice sustainable vineyard management according to the **Vine-Balance New York Guide to Sustainable Viticulture**. This grower self-assessment workbook was co-developed by the Cornell Cooperative Extension and the New York Department of Agriculture and Markets Soil and Water Conservation Committee in 2007, and later formed the basis for the third-party certification available through Long Island Sustainable Winegrowing.

What we learned from the survey is that 94 percent of grape growers practice some aspect of sustainable vineyard management and 77 percent have applied the VineBalance workbook at least once. This is extremely promising for the feasibility of using VineBalance as the basis for our fledgling statewide sustainability program. What we also learned is that the average vineyard size in New York is 70 acres, but that the range is vast. In addition, about half of the vineyards surveyed grow exclusively *V. vinifera*, but the bulk of the reported acreage (44 percent) is planted with a mix of *V. vinifera*, *V. Labrusca*, and hybrid grape varieties. This highlights the unique situation the New York grape industry is in compared to our West Coast cousins who have sustainability programs written primarily for *V. vinifera*. Here in New York, we are challenged to create a program that is inclusive of vineyards ranging from one acre to hundreds of acres, growing a diversity of grape varieties not cultivated in other parts of the country.

Developing this program will “take a village,” and that is key to our approach. Recently, we established a Sustainability Advisory Committee of growers and wineries from the Finger Lakes, and we are seeking representatives from Lake Erie, Long Island, Hudson River, Upper Hudson, Niagara Escarpment and Champlain Valley to join this committee. We welcome you to submit your committee nominations through our [online form](#), and we encourage stakeholders from across the state to engage with us throughout this process.

Sustainability Advisory Committee Nominations

We are seeking representatives from Lake Erie, Long Island, Hudson River, Upper Hudson, Niagara Escarpment and Champlain Valley to join this committee.

[SUBMIT A NOMINATION](#)

Phenological Resources:

- [Grape Disease Control, Spring 2021](#) | Katie Gold, Cornell University
- [Enterprise Tool for Eastern US Small Vineyard Management](#) | Cornell University
- [Spotted lanternfly experts debunk myths about the prodigious, pestilent pest](#) | Amy Duke, Pennsylvania State University

PA Update

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

According to the National Weather Service, temperatures (this Friday – Monday) will range between 81 – 84 degrees with a chance of precipitation (showers/thunderstorms) between 50 – 70%.

Insects

Grape Berry Moth (GBM) – Concord berries are at the stage where red discoloration of berries due to larval feeding is visible (Figure 1). So far, only a low number of GBM injured berries were found in blocks scouted this week.

From this Friday – Monday, with temperatures in the low 80's, GBM degree day (DD) accumulation will be about 26-31 DD per day. I checked most of the NEWA sites across the region and only the Sheridan site was projected to reach 810 GBM DD by as early as Monday or Tuesday of next week. The earliest that the other sites are estimated to reach 810 DD are by next Friday (7/2) or later. However, start checking the NEWA site (<http://newa.cornell.edu>) closest to your vineyards to determine when to spray high risk areas or when to begin scouting low and intermediate risk blocks. The GBM Model advises to “Prepare to scout low and intermediate risk vineyards for grape berry moth damage when DD accumulation after wild grape bloom reaches 750-800 DD. During scouting, determine if damage from first generation larvae exceeds the treatment threshold of 6% damaged clusters. If above threshold, control measures should be applied at 810 DD.”



Figure 1. Red discoloration of Concord berry caused by injury from GBM larva. Photo – Andy Muza, Penn State.

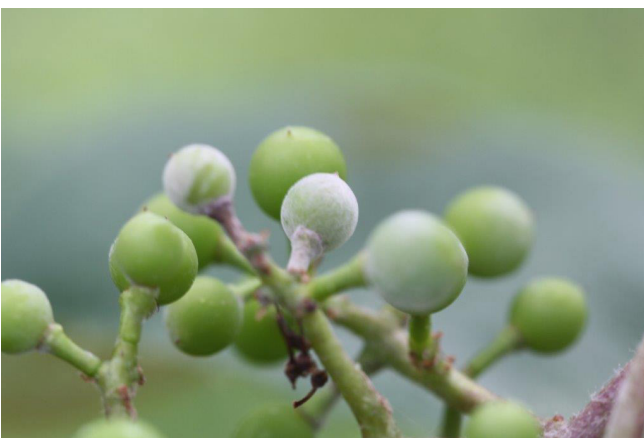


Figure 2. Powdery mildew on Concord berry and pedicel. Photo – Andy Muza, Penn State.

