

Concords -Kim Knappenberger 9/6/2023

## CROP UPDATE September 7, 2023

Cornell Cooperative Extension Lake Erie Regional Grape Program



PennState Extension

Building Strong and Vibrant New York Communities Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.



### In this copy:

Farm Bill Listening Session, Concord Berry Curve-Jennifer Phillips Russo-page 5North East PA Update-Bryan Hed-page 9

Spotted Lantern Fly, EPA Herbicide Re- Registration Update- Megan Luke- page 14

### How to reach us:

Jennifer Phillips Russo - LERGP Viticulture Specialist: jjr268@cornell.edu Cell: (716) 640-5350 Office: (716) 792-2800 Ext 204

Megan Luke –LERGP Penn State Extension Viticulture and Tree Fruit Educator <u>MFL5873@psu.edu</u> Cell:(716) 397-9674 Office:(814) 825-0900

Kim Knappenberger – LERGP NEWA and Vineyard Improvement Program Contact <u>ksk76@cornell.edu</u> 716-792-2800 ext 209

Click here to

watch Podcasts

**Kate Robinson – Administrative Assistant** <u>kjr45@cornell.edu</u> 716-792-2800 ext 201

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.



# **NO MATTER THE REASON**, **NO MATTER THE SEASON**, WE'RE HERE FOR YOU.

**ALWAYS FREE, ALWAYS CONFIDENTIAL** 

financial analysis + decision making personal well-being | retirement + estate planning family business relationships | business planning communication | coping with COVID-19 stress referrals to additional resources

**AVAILABLE TO NY FARMERS. FARM** 



SC Johnson College of Business

Jyson

FAMILIES AND AGRIBUSINESS EMPLOYEES.







## Own Rooted & Grafted **Certified** Grapevines

Berries, Hops, Wine Making, Vineyard Supplies & More

www.doubleavineyards.com

10317 Christy Rd Fredonia, NY 14063 716-672-8493

# ne frozen

There's no end to the potential hazards your crops face: freeze, hail, wind, insects and disease. And those are just the natural disasters. As a fruit farmer, you also have to deal with other variables like fluctuating market prices.

Crop Growers is here to help. Our multi-peril crop insurance will protect your business when Mother Nature (or the market) lashes out, making sure you're still standing when the skies clear.

Call a Crop Growers agent today.



ACTUAL PRODUCTION HISTORY PLAN WHOLE FARM REVENUE PROTECTION **CROP HAIL COVERAGE** 

800.234.7012 | CropGrowers.com

CROP GROWERS, LLP IS AN EQUAL OPPORTUNITY PROVIDER

### **Viticulture** Jennifer Russo, Viticulture Extension Specialist, LERGP

### In the Vineyard

The Cornell Lake Erie Research and Extension Laboratory in Portland, NY housed Congressman Nick Langworthy's Farm Bill Listening Session with the House Committee on Agriculture Chairman, Glenn "GT" Thompson on September 6, 2023. The information advertised about the event stated, "Every five years, Congress passes legislation that sets national agriculture, nutrition, conservation, and forestry policy, commonly referred to as the "Farm Bill". This event will bring together farmers, producers, agribusiness owners, and more to solicit public feedback—an integral part of the Farm Bill reauthorization process."

Dr. Terry Bates welcomed everyone and thanked the committee for their support of research and extension. The event was very well attended, and many took this opportunity to have their voices heard and give feedback on what is important to agriculture in our region. We heard from dairy producers, Farm Credit loan officers, poultry farmers, vegetable, grains, maple industry, sugar refinery industry, organic and urban farmers along with grape industry growers and producers all contributing to the session. Many discussed the need to keep funded programs based in nutrition and a common thread was the importance of technical assistance with emphasis on research and extension.

Dr. Benjamin Houlton, Dean of Cornell College of Agriculture and Life Sciences, offered public comments on behalf of CALS for another Farm Bill Listening Session. He stated (and I summarize portions of it here), "Cornell CALS is committed to engaging in responsible science through thoughtful and thorough research and vigorous discourse. Conducting science in the public interest with an eye towards ensuring economic and environmental sustainability for farmers and the food system, is a top priority of our Land-Grant mission and our over 150-year partnership with New York State..."

