

Cornell University Cooperative Extension



PennState Extension

Crop Update June 6, 2019



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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.

Business Management

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

2019 Challenges: Focus On What You Can Control

As a grower you can only control so much. To focus on the rain might be exhausting. The mid-west does offer some perspective, as someone always has it worse. What you can do at this time is heavily invest in powdery mildew sprays. The challenges of this season will evolve but at the moment powdery mildew appears to pose the greatest threat to success in 2019.

The market for powdery mildew spray is quite clear. We have a lot of tools and you need to spend more than \$10 per acre in the immediate pre and post bloom sprays this year. For Concord growers nearly all of the tools, from \$12 - \$32 per acre are priced based on their performance. The more you spend the better control you will get. In general, fungicides above \$30 offered total control last year. From \$20 - \$30 control was very impressive, close to 90%. Less expensive materials performed well but certainly resulted in some late season pressure last year. So called cheap materials, in a year like this, will increase the likelihood of significant problems. Some of those materials are great and make a good deal of investment sense. There is just no longer a place for them in June. Again, the good news is understanding the quality of materials is very straight forward. If you pay more, you get more. Based on the weather, you might not have to pay more for just the materials. The application might cost more. As my colleagues mention, trace bloom will occur in the next week here at CLEREL. Our immediate pre-bloom spray has been applied. Depending on where you are at in your operation, it might take burning some midnight oil to work around the forecasted rain and make sure this application is timely.

There has been no repeat of phomopsis nightmare of two years ago, buds look fruitful so far, frost has been very limited and market issues are the best they've been in years. For financial success, focus on powdery mildew in June and in the next 21 days we'll see what the next curveball is. Some growers may need to be a bit more intensive and intentional about a lot of different management practices this year. We see a lot of "abandoned" vineyards getting renewed. The strategy there should be spare no expense and get it to cash flow as soon as you can. A revitalization should not cash flow in the first year. If you need a vineyard block with 20-foot-tall trees, poison ivy and 15% dead vines to cash flow in 2019, you're better off finding a buyer that doesn't have that need. These vineyard blocks can create a positive ROI, just not in 2019.







INSURING GRAPES

NY. 2019

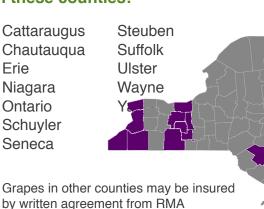
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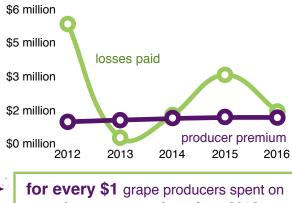
- Aug. 15, 2018: Premium Billing Date
- Nov. 20, 2018: Sales Closing, Policy Change, Cancellation, Termination Date
- Nov. 20, 2019: End of Insurance Period
 - Jan. 15, 2019: Acreage / Production Report Date

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Wild Grape Bloom and the Grape Berry Moth Model

The bio indicators that we use to help time Concord bloom are becoming visible (see Jennifer's article). One of these indicators, wild grape bloom, is also important to customize the results of the grape berry moth model on NEWA <u>http://newa.cornell.edu</u> to your vineyard operation. The date when 50% of the wild grape bunches have bloom provides the biofix date to start the model. While the GBM model on NEWA automatically provides a date for the biofix using historical phenology and weather information from a Concord block at the Fredonia Laboratory, it also provides the option of inputting the observed date of wild grape bloom. This helps to get more accurate information from the model and allows you to customize model results by running it multiple times for different blocks in different locations.

If you would like to learn more about how to implement the GBM model into your vineyard IPM strategy please get in touch with me <u>thw4@cornell.edu</u> or Andy Muza ajm4@psu.edu.



Wild Grape bloom. Photo- Tim Weigle

Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

Lake Erie Genie Bloom Prediction

The Lake Erie Genie has consulted the crystal ball, or lake model, to predict when bloom date will be for the Lake Erie Grape Region. Taking into account growing degree days, weather, and add a dose of historical data applying it to the genie spreadsheet and around and around the mathematical swirls of number go and POOF, the date pops up! As we get closer to actual bloom, the prediction gets more accurate and it is 100% accurate on the day of bloom! Imagine that!

This year that date has been predicted to be June 13.5th. Does that mean it will be June 13th at noon or midnight? Nobody knows. However, it does give an approximate time to work with for getting your prebloom EBDC spray on (prior to the first blossom opening or NOW) and to start planning any nitogen applications that may be in your management plans.



The other bio-indicators are also matching up with the Genie's prediction. The area locust trees bloom around ten days before Concord grapes and on June 3rd, they were in bloom. There were signs of trace wild grape bloom on June 5th around the area and once they are in full bloom, then Concord grapes usually follow seven days later. The wild grape bloom date is also the biofix used to start collecting degree days for the Phenology based degree day grape berry moth model found on NEWA <u>http://newa.cornell.edu</u>. While the GBM model on NEWA provides an estimated wild grape bloom date using historical weather and phenology information, it also allows the user to input a wild grape bloom date they observed, which is the best way to ensure the greatest accuracy of the model.

Bloom doesn't happen at the same time in every area, so, check out your favorite wild grape vine in close proximity to your vineyard site and continue to monitor GBM development as the season progresses.



