

LERGP Crop Update ** September 24, 2015 **

Harvest Season is upon us!





The Lake Erie Regional Grape Program

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Business Management

Kevin Martin Penn State University, LERGP, Business Management Educator

Harvest Management

With Concord harvest just under way the Cooperatives have been bringing on Concords. Continued tinkering with some of the quality rules as well as a few years of experience with new standards have led to smoother harvesting operations for most. Winter damage did cause some high levels of variability that led to challenges in crop and brix estimates.

Logistics is a challenge this first week for National deliveries. Many growers have been pleased with brix accumulation. Areas with high yields have been cancelling some loads. A few isolated areas with low yields were cancelling loads because of the length of time required to fill trucks. This was certainty a common occurrence with Niagara harvest. In those areas I expect to see quite a few crop insurance claims.

Reducing harvesting costs this year will prove to be particularly challenging. Yields are variable enough to make reducing staffing complicated. The biggest change this year will probably relate to harvester ground speed. Growers with modern larger harvesters have the ability to pick at significantly higher speeds. We have seen these growers vary their speed by as much as 30% when harvesting smaller crops. Watching rod RPMs, ground speed and yield. Typically with these variations in speed harvesting related losses rise from 4% to 8%. A little mental math in the field justifies the increased loss when yields are only 1-3 tons per acre.

While it is too late to pre-test brix, if brix are an issue I would use any and all downtime to try to get a more accurate picture of where the quality is and where brix continue to accumulate. As we get closer to the second week of Concord harvest the brix needed for minimum standards tends to unofficial changes. While you may be able to bring in a load at lower brix, the penalties at Cooperatives are either officially or practically different. In any event, we still have not seen any brix issues that will create load rejections by the third week of October. So far it will probably just impact the scheduling of loads. Of course, a severe impact on scheduling may reduce the ability to get loads in.

As usual, harvest is never easy. Some challenge always presents itself.

Cultural Practices

Luke Haggerty Viticulture Extension Associate Lake Erie Regional Grape Program

Nutrient Deficiencies

This is a great time of year to look for nutrient deficiencies and foliar disorders in the vineyard. Now that harvest is moving into full swing you have a chance to get a good look at your entire vineyard as you harvest. Potassium and magnesium are two of the more noticeable deficiencies found on leafs. Magnesium deficiency shows chlorosis or yellowing in leaves while the area close to the main veins stays green (Picture 1). Magnesium deficiency most often occurs in soils that have a pH below 5.5 where potassium becomes more available.



Picture 1. Magnesium deficiency in Concords

Potassium plays an important role in many regulatory plant biochemical functions including carbohydrate or sugar production. Severe potassium deficiency will show necrotic or dead leaf tissue and have a scorched appearance (Picture 2). Potassium deficiency can occur in soils that are high in calcium and magnesium and where potassium is less exchangeable.



Picture 2. Potassium deficiency in Concords

Other nutrient deficiencies and or foliar disorders to be on the lookout for are nitrogen deficiency and nitrogen spray burn, acidic soil damage, iron deficiency, crown gall, spray damage, and symptoms of drought. If you see symptoms and would like soil or petiole samples taken, bring samples into the Cornell Lake Erie Research and Extension Laboratory (CLEREL) at 6592 West Main Road Portland, NY 14769. The cost per sample is \$30.00 for petiole sample (bring in 50 petioles) and \$17.00 for soil samples.(bring in at least one full cop of soil)

If you have questions about taking petiole and or soil samples or if you would like to set up a site visit, please contact me. Call me at (716) 792-2800 Ext. 204 or email me at <u>llh85@cornell.edu</u>.



Multi-Colored Asian Lady Beetle

It is that time of year where the Multicolored Asian Lady Beetle (MALB) will move from soybean fields (where it has been acting as a beneficial insect by dining on soybean aphids) to other areas looking to stock up on carbohydrates for their winter hibernation. One of the areas they can flock to, (they use an aggregation pheromone to call others to the nice spot they have found) are vineyards where they become a pest, but only if they become part of the crush portion of the harvest process. When crushed or frightened the adult MALB release a noxious chemical that can taint the resulting wine. A working threshold of an average of 2 beetles per kilogram (2.2 lbs) of grapes is enough to taint the wine produced from those grapes. It is not as severe a problem in Concords, where the pasteurization process removes much of the chemical, but there is still a concern on the part of the processor if MALB is found during your harvest. The best bet is to speak with your processor or winemaker to determine what threshold they are using for MALB at the plant.

It is important to remember that MALB is a secondary pest that we do not see every year in our region. And while there have been reports coming out of the Finger Lakes that MALB populations may be higher than normal in 2015, the Lake Erie region has not seen that to be true up to this point in the season. Please let the team know if you are finding MALB in your vineyard blocks as you harvest so we can get a better handle on populations and distribution of this secondary pest. There are a number of products labeled in NY and PA for MALB which can be found in the 2015 NY & PA Pest Management Guidelines. They are Evergreen, Aza-Direct, Venom (PA only), Mustang Max. There are also two materials which have a 2(ee) FIFRA registration in NYS: Provado 1.6 or Admire Pro. The table below gives you the days to harvest interval (DHI) and reentry interval (REI) for each of the products.

Material	Days to Harvest Interval	Reentry Interval
Aza-Direct	0	12 hour
Evergreen	0	12 hour
Mustang Max	1	12 hour
Venom (PA only)	1	12 hour
Admire Pro (2ee)	0	12 hour
Provado (2ee)	0 (foliar use)	12 hour



As shown in this photo, the color of Multicolored Asian Lady Beetles can vary as well as the number of spots. The best way to identify them is the "w" on the tan pronotum just behind the head.