Dean Houlton went on to point out areas where the Farm Bill could be improved in his public statement, and they are listed below:

"But I do want to point out a very serious, systemic challenge relating to the 5-year Farm Bill; the failure to fully invest in our research capacity within the Land-Grant system throughout the nation. I'd like to simply share a few data points, gathered from the USDA Economic Research Services, last fully updated in 2019.

- In inflation-adjusted 2019 dollars, the amount of public, federal funding dedicated to agricultural research is largely the same amount as it was in the early 1970's. Effectively, we've faced stagnation as a nation in our investments in agri-food innovation over the past fifty years of Farm Bill's.
- Not only has our country not invested fully in agricultural research, we are now being outpaced by other countries. In 2015 inflation adjusted dollars, China, as well as the European Union, both started investing more than the United States in public agricultural research in 2007-2008. In fact, by 2015 China spent almost double what we spent in public

agricultural research.

• In the same time frame, private sector investment in agricultural and food research far outpaces public sector investment. While private sector investment in agricultural research is vitally important, private sector dollars do not tend to be as equitably distributed throughout the plethora of different crops that our farm families grow in New York State, nor is the science released fully into the public domain.

Dean Houlton's statement concluded with, "I have a very simple recommendation. The average amount of Farm Bill spending on public agricultural research in the last two farm Bill's was about 2% of the entire total. What if we imagined a world where we moved that percentage point up just a bit – to 4% of the entire total Farm Bill. While that may not lead to the United States overtaking China's and the European Union's investment in agricultural research, it would significantly help increase what our tremendously gifted scientists can imagine for farmers in New York.

The USDA's Economic Research Services has regularly found that investments in public sector research have an annual return on investment of 20-60%. With that type of ROI, and a demonstrated need to eat, I would simply restate that increasing the percentage of the Farm Bill funding that is devoted to public sector agricultural research is needed for New York's farmers, as well as New York's consumers.

Thank you for your time and consideration, I appreciate your attention greatly."

Dean Houlton's comments uphold our Land-Grant mission which encompasses research, education and extension programs—allows for the creation and dissemination of knowledge that improves lives for not only citizens of New York, but also the nation and people around the globe. His remarks were not Cornell specific, but for all Land-Grant universities and community members. I am grateful for the support of our university and that of all those who attended the sessions. Thank you for making your voices heard.

### Around the Belt

During Veraison to Harvest, I am in constant contact with processers to share information and report to the rest of you their progression. Some processers reported that they are stopping schedules for white varieties in order to bring in some of the red hybrids like Baco Noir, Castel, Geneva Red, and Leon Millot. They will continue with whites early next week and plan on starting Concords around September 13, 2023. Other processers are waiting a bit longer to begin Concords to in order to reach a higher Brix standard and are anticipating beginning the last week of September or first week of October. Of course, that is all weather contingent. Should we see a bump in sugar accumulation, they will reassess and open earlier if quality standards are met.

### **Concord Berry Curve (Dr. Bates)**

Thank you to Dr. Bates and the research staff for their weekly monitoring of the Concord Berry Curve here at the Cornell Lake Erie Research and Extension Laboratory in Portland, NY. Figure 1 below is the Concord Berry Curve where the red line indicates 2023 Concord growth, the dark blue line is 2017 growth (which was above the historical average), the black line is the 24-Year historical average, and the green line is from 2016, which was below the historical average. 2023 is currently tracking larger than 2017 at this point in the growing season, and approximately half a gram larger than the 24-Year Mean.



*Figure 1. Concord Berry Curve at the Cornell Lake Erie Research and Extension Laboratory for the week of September 4, 2023, and historical data* 

Figure 2 illustrates the Concord Brix accumulation for the same phenology vines. The black line illustrates the 24-year mean of Brix accumulation and the shorter red line is 2023. This figure depicts 2023 Brix to be approximately one Brix behind in accumulation as compared to the last 24 years at this point in the growing season. These numbers are indicative of last week's weather because the berry collection took place on Monday. I am interested to see if the hot, dry weather that we all experienced over the holiday weekend will show a jump in sugar accumulation in next week's numbers. It is very important to be sure to keep the canopy clean and free of disease to continue to help with the ripening process. Next week's forecast is projected to have cooler weather and more chances of rain.