PA Update Andy Muza, LERGP Extension Educator, Penn State University

In the Vineyard (6-6-19)

Immediate Prebloom Fungicide Application – This is the yearly reminder that a fungicide application needs to be applied at the Immediate Prebloom stage (just before blossoms open). This is a critical spray needed to protect rachises, pedicels (berry stems) and berries from our four major diseases (Phomopsis, Black Rot, Downy Mildew and Powdery Mildew). Fungicide products which are **highly effective** against all of these diseases should be used. See the <u>2019 New York and</u> <u>Pennsylvania Pest Management Guidelines for Grapes</u> to compare efficacies of fungicides (Table 3.2.2, pages 47 - 49) and for comments concerning the use of various fungicides (pages 78 – 87). The next critical fungicide application will be the first Postbloom spray which should be applied within 10 – 14 days of the Immediate Prebloom spray. Again, **DO NOT** stretch spray intervals beyond 14 days during this critical period for protection of the clusters. (Check the NEWA station http://newa.cornell.edu closest to your vineyard blocks for 5-day weather forecasts and for disease models).

Rose Chafer – beetles should start emerging from the soil soon (i.e., in about the next 3 – 4 days). Vineyards with a history of this pest or blocks with sandy soils should begin scouting now. Scouting for this pest should be conducted daily, if possible, but at a minimum of 3 times/week and should continue for about 2 weeks after bloom. Infested areas can lose extensive numbers of flower clusters if beetles are not detected early and treated (Figure 1). Research from Ohio State recommends an insecticide application if a threshold of 2 beetles per vine is reached. Blocks with high populations of rose chafers may require a second insecticide application.

Insecticides for management of rose chafer listed in the <u>2019 New York and Pennsylvania Pest</u> <u>Management Guidelines for Grapes</u>, page 87) include Assail, Danitol and Sevin.



Figure 1. Rose chafer beetle feeding on a flower cluster. Photo – Andy Muza, Penn State

PA Update

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

Weather: May finished out with 2.74" rain and only 229 growing degree days (gdds); dryer and cooler than average. It seemed a lot wetter than that though, probably because we had measurable rainfall on 20 of the 31 days in May; frequent wetting periods but with relatively low amounts of rainfall each time. We have accumulated 1.05" of rainfall so far in June, definitely on the wet side. We have accumulated just 52 growing degree days (gdds) in June, and 335 gdds as of April 1. For North East PA, the forecast through the weekend looks dry, with highs in the 70s (nice). Rain is in the forecast for Monday.

Phenology: Everyone is asking when bloom will begin. At our site by the lake, our average days from bud break to trace bloom in Concord is about 40-41 days. With 50% bud break called on May 9, that places us at about June 17-18 for beginning of bloom. Over the past 20 years or so, our average trace bloom date is June 11, so that would place us about a week late. Our average growing degree day accumulation from April 1 to trace bloom is 521 gdds; we are currently at 335 gdds since April 1, and our current forecast will place us at about 521 gdds on June 18, for trace bloom. However, we've gone from April 1 to trace bloom in as little as 459 gdds (2016) which would place us at about June 13 for trace bloom, here by the lake; it's unlikely, but it has happened before. The black locust has been in bloom for some time now, but the wild grapes here at our site by the lake are nowhere near bloom (I'm told wild bloom is generally about 7-10 days before Concord bloom (?)). So, just looking at all these averages over the past 20 years, my best guess is that bloom will likely begin sometime between June 13 (in a week) and 18 (in a couple of weeks). Of course, farther inland will go into bloom earlier.

Diseases: We've clocked up plenty of infection periods for Phomopsis, black rot and powdery mildew since the last days of May. We are observing Phomopsis lesions on the first two internodes of some green shoots, but it does not appear to be as prevalent as in the two prior seasons. Current Phomopsis lesions are from infection periods just after bud break (middle of the second week in May); shoots were only an inch or two out and only the first two internodes were vulnerable. Those first few shoot internodes should be relatively resistant to lesion formation now and our current sprays are for protecting clusters from this disease.

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 two weeks to show up on leaves after infection has occurred, and so the effects of these latest infection periods for that disease will become manifest shortly before bloom, 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.

As 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 a red flag for a potentially problematic year with this disease on fruit.

In addition to that, the DMcast model has generated downy mildew infection periods for more inland

areas of North East/Harborcreek PA (but not by the lake). At our site we have not yet reached that 5-6 leaf stage yet, when downy mildew kicks in. 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 (where the pathogen comes up from). On the undersides of infected leaves, you'll see the classic white, downy sporulation of the pathogen.

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LERGP **2019 COFFEE POT MEETING** SCHEDULE

Location

Date Time May 1, 2019 10:00am May 8, 2019 10:00am May 15, 2019 10:00am May 22, 2019 10:00am May 29, 2019 10:00am June 5, 2019 10:00am June 12, 2019 10:00am June 19, 2019 10:00am June 26, 2019 July 3, 2019 10:00am July 10, 2019 10:00am July 17, 2019 10:00am July 24, 2019 10:00am July 31, 2019 10:00am

John Mason Farm Sprague Farms Paul Bencal Arrowhead Winery Militello Farm Supply North East Fruit Growers Kirk Hutchinson NO COFFEE POT Betts Farm Jim Vetter Trolley Line Vineyards

Brian Chess

Tom Tower Farm

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