Spotted Wing Drosophila

A grower stopped in the other day with some wine grape bunches that contained split berries with the start of any number of rots, fruit flies and a grape berry moth larva crawling around in the bag. There was concern that the fruit flies were spotted wing drosophila, so Luke Haggerty reared out the remaining flies and did identify the majority of fruit flies in one bag as spotted wing drosophilia (SWD).

So when looking at management options, the question became; were the berries split because of spotted wing drosophila (remember they are the fruit flies with the serrated ovipositioner so they can attack sound fruit to lay their eggs) or were the SWD taking advantage of berries that had split due to other causes like grape berry moth stings or three-inch rain events close to the harvest period. According to Greg Loeb, at this time of year there is the potential to see a large amount of SWD in vineyards, even after the fruit is harvested. Spotted wing drosophila have been shown to be a factor in the spread of sour rot, but there is no conclusive evidence that it is from breaking the skin of the grape during ovipositioning, or just the fact that there are a large number of them visiting grapes that have already started to rot and then moving on to other compromised clusters to infect them as well.

If you have wine grapes and you are concerned about SWD and the spread of sour rot Wayne Wilcox wrote an excellent article summarizing the work he and his grad student Megan Hall have conducted. You can find that article from the September 2015 issue of the Finger Lakes Vineyard Notes at: <u>http://nygpadmin.cce.cornell.edu/pdf/newsletter_notes/pdf58_pdf.pdf</u>

We are also seeing split grapes in Concord vineyards. A majority of these can be traced backed to grape berry moth. As you start removing berries for a closer examination, the stings and tunneling of grape berry moth quickly becomes evident in the majority of the cases. Concord are a thick skinned variety and I believe it is a widely held belief that SWD do not pose a major threat to this variety at this time.

If you have concerns about Spotted Wing Drosophila please give me a call, or stop by, and I would be happy to discuss the situation with you.



Adult Male Spotted Wing Drosophila on a blueberry. Notice the spot at the tip of each wing. Female SWD do not have spots on the wings but are easily identified by their serrated ovipositioner. (photo by Tim Martinson)

In the Vineyard Andy Muza Extension Educator, Erie County, PA Extension

In the Vineyard (9-24-15) – Andy Muza, Extension Educator, Penn State University

Even though Concord harvest is underway, taking the time to scout your vineyards is still important. Now is an excellent opportunity to determine how effective your pest management program performed.

While you are sampling your blocks for brix levels to determine in which order vineyards should be harvested, also observe disease and insect levels present at each site.

Don't rely on your memory but record: **Specific Pest Problems** observed (e.g., grape berry moth injury, downy mildew, etc.); **Severity** (e.g., low, medium, high, severe) and **Locations** on your vineyard maps. Don't forget to also make a quick assessment of weed management at each site.

These records will provide the information needed to plan your pest management program for the next season.



Shelled Concord berries with GBM injury



Black Rot mummies on Concord berries



Concord Berrires with GBM injury



Concord leaf with Downy Mildew lesions

North East PA Update

Bryan Hed-Research Assistant Lake Erie Regional Grape Research and Extension Center

Our September rainfall total is currently 4.43", thanks to a storm over Sep 12-13 that delivered 3.28" at our site and ended two weeks of nearly bone dry weather. That puts September 2015 at above average in rainfall. According to NEWA, that storm appears to have dumped the most around the North East area of PA, with parts of New York getting healthy, but somewhat lesser amounts of rain. Growing degree day accumulations since April 1 total about 2544, and since our average accumulation from April 1 to Sep 30 is 2553, gdd accumulations for September are close to a week ahead of average at our site. The short term forecast shows temperatures to be staying consistently above average through the end of the month with plenty of sunshine; great harvest weather!

Our Concords here by the lake are 15-16 brix and ripening appears to be hurtling right along. The majority of our wine grapes are at 18 brix or more, whereas our Minnesota hybrids, which ripen somewhat earlier, are pushing 22-25 brix at this time. Downy mildew appears to be a non-issue in most vineyards I've looked at, thanks in large part to the mostly dry days in September; even though rainfall for September is above average, it all fell in just 3 wetting periods. This is a classic illustration of the importance of rainfall frequency in epidemic development, as opposed to just total rainfall accumulation.



LERGP Website Links of Interest:



Check out our new Facebook page!!

Cornell Lake Erie Research & Extension Laboratory Facebook page https://www.facebook.com/pages/Cornell-Lake-Erie-Research-Extension-Laboratory/146971918664867

Table for: Insecticides for use in NY and PA: http://lergp.cce.cornell.edu/submission.php?id=69&crumb=ipm|ipm

Crop Estimation and Thinning Table: http://nygpadmin.cce.cornell.edu/pdf/submission/pdf65_pdf.pdf

Appellation Cornell Newsletter Index: http://grapesandwine.cals.cornell.edu/cals/grapesandwine/appellation-cornell/

Veraison to Harvest newsletters: http://grapesandwine.cals.cornell.edu/cals/grapesandwine/veraison-to-harvest/index.cfm

Go to http://lergp.cce.cornell.edu/ for a detailed calendar of events, registration, membership, and to view past and current Crop Updates and Newsletters.







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> THE LAKE ERIE REGIONAL GRAPE PROGRAM at CLEREL 6592 West Main Road Portland, NY 14769 716-792-2800



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