Figure 2. Concord Brix Accumulation (Lake Erie) for 2023 and the 24-year historical mean.

Table 1 below contains the first week of Veraison to Harvest data for our region. According to the samples collected from different vines than the Concord Berry Curve in our region, the average berry weight for Concord was 3.47 grams for Week 1 with 10 Brix. Niagara berry weight is 3.51 and 9.7 Brix. Not surprising, Marquette had the highest Brix accumulation of 16.1 in Fredonia, NY, and is an early variety. Cabernet franc was the lowest sugar accumulation of 7.4 Brix in Portland,

NY. This week's data will be available soon, however with the long holiday weekend some data collection took a bit longer. Hopefully we will have that for you early next week.

					Avg Berry			
Variety	Grower	Region	Date	Description	wt (g)	Brix	рΗ	ТА
Concord	Portland	Lake Erie	8/28/23	Portland	3.47	10	2.69	22.59
Niagara	Portland	Lake Erie	8/28/23	Portland	3.51	9.7	2.71	17.41
Seyval blanc	Portland	Lake Erie	8/28/23	Portland	1.58	14.3	2.74	14.85
Marquette	Portland	Lake Erie	8/28/23	Fredonia	1.34	16.1	2.92	17.93
Riesling	Portland	Lake Erie	8/28/23	Portland	1.32	8.7	2.7	22.89
Frontenac	Sheridan	Lake Erie	8/28/23	Sheridan	1.23	12.8	2.76	26.49
Vignoles	Portland	Lake Erie	8/28/23	Portland	1.42	12.1	2.65	25.09
Cabernet Franc	Fredonia	Lake Erie	8/28/23	Fredonia	1.21	7.4	2.55	>30
Traminette	Portland	Lake Erie	8/28/23	Portland	1.48	7.6	2.61	25.8
Gewurztraminer	Portland	Lake Erie	8/28/23	Portland	1.24	11.9	2.9	15.01
Chardonnay	Portland	Lake Erie	8/28/23	Portland	1.27	9.2	2.73	24.93
Lemberger	Portland	Lake Erie	8/28/23	Portland	1.57	13.3	2.87	15.08
Cabernet								
Sauvignon	Portland	Lake Erie	8/28/23	Portland	1.32	11	2.72	24.43
Saperavi	Schulze	Niagara	8/28/23	Niagara County	1.90	11.2	2.62	>30
Blaufrankisch	Schulze	Niagara	8/28/23	Niagara County	1.79	14.1	2.79	18.88
Vidal Blanc	Schulze	Niagara	8/28/23	Niagara County	1.69	11.2	2.69	20.84
Siegfried	Schulze	Niagara	8/28/23	Niagara County	1.06	11.1	2.61	23.23
Sauv Blanc	Schulze	Niagara	8/28/23	Niagara County	1.45	13.9	2.75	15.4



## PA Update

#### Bryan Hed, Research Technologist, Lake Frie Grape Research and Extension Center

<u>Weather:</u> We accumulated about 558.5 growing degree days and 4.28 inches of rain in August, cooler and wetter than our long-term average. In contrast, the first 6 days of September have been quite warm (141 gdds) and bone dry. We just got about 0.1" rain this morning. It topped 90 F yesterday, but the short-term forecast for North East PA has much cooler temperatures ahead. There's a 20% chance for rain on Friday, and 40% chance on Saturday and Sunday. High temperatures will hover in the low 70s.

Phenology: Our Concord block on route 5 (on the lake), is at 11.3 brix as of September 7.

<u>Diseases:</u> Fruit have been resistant to powdery and downy mildew and black rot for several weeks now, but leaves remain susceptible to both mildews. And, although I'm not seeing too many problems with leaf powdery mildew at this point, I am seeing plenty of downy mildew come in on leaves of susceptible varieties.

