Lake Erie Regional Grape Program

After the Rain 08/22/2022-
Kim Knappenberger

CROP UPDATE
August 25, 2022

Cornell Cooperative Extension
Lake Erie Regional Grape Program

PennState Extension

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Click here to watch Podcasts

The Lake Erie Regional Grape Program is a Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extensions in Chautauqua, Erie and Niagara county NY and in Erie County PA.

LERGP Research Demo Day at CLEREL!

Wednesday, August 31, 2022

9:00am-1:00pm

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

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

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

This is a FREE event but please register

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BASF We create chemistry

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Endura® Fungicide

Rely® 280 Herbicide

Zampro® Fungicide

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Prowl® H20 Herbicide

Business Management

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

NYS Grape Price Announcement

This may be a two-part series, just as it was last year if you recall. The stated grape prices were mailed or electronically distributed this week in New York State. For three years in a row this data has been very good news for Concord grape growers.

Last year grape prices were driven upward by a lack of supply. The macroeconomic economy has fundamentally changed since then. In a normal year, a large crop would have driven prices down. Instead, we've seen retail grocery prices driving an inflation engine that we haven't seen in 40 years. Grape juice, fortunately, is going along for the ride.

Eastern Concord grape cash prices will average $375 per ton from the data we have collected so far. Crop size in the tri-states will be smaller than last year. Cooperative payments, as usual, will be unknown. We do know a lot about cooperative crop payments for years 2020 and even 2021. They seem to be in line with current cash prices of $375 or higher. In this cycle cooperative payment increased happened earlier than the cash market (from a crop year perspective). No data indicated that cooperative payments will decline substantially for the 2023 crop year. It will be more of the same until something in the market evolves.

What does $375 per ton mean?

In 2020, everyone thought $300 a ton was the summit. The key to profitability. We know now, we just got lucky. Inflation has moved the goal posts for us. Over the long-term it is impossible to know how far the goal posts have moved. What $300 per ton was in 2020 is probably close to $350 per ton in 2022. For 2023, that will depend significantly on the price of potash, posts, and herbicides. Labor costs also significantly increased in costs, but labor cost trends are more stable. We know labor added $16 in costs per ton, but that increase is stable. The other costs are much more volatile. They're up around $34 per ton but the price of those inputs has been going up and down. It's hard to say if the new $300 will be $325 or $375 by 2023.

One consequence of these changing markets is the importance of higher yields. Expenses are mostly incurred by the acre. Revenue is generated by tons. As prices of both rise, profitability becomes more sensitive to yield fluctuations. The highest yields tend to capture a greater share of profits in these conditions.

Other grapes

Niagara grape prices are all over the place. Those used for juice tend to be high. Niagara grapes destined for wine are not commanding higher prices. Prices for Niagara grapes used in wine will likely fall below $300 per ton. Some contract reductions were noted in this area. On the juice grape side, there was a bit of contract availability and prices are in line with Concords. Cooperative markets, traditionally pay identical amounts. In addition, cooperative processing plans indicate there is a demand for Niagara for juice.

Hybrid prices in the Lake Erie Region remain relatively flat. Certainly, the gap between Concord and hybrid is much smaller than it typically is historically. While there has been a bit of movement in

individual hybrid varieties, the overall trend is flat. Concord is near the top end of prices for natives. Peak hybrid prices are still above $1,000 a ton for certain varieties, particularly those not widely planted. Others in surplus have contracted announced prices as low as $375 per ton. I'll continue to update these observations as I get more data from other processors. If you'd like to share data please feel free to e-mail or text price information to kmm52@psu.edu 716-397-9674.

Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

In the Vineyard

The Concord clusters have been coloring up nicely see Photo 1, and my unscientific taste-testing tells me that we are not quite there yet. Fortunately, the research staff monitors Brix on a weekly basis and Table 1 below has this week's data for you. Concords tested at 11.0 Brix, while Delaware was 15.2. Niagara was only 10.5, but Seyval, Vignoles, and Vincent were all over 14.0.