Diseases

At this point in the season, Concord berries should be close to resistant to new infections from powdery mildew (i.e., about 2 weeks after bloom) whereas highly susceptible hybrids and *V. vinifera* varieties are resistant after about 4 weeks. Although additional berry infections on ConCORDs may not occur after this time, the leaves, rachises and pedicels are still susceptible to infections. Scout your vineyards to determine the efficacy of your fungicide program, so far. Now, powdery mildew on berries will be noticeable (Figure 2). If powdery mildew, black rot or downy mildew is found without much effort, a second Postbloom fungicide application (within 10 - 14 days after the first Postbloom fungicide spray) is advised

in blocks with native varieties. In blocks of *Vitis vinifera* and highly susceptible hybrids a second Postbloom fungicide application should be applied. (See Bryan Hed's Crop Update concerning a second Postbloom application).

PA Update

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

Weather: Our June precipitation has received a huge boost over the past week and is now totaling 2.48". We have accumulated about 448 growing degree days so far in June (ahead of average) and we now have 816.5 gdds as of April 1. The 3-day forecast predicts a 50% chance for thunderstorms on Friday night, 60% chance of rain on Saturday, 60% chance of rain on Sunday. High temperatures in the low 80s.

Phenology: Here by the lake, we are about 12 days past bloom for Concord, not quite beyond the fruit susceptibility period for powdery mildew on Concord.

Diseases: June rainfall has resulted in four infection periods for all the major diseases in many places along the lake belt. The two previous sprays (the pre and first post bloom sprays), were "no-brainers"; use best materials, best coverage, etc, etc, etc, no matter what. But what can we use for the second post bloom spray?

Well, we're still not out of the woods for all diseases. A second post bloom spray will depend heavily on how well you've controlled diseases to date, based on the presence/absence of active disease on leaves and fruit (determined by scouting) and the fact that fruit will remain susceptible to powdery mildew for another 1 (Concord, Niagara) to 3 (sensitive hybrids, *Vitis vinifera*) weeks, to downy mildew for another 1 (Concord) to 3 (Niagara, sensitive hybrids, *Vitis vinifera*) weeks, and to black rot for another 4 (Concord/natives) to 6 (*Vitis vinifera*) weeks. So take the time to make that assessment, starting with your blocks most at risk.

If your scouting reveals black rot on leaves, your risk of fruit infection during early fruit development is high if conditions turn wet. These lesions are in prime position to release spores onto developing fruit during rain periods after capfall, and that first and second post bloom spray will need to be applied in a timely fashion to avoid losses from black rot, especially if conditions turn wet. New infections from the wetting periods generally take 10-14 days before lesions become visible. That said, infections on fruit may not become visible until the beginning of next week, as the first infection period after bloom (when there were berries present) took place around June 14th. Ziram is very effective on black rot, but must be applied before infection to control the disease. On the other hand, the sterol inhibitors like difenoconazole (not on Concord), tebuconazole, tetraconazole, flutriafol, and myclobutanil have some post infection activity in addition to protectant activity.

Continue to scout for downy mildew on leaves near the ground (especially sucker growth). "Oil spots on leaves will become visible in as little as 4-5 days from an infection period. Our last infection period was on June 21. There is more rain in the forecast for this weekend and beyond that could result in more downy mildew infections, so stay vigilant and continue to scout, especially if you're growing a susceptible variety (any *vinifera* and sensitive hybrids, Niagara and Catawba). If you see downy mildew, you will need to apply a fungicide for it in your second post bloom spray (to susceptible varieties) due to the fact that we have rain in the short term forecast. Copper/lime, Revus/Revus Top (not on Concord), Phosphorous acid products, and Zampro are all very effective. Ziram will also provide protection from downy mildew, but is not as potent as mancozeb or captan (pay attention to processor restrictions).