Scout your vineyards to maintain good control of downy mildew as it continues to be a serious threat in some vineyards. Just the other day, I visited a premium wine block that had been largely defoliated by this disease. Look for it primarily on young leaves of still actively growing shoots. However, as the disease progresses unchecked, it can jump to older foliage and begin "chewing" on the entire canopy. The sight of active, white sporulation on the undersides of leaves means the downy mildew pathogen is capable of spreading quickly under wet conditions, and that sprays for downy mildew should continue for susceptible varieties. Even humid nights that result in heavy dews by morning, can continue to fuel downy mildew development, generating fresh sporulation that can spread the disease rapidly when plant surfaces get wet with rain. If this disease blows out of control (and it easily could if we continue to receive regular wetting periods in September and control measures are not taken seriously), it can defoliate a vineyard and essentially end the season for that block. It can also hamper or prevent shoot ripening for next year's crop. Your grapevines go into winter dormancy in a weakened state, and are more vulnerable to damage by severe cold, leading to crown gall and expensive trunk renewal the following season, with little or no crop to pay for it; all that stuff is connected, so you want to keep downy mildew under very tight control. especially on Vitis vinifera.

If you get into a pinch and downy mildew blows up on your leaves, copper sprays (on varieties that can tolerate copper) can go a long way to bringing things back under control. For wine varieties that don't tolerate copper, captan may be an option for treating an epidemic of downy mildew. It won't eradicate what's already there, but it will help to control future infections and there is relatively little concern about resistance development with captan.

Here are some precautions to consider with use of the 'old standard' protectants like copper and captan:

- Some insecticides and oils should not be applied with Captan.
- There is the concern for plant injury by copper applications, which will be exacerbated by
  application under slow drying conditions and application to wet canopies (for example, don't
  make applications to dew covered canopies in the early morning). The addition of lime to the
  application raises the pH of the spray solution and reduces the chances for plant injury.

- Consider that copper is poisonous to yeasts and that excessive copper residues at harvest
  can interfere with fermentation, and wine stability and quality. Unfortunately it's impossible to
  predict how high residues will be on fruit at harvest; that's going to depend on the copper
  formulation (some of the newer coppers utilize lower copper concentrations), rate of material
  used, number and timing of applications made, spray coverage, and amount of rainfall from
  application to harvest. I am not aware of any information that establishes a nice, clean cutoff date or pre-harvest interval for avoiding excessive copper residues at harvest, but I have
  heard that cutting off copper use about a month before harvest may be sufficient in most
  cases.
- There is also evidence that late Captan sprays can delay fermentation and have negative effects on wine quality but the consequences seem less severe and irreversible than those associated with copper use. For more on this, consider this online article by Dr. Annemiek Schilder, former fruit pathologist at Michigan State University: <u>https://www.canr.msu.edu/news/late\_season\_fungicide\_sprays\_in\_grapes\_and\_potential\_effects\_on\_fermentation
  </u>

If you are protecting a non-bearing, young vineyard from downy mildew (you're not selling/ harvesting a crop), you can continue to use mancozeb products to control downy mildew past the 66-day pre-harvest interval. You can also consider using mancozeb after harvest to keep canopies clean of downy mildew and 'firing on all cylinders' until that first frost. The longer your vines can continue to produce and store carbohydrates after harvest, the better prepared they'll be to withstand winter cold without damage (and the crown gall that follows).