Photo 1. Concord grapes showing more color.

Date	Variety	Brix
8.24.22	Concord	11.0
8.24.22	Vignoles	14.7
8.24.22	Niagara	10.5
8.24.22	Seyval	14.2
8.24.22	West Riesling	11.5
8.24.22	East Riesling	11.2
8.24.22	Vincent	14.1
8.24.22	Ives	12.2
8.24.22	Delaware	15.2

Table 1. August 24, 2022 weekly Brix monitoring data for several varieties at the Cornell Lake Erie Research and Extension Laboratory.

Grape Berry Moth Model
One of the important tools in timely viticulture and IPM this week is the Grape Berry Moth (GBM) model that is available for your use. This model is a growing degree day (GDD) tool that estimates development of grape berry moth (*Parolobesia viteana*) generations, identifies treatment windows, and provides management guidelines. NEWA downloads weather parameters from weather stations across the state, so most grape growers are able to access results specific to their region.

- Spray (if needed) as close to the designated degree day timings as possible.
- The model recommends an insecticide treatment in high and possibly intermediate risk sites when: 810 GBM degree days are accumulated for the second generation; 1620 GBM degree days for the third generation; and 2430 GBM degree days (if harvest has not yet occurred) in years that a fourth generation occurs. Insecticides such as Intrepid, Altacor, and Delegate are suggested for these timings.
- If using broad spectrum contact insecticides (e.g., pyrethroids) then applications should be delayed about 100 GBM degree days for each generation (i.e., 910, 1720, 2530 GBM degree days).

For a quick reference, Kim Knappenberger put together the below table with NEWA stations in our region for Grape Berry Moth Growing Degree Days from the Wild Grape Bloom date for this year, please see Table 2. below. The next generation could happen.

NOAA's National Weather Service Forecast by 12 Hour Period

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: 2022-08-24T08:36:59+00:00

Friday: A chance of rain showers before 8am, then showers and thunderstorms likely between 8am and 2pm, then a chance of showers and thunderstorms. Partly sunny, with a high near 78. West wind 9 to 14 mph. Chance of precipitation is 60%.
New rainfall amounts less than a tenth of an inch possible.

Friday Night: A chance of showers and thunderstorms before 8pm. Partly cloudy, with a low around 61. Chance of precipitation is 30%. New rainfall amounts less than a tenth of an inch possible.

Saturday: Sunny, with a high near 77.

Saturday Night: Mostly clear, with a low around 63. Sunday: Mostly sunny, with a high near 82.

Sunday Night: Partly cloudy, with a low around 71.

Historical Growing Degree Days (base 50) for Portland, NY

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.

The below data is through August 23, 2022, for CLEREL in Portland, NY and for 2022 the total on that day was 1953.0 GDD that is slightly below the five-year average of 2031.8 on the same date. The year 2020 is the closest year for accumulated GDDs on the same date at 1990.0 and you can see the data represents in Figure 1 below.