For decisions regarding powdery mildew, research at Cornell has shown that in most years, lightly cropped Concord vines will benefit little from continued control measures against powdery mildew, once fruit are resistant (about when Concord fruit are a quarter inch in diameter). Conversely, Concord vines with above average to large crops will benefit from continued efforts to control powdery mildew, to keep canopies operating at maximum fitness and ensure that you reach minimum sugar standards by harvest. Note the use of the term, "in most years": if conditions turn poor for ripening (cloudy and wet), all bets could be off. Juice grape growers do not have to apply "top notch" materials at this time, but could resort to a Nutrol (plus surfactant), a Harvest-More (not a fungicide, but will add a little potassium and control mildew by about 30-40%), a copper/lime spray, a tebuconazole product (which will add black rot protection too), or even a stylet oil spray (especially if you don't have a large crop and are not too concerned about a slight, temporary impairment of the canopy photosynthesis). For large crops, you could also continue to use the 'heavier hitters' like Quintec, Vivando, or Endura, but make sure you rotate FRAC groups and do not use any one of these more than twice per season. A tank mix of Nutrol or Harvest-More with these latter materials would help to delay the development of resistance.

As for more sensitive hybrids and vinifera, a second post bloom spray (and well beyond that) for powdery mildew is a must, even if conditions remain relatively dry. Remember that, unlike the other diseases, powdery mildew secondary cycles do not require rainfall to continue fueling to epidemic proportions. Materials like Aprovia/Aprovia Top, Miravis Prime, Gatten, or Luna Experience, will continue to provide excellent control of powdery mildew. Just be sure you rotate FRAC groups each time. A tank mix with sulfur (on sulfur tolerant varieties) is also highly recommended.

As I stated in the previous weeks, for premium wine varieties, now is the time to do leaf removal in the fruit zone. Leaf removal can be done by machine or by hand and generally provides sizable reductions in bunch rot on rot susceptible wine varieties (Riesling, Vignoles, Pinot noir and gris, Chardonnay, etc). Leaf removal at this time can result in a reduction in bunch/sour rots of about 50% or more at harvest. Leaf removal can also improve fruit quality and may even reduce manual harvest costs (the clusters are easier to see and remove if you're hand harvesting).



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Information for you

Kate Robinson, Administrative Assistant, LERGP

Coffee Pot Meeting June 23@ 10:00am

Join us for a presentation by

Nick Gunner, Orbitist

Nick will be walking us through the use of the MyEV tool.

[Watch this video!](#) It is a great resource.

Wednesday, June 30 @ 10:00am



Registration Requirements- Please Read!

To receive DEC and PDA pesticide credits, you are required to register for each of the coffee pot meetings you plan to attend. You do this at the [LERGP web-site](#).

You also need to have a camera on for the entire meeting.

Choose the coffee pot meeting you would like to attend-

Click on "view details"

Click on "Register for this event now"

Then send a copy of your pesticide license to kjr45@cornell.edu, In the e-mail include your Date of Birth. This step only needs to be done one time, but continue to register for subsequent meetings.

Registration is open until 8:00am the day of morning meetings and 4:00pm on evening meetings.

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Eastern Viticulture and Enology Forum

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

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. **Please feel free to submit questions related to any topic by July 6th**. But please see below for the topic area suggestions for the July 13th meeting.*

*Viticulture focus area: **post-fruit set to veraison** (crop load management, canopy management, pest management, nutrient management, mechanization of vineyard operations)*

*Enology focus area: **primary fermentation** (harvest decisions, fruit chemistry analysis, and fermentation options, e.g. non-Saccharomyces yeast, strain selection, ambient ferments)*

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: 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.

Register using this link and choose your breakout room (viticulture or enology) for the July 13th meeting. After registering, you will receive a confirmation email containing information about joining the meeting.

-[Cain Hickey](#), [Beth Chang](#), and [Tim Martinson](#)

Eastern Viticulture and Enology Forum Hosts

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)