For late summer **powdery mildew fungicide applications**, options for powdery mildew control should emphasize materials that are less risky in terms of the development of resistance, like formulations of sulfur on varieties that are not sensitive to it (which could also be tank mixed with the aforementioned synthetics to manage resistance). The more expensive, micronized formulations of sulfur will generally perform better (more effective per pound, more rainfast) than the cheaper, wettable powder formulations, especially for *V. vinifera* (you get what you pay for). Also, according to the New York and Pennsylvania Pest Management Guidelines for Grapes, "sulfur activity is strongly influenced by formulation, rate, frequency of application, and weather"; that is, higher rates and shorter spray intervals will provide better control than lower rates and longer spray intervals. Do not apply sulfur within 14-21 days of an oil application. Sulfur residues on fruit at harvest have been correlated with increased hydrogen sulfide and sulfurous off-aroma formation during fermentation, and so growers will need to phase out sulfur applications at some point well before harvest. This is mostly a problem for wines that are fermented on the skins (reds) where most of residues at harvest are found. Work published by Dr. Misha Kwasniewski showed that "sulfur residues are likely of low concern in white wine making, especially when juice is clarified before fermentation. However, residue levels in red fermentations (fermented on skins) can exceed levels associated with increased hydrogen sulfide production when some sulfur sprays are applied within 8 weeks of harvest" (Kwasniewski et al. 2014). However, in that same study, ceasing sprays no later than 5 weeks before harvest, resulted in sulfur residues that were below a concentration consistently shown, in previous literature, to increase hydrogen sulfide production. Therefore, for reds fermented on the skins, one may need to end sulfur applications a month or two before anticipated harvest date, to avoid increased H2S production during fermentation. Another strategy can include early-mid summer sulfur applications with micronized formulations (that are longer lasting/more rainfast) and making the later sulfur applications with a wettable powder formulation that is more quickly reduced by weathering.

Other late season options include coppers, potassium salt sprays like Nutrol, and formulations of potassium bicarbonate. As for coppers, the same concerns that were mentioned in the section on downy mildew, apply here as well. These materials can be a good way to maintain decent control of powdery mildew on leaves, while minimizing the chances for the development of resistance to the riskier materials used earlier in summer.

**Bunch and sour rots:** And finally, because the ripening period is upon us, I'm also including some information from a previous report regarding Botrytis bunch rot and sour rot pesticide applications to <u>susceptible wine varieties</u>. Botrytis specific fungicides have active ingredients that are prone to the development of resistance by the Botrytis fungus. Below is a list of these materials according to the FRAC (Fungicide Resistance Action Committee) group that each product belongs to. FRAC numbers group together active ingredients with the same mode of action.

For example, Vangard and Scala are in the same FRAC group, 9. This means that if a population of Botrytis in a vineyard has developed resistance to the active ingredient in Vangard, then it will also be resistant to the active ingredient in Scala, even though the active ingredients may be different chemical compounds (cyprodinil in Vangard and pyrimethanil in Scala). Nevertheless, the mode of action of these two chemistries (the way in which the fungicide disrupts a specific metabolic pathway in the fungus, killing it) is the same, or similar enough that pathogen resistance to one chemistry will confer resistance to the other.

- 1. Rovral/Meteor: FRAC group 2, 7 day pre-harvest interval
- 2. Endura: FRAC group 7, 14 day pre-harvest interval
- 3. Luna Experience: FRAC group 7 (and 3, which is not for Botrytis), 14 day pre-harvest interval
- 4. Pristine: FRAC group 7 and 11, 14 day pre-harvest interval
- 5. Vangard, Scala: FRAC group 9, 7 day pre-harvest interval
- 6. Inspire Super: FRAC group 9 (and 3, which is not for Botrytis), 14 day pre-harvest interval
- 7. Switch: FRAC group 9 and 12, 7 day pre-harvest interval
- 8. Flint and Intuity: FRAC group 11, 14 and 10 day pre-harvest interval, respectively.
- 9. Elevate: FRAC group 17, 0 day pre-harvest interval

Botrytis specific fungicides will provide little or no control of sour rot. However, work by Drs. Megan Hall and Wayne Wilcox at Cornell University has shown a close connection between fruit flies and sour rot development and spread. Weekly sprays of insecticides (to control the fruit flies) initiated just before sour rot symptoms are observed (preventive sprays just before about 15 brix) can provide significant control of sour rot. The addition of antimicrobials (Oxidate, Fracture, for example) could improve sour rot reductions even further,

### KEEP YOUR FARMING OPERATION FINANCIALLY HEALTHY

### Crop insurance offers a lot of choices. Which protection is right for your business?

Contact your local Rain and Hail agent to get your crop insurance consultation before it is too late.

Sales closing date is November 20!