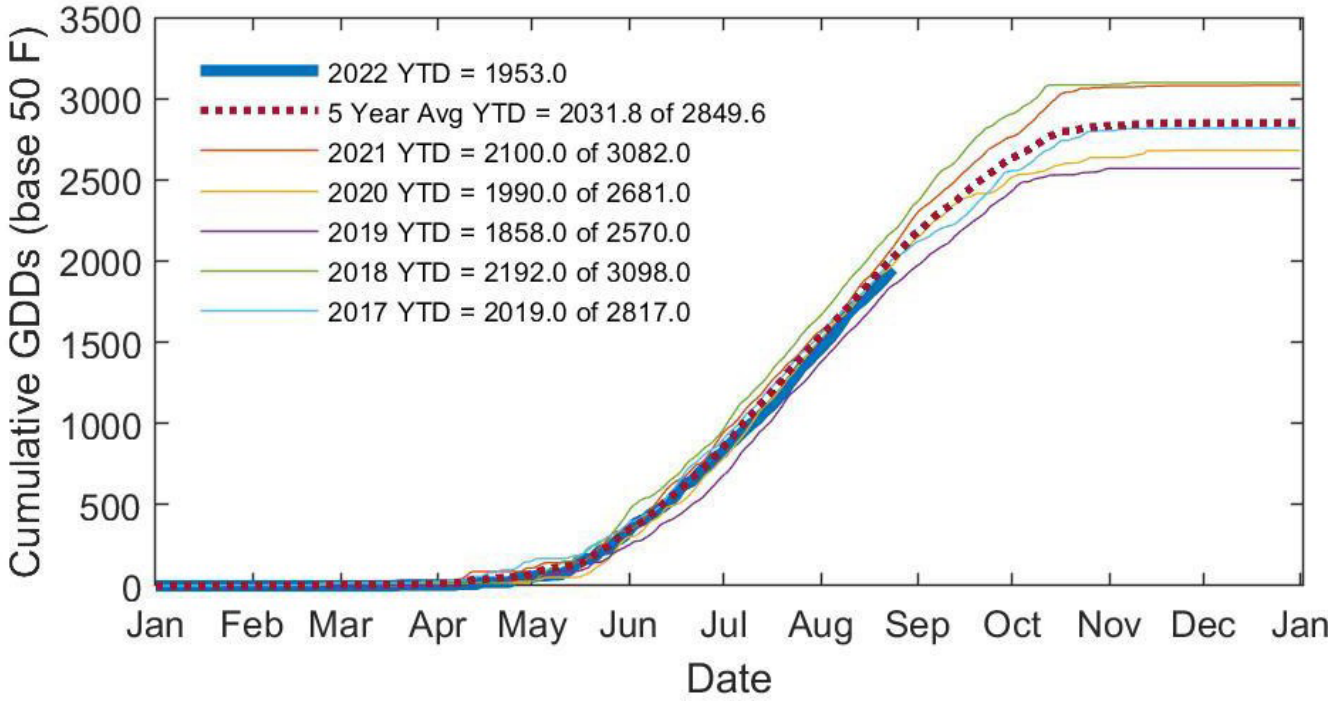


Figure 1. Historical Growing Degree Days (base 50) for Cornell Lake Erie Research and Extension Laboratory in Portland, NY

NEWA Location	Wild grape bloom date*	DD total on Aug 25	Forecasted GBM GDD for Aug 30
Brant	May 27	2081	2202
Versailles	May 30	1956	2081
Hanover	May 30	2015	2140
Sheridan	May 28	2134	2260
Silver Creek (Route 5)	May 31	2070	2198
Silver Creek (Double A)	May 28	2139	2264
Dunkirk Airport	May 29	2151	2277
Forestville	May 29	2048	2173
East Fredonia	May 31	1955	2082
Fredonia	May 31	1971	2098
Brocton Escarpment	May 30	1996	2119
Portland	May 30	2036	2162
Portland (LERGP West)	May 29	2135	2263
East Westfield	May 31	1965	2091
Westfield	May 31	2002	2130
Ripley	May 30	2078	2205
Ripley Escarpment	May 30	2016	2143
Ripley State Line	May 30	2064	2192
North East State Line	May 31	1961	2082
North East Escarpment	May 29	2055	2175
North East Sidehill	May 30	2002	2122
North East Lab	May 30	2110	2240
Harborcreek	May 30	2044	2173
Harborcreek Escarpment	May 31	1903	2027
Lake City	May 31	2050	2176
Ransomville	May 30	2126	2254
Burt	June 7	1776	1904
Corwin	June 1	1956	2081
*Estimated date provided by NEWA website			
*** Not on forecast yet			

Table 2. Lake Erie Region Grape Berry Moth Growing Degree Days as of August 25, 2022

PA Update

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

Weather: Here by the lake in North East, our rainfall total for August is 3.56" (a little above average) and we have accumulated about 543 growing degree days (gdds; also above average) so far in the month. Gdd accumulations since April 1 are at about 2180, also ahead of average (by more than a week). Our short-term weather forecast estimates a 70% chance of rain Friday, dry on Saturday and Sunday, and a 40% chance of rain on Monday. High temperatures will bounce around between the mid 70s and mid 80s, with overnight lows in the 60s.