#### For details contact:

**GEORGE HAFFENDEN** 716.725.7840 ghaffenden@american-national.com



This institution is an equal opportunity provider and employer.



though most of the sour rot control will come from the insecticide. Be careful to rotate insecticides as fruit flies can develop resistance to insecticides very quickly. This could be an important part of your rot control program if you're growing varieties like Pinot noir/gris, Vignoles, Chardonnay, or Riesling, especially if the last leg of the ripening period is a wet one.



Botrytis bunch rot (above photo) and sour bunch rot (below two photos) in Vignoles.





### YOU'RE GREAT AT FARMING. WE'RE GREAT AT INSURANCE.



27 E MAIN STREET WESTFIELD, NY

716 269 4322



ORIGINAL

SWISS MADE

Chautauqua County Farm Bureau<sup>®</sup> is working hard to gain workforce options, retain necessary protectants, and ensure policy that benefits our growers



**Join Today!** 

NYFB.org 800-342-4143

NORTH EAST FRUIT GROWERS 2297 KLOMP ROAD, NORTH EAST, PA 16428 NEFRUITGROWERS@VERIZON.NET **OPEN YEAR-ROUND MONDAY - FRIDAY 8AM - 5PM OPEN SATURDAYS APRIL- NOVEMBER 8AM - NOON BULK FERTILIZER BAGGED FERTILIZER** CHEMICALS **EST 1937** VINEYARD SUPPLIES **ORCHARD SUPPLIES** ORPOR PRUNING SUPPLIES GLOVES & BOOTS V-NATURA POND PRODUCTS **RODUCE PACKAGING** FOOT The world's most wearable rubber boot **HOME OWNER SUPPLIES** tspen Song & SO MUCH MORE! dryshodusa.com



## PA Update

Megan Luke, Penn State Extension Viticulture and Tree Fruit Educator

#### **Spotted Lanternfly**

There have been unconfirmed reports of adult SLF in Erie County, PA. The Pennsylvania Department of Agriculture has not found an established population of SLF so far this year, all adult insects have been individual "hitchhikers" from infested areas. Erie County is not currently expected to come under quarantine.

That being said, the PDA and Penn State Extension is strongly encouraging any sightings to be reported. In the event of the discovery of an aggregation or established population in Erie County, the PDA will provide mitigation and eradication of the pest on your property to prevent it from spreading.

### If you see an adult SLF, catch and crush it, take a photo, report it, and contact a member of the LERGP team immediately!

- Pennsylvania Reporting: 1-888-4BAD-FLY (1-888-422-3359)
- <u>New York Reporting</u>:

Additionally, if you or someone you know is traveling into a quarantine zone, be sure to check vehicles for adult SLF hitchhikers upon arrival in Erie, PA or Chautauqua County, NY.

#### **EPA Herbicide Re-Registration Update**



Link to public comments: EPA Herbicide Practices Comment Link

The EPA has been under fire in recent years with multiple lawsuits claiming that the agency has been negligent in its assessment of pesticides and their risks to species and their habitats as defined and protected under the Endangered Species Act.

The EPA hosted a webinar to address these concerns and to outline new measures for mitigating risks of damage to protected species and habitats by creating new label requirements for herbicide use. As we all know, the label is the law when it comes to pesticide applications, so these measures will affect agriculture and individual farming operations as soon as next year.

#### Recording of webinar here:

### EPA's Bulletin Live! 2 Website can be found here:

#### Key takeaways:

- The EPA is working with the U.S. Fish and Wildlife service to create maps of every endangered and protected species in the USA and their critical habitat.
- If your farming operation is within 1000 feet of critical habitat, you will be required to demonstrate compliance with "mitigation measures" as defined by the EPA
- Mitigation measures are defined on a point system, with individual measures being worth a given number of points
  - Measures will include practices such as cover cropping, conservation tillage, drift reduction practices, contour farming, etc.
  - Points vary for each qualifying practice
- Every new herbicide and every herbicide due for re-registration will have a mitigation point requirement added to the label
  - o Herbicides with higher risk to non-target species will require a higher number of points
  - Farmers MUST be able to demonstrate commensurate mitigation practices to the number of points on the label IN ORDER TO USE THE HERBICIDE
- All current information on point values and mitigation practices will be hosted EXCLUSIVELY on a website

The only exemptions provided at this time are for farmers who have land that is NOT within 1000 feet of any protected habitat, OR for farmers currently working with an "expert" to utilize conservation practices on their land with actionable steps in place. The definition of what type of qualifications are required for an "expert" exemption are not yet defined.

Methods of enforcing these measures were not discussed in the webinar. Currently, these measures are open to public comment until September 22<sup>nd</sup>. We are strongly encouraging growers to voice their thoughts on these measures. It seemed that at this point the suggested "point system"

was going into place regardless, but the speakers for the EPA requested advisement on possible exemptions, methods for refining the maps of critical habitat, and mitigation practices that should be included in the menu of options.

**General scouting and management:** Current pests of concern include grape berry moth, grape leaf hopper, and spider mites. With the cool conditions and frequent rains, extreme damage from spider mites is unlikely, but if you have been applying high rates of insecticides and are observing bronzing or stippling with curling leaves you should check the undersides for signs of mites. Dark specks along with fine webbing are the telltale signs, high enough populations can reduce plant vigor and cause defoliation. If spider mites pressure exists, be sure to include an acaricide or pesticide listed for mite control in your next application, examples would be abamectin, acequinocyl, bifenazate, etoxazole, fenpyroximate, and fenbutatin-oxide. Be mindful of your PHI (pre-harvest interval) in early-harvest grape varieties.

**Grape berry moth (GBM) (Figure 1):** At this time, damage is visible as holes in berries with a purplish discoloration and a split in the skin with frass or webbing (Figure 2). In warm years and at high-risk sites, growers need to continue chemical control on a 10-to-14-day interval through mid-September. Good coverage of the fruiting zone is essential. Remember when scouting that the goal is to get a handle on potential damage levels and whether you are exceeding economic thresholds. For Concord grapes, if the percent of clusters that show some GBM damage to berries is **greater than 6% at second flight** and **greater than 15% at third flight**, then a treatment is recommended.



Figure 1



Figure 2

Grape Berry Moth Larvae and Damage Photos courtesy of Penn State Extension, Andy Muza & Megan Luke

**Grape leaf hopper:** Grape leaf hopper is still being reported in many vineyards. (Figure 3). The final round of scouting is performed in late August. If you see stippling (white dots on leaves caused by leafhopper feeding) throughout the vineyard block, you should be counting nymphs to determine if an insecticide treatment is recommended (Figure 4). Sampling for leafhoppers at this point in the season is focused on the abundance or quantity of second-generation nymphs. Check four different areas in the vineyard (two exterior and two interior). At each area look at five lower (basal) leaves (leaves #3-#7 when counting from base of shoot) per shoot on five different shoots at each location and check for leaf feeding. If no damage or minimal injury is observed, proceed to the next sampling site. If moderate to heavy leaf stippling is observed, then begin counting nymphs on the undersides of leaves. **If you are observing heavy damage, and a threshold of ten nymphs/leaf is reached, then an insecticide application is recommended**.







Figure 3

Figure 4

Figure 5

Grape leaf hopper adults, leaf damage, and nymph Photos courtesy of Penn State Extension, Andy Muza

For Pennsylvania growers, the Erie County Conservation District has funds available to growers for implementing projects such as cover cropping and stabilization of access roads through the VinES Program.

Information for these funds is available here: VinES Program Website

To get your free workbook, contact Ryan Nageotte at (814) 825-6403

### Office schedule (September 11<sup>th</sup>-September 15<sup>th</sup>)

M 8am-4:30pm CLEREL Portland, NY T 8am-4:30pm LERGREC North East, PA W 9:30am-4:30pm Out of office (available by email or phone) Th 9am-5pm Summit Municipal Building, Erie, PA F 9:30am-4:30pm Out of office (available by email or phone)

### **Contact information:**

Mobile (call or text): (716) 397-9674 (preferred)

Office: (814) 825-0900

Email: MFL5873@psu.edu