Our Concord here by the lake are up to 10-10.3 brix. That's a jump of about 1.5 to 2 brix over the past week…not too shabby. These first few weeks after veraison are critical for ripening of the crop so let's hope for more good weather.

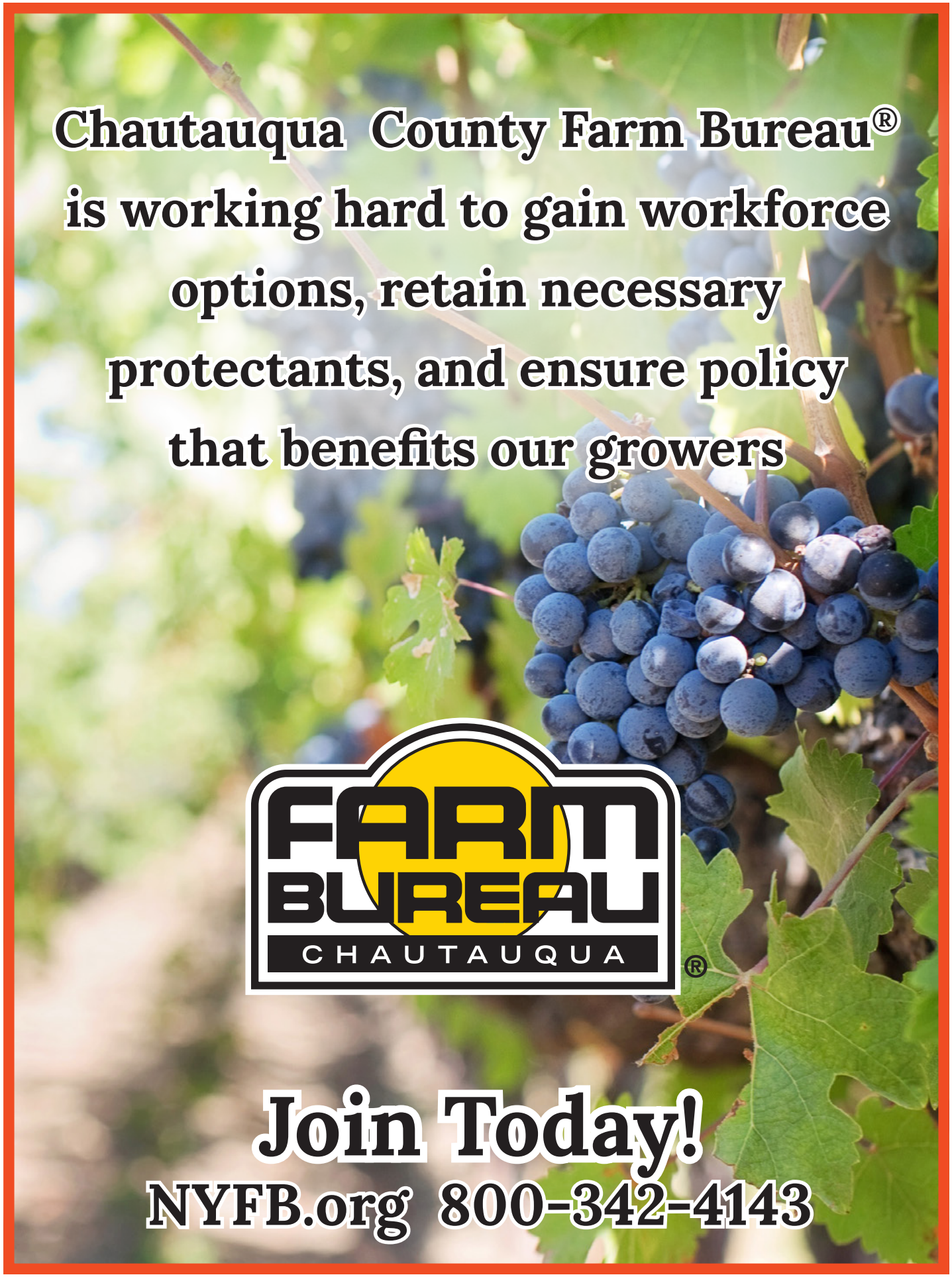
Diseases; Some downy mildew is showing up in wine vineyards, mainly on young shoot tips and leaves of susceptible varieties. However, I have not received any calls relating full blown epidemics or serious problems in any area vineyards. Rain periods on August 16/17 and 21/22 were capable of generating infection periods for downy mildew. The results of the 21/22 rain period will become visible as downy symptoms on leaves by about the 28th or so, of August. My advice for now is to keep scouting your susceptible wine blocks and if you see it developing, pounce on it with a fungicide to maintain tight control, especially if fruit is to hang for quite some time still. Our weather forecasts have been showing evidence of regular wetting periods that could lead to an escalation of symptoms in blocks of susceptible varieties. Your best options are Captan, copper, or a phosphite/phos acid material, all of which can be used very close to harvest. Do not tank mix copper with a phos acid fungicide. Just keep in mind that late captan or copper residues on fruit can contribute to problems with fermentation for wine making. I am not concerned about Concord grapes with respect to downy mildew.

Bunch rot: In wine varieties, especially those that produce tight clusters, a Botrytis specific fungicide spray at veraison and about 2-3 weeks later can help manage bunch rots but will only control Botrytis. Botrytis specific fungicides will not control other organisms that can lead to sour rots, that we often see developing in warm, wet harvest seasons. Fruit zone leaf removal, applied earlier around bloom, can significantly reduce bunch rot development now in these varieties. However, the research has shown that the benefits of leaf removal tend to diminish the later its applied, especially if its not applied until veraison.

The development of bunch rots depends heavily on the generation of injuries to the berry skin, whether by birds, hail, insects (like berry moth), or those that occur through excess pressure in overly compact clusters. Even microscopic injuries caused by powdery mildew can leave breaches in the berry skin, that are entry points for microbes that cause bunch rots. Limiting such injuries can go a long way to preventing the development of late season bunch rots.

And finally, work by Megan Hall and Wayne Wilcox shows that controlling fruit flies (with insecticides) during the latter part of the ripening period (beginning around 15 brix) can significantly reduce sour rot development. Applying insecticides with sterilants or antimicrobials like Oxidate or Fracture can further improve control over insecticides alone. However, always rotate insecticide chemical classes to delay the development of resistance.

And finally, for berry moth, most of our weather stations in the PA part of the belt indicated that the 1620 degree day benchmark for that second round of berry moth insecticide sprays, occurred on or after August 5th, so most of that generation will go into diapause and not contribute much to a 4th generation. So, our biggest threat at this point may simply be extended egg-laying/hatch of the 3rd generation, especially in high pressure areas. Larvae will be entering ripening berries that will easily rot. Additional insecticide sprays may be prudent at those high pressure sites, particularly in valuable wine blocks and in varieties prone to bunch rots or varieties that will not be harvested for quite a while. Borrowing from one of Andy Muza's previous recommendations, "If you do decide to apply an insecticide at this point in the season, check the pre-harvest interval before application". While it may be less sustainable to continue insecticide sprays for juice grapes - especially for Niagara or blocks slated for earlier harvest - it may be prudent to continue insecticide applications on a 10 to 14-day schedule in high pressure wine blocks, with a history of late season grape berry moth damage, at least into September.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Questions?
Suggestions?
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