Lake Erie Regional Grape Program

Vineyard Notes-July 2017

The Lake Erie Regional Grape Program

PENNSTATE

Dates of Interest:

Wednesday, August 2- Hort Society Annual Chicken BBQ- Gravel Pit Park, North East PA

Friday, August 11- LERGP Summer Grower Conference-CLEREL
Saturday, August 12-LERGP Open House at CLEREL

Saturday, August 19-LERGP Hops Conference-CLEREL

LERGP Summer Growers' Conference

Do you find the changes to the Worker Protection Standard regulations confusing? Have you heard all the chatter at the Coffee Shop about sensors and variable rate technology? How about why there is so much late season grape berry moth damage and what can be done about it? The answer to these questions and more are available – along with the highly sought after pesticide recertification credits (up to 2.5 for NY and 5 for PA) – at the LERGP Summer Growers' Conference on August 11, 2017 at the Cornell Lake Erie Research and Extension Laboratory (CLEREL) 6592 West Main Road, Portland, NY.

The conference will be held in the CLEREL meeting room and will start at 9AM and adjourn by 4 PM. The cost includes a day of education and a catered lunch and is a bargain at $20 for members of LERGP. With on-line pesticide credits going at $30 per credit it is like you are paying yourself $55 to attend.

Following are the talks and presenters for this year's conference.

Using the Grape Berry Moth Model on NEWA - Tim Weigle, NYS IPM and Andy Muza, LERGP Penn State

Managing Resistance and Late Season Fungicide Applications - Bryan Hed, LERGP, Penn State

Insect Update - Jody Timer, LERGP, Penn State

Update on Changes in the Worker Protection Standard Regulations - Michael Nierenberg, NYS DEC

Precision Vineyard Imaging - Dr. Stephen Nuske, Carnegie Melon University

Variable Rate Shoot Thinning – The Hows and Whys - Jackie Dresser and Rhiann Jakubowski, LERGP

"Efficient Vineyard" SCRI Project Update - Terry Bates, LERGP, CLEREL Director

Economics of Using Cover Crops - Kevin Martin, LERGP, Penn State

Efficient Vineyard Project - James Taylor, New Castle University

In addition, you will learn why all those people in the picture below were so interested in a bucket of soil.

To register, visit the LERGP website https://lergp.cce.cornell.edu/ and look in the Upcoming Events section in the lower right hand corner of the home page.

LAKE ERIE REGIONAL GRAPE PROGRAM- 25 Year Anniversary

2017 GRAPE GROWERS' SUMMER CONFERENCE REGISTRATION FORM

to be held at CLEREL
on Friday, August 11, 2017
Deadline for registration is Friday, August 4, 2017

Name (1st attendee) _____ **$**_____

Farm Name _____

Address, City, State, Zip Code _____

_____

Phone_____ **E-mail**_____

Are you enrolled in Lake Erie Regional Grape Program (LERGP)? **Yes**_____**No**_____

REGISTRATION FEES	
LERGP Member attendee	$ 20.00
Non- member	$100.00

Additional Attendees:

	$20.00
	$20.00
	$20.00
	$20.00
	$20.00

*Please add a **$20.00 late fee** for each reservation made after August 4, 2017

TOTAL $_____

Please make check payable to **LERGP (Lake Erie Regional Grape Program)** and mail to: (*US funds only*)

Kate Robinson
LERGP
6592 W Main Rd
Portland NY 14769

Name _____NY DEC/PA PDA NUMBER_____

Name _____ NY DEC/PA PDA NUMBER_____

Name _____ NY DEC/PA PDA NUMBER_____

Date Ck. Rec'd	**Amount**

Call Kate at 716-792-2800 ext 202 with any questions.

2017 LERGP Summer Grape Growers' Conference

Friday August 11, 2017
at CLEREL
6592 W. Main Rd.
Portland NY 14769
9:00am-4:00pm

Summer Grape Grower Conference with a focus on Efficient Vineyard SCRI project, Variable Rate Management, Cover Crops, NEWA, GBM and Business Education. *$20.00 per person includes program, morning refreshments and a catered lunch. For more information, please call Katie 716-792-2800.*
Register at https://lergp.cce.cornell.com

Business Management

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

Why We Cover Crop

For the last 26 years cover crop research in vineyards has focused primarily on making wine grapes smaller. While that research did show some success, most of the long-term impact was less than ideal. In many trials vine size did not decrease and sometimes it actually increased. This sounds like a recipe for success for native varieties. Whenever growers are trying to maximize yield, increasing and maintaining vine size is usually the limiting factor. If cover crops can help with that, we can improve profitability. Recent cover crop research by Luke Haggerty is beginning to establish evidence that a well-managed cover crop will improve profitability in vineyards.

We are also seeing evidence that these solutions may work for bulk juice growers. Our threshold to establish a new production practice in our industry is finding that cover crops may be the least costly solution (or in some cases, only solution) to a viticulture challenge.

A seed blend of 3-5 seeds will effectively accomplish a number of things, if seed grows well. The potential compounding benefits of cover crops lead to multiple financial benefits as well. Seed choices, seed rates and adequate preparation are all required to maximize the value of cover crops. Benefits and goals should be tailored to the needs of individual vineyard blocks.

Preparation

When using cover crops in vineyards soil pH should be kept on the higher end of recommendations. If current soil pH is below 5.0, do not plant cover crops. Until soil pH is above 5.5, cover crop seed costs should be minimized and should not be focused on nitrogen fixation. Select cover crops that are inexpensive per acre and tolerate lower pH. Concord grapes and legumes can do well with a pH of 6.0 – 6.25. While this is higher than traditional guidelines for Concord needs, Concord will do well and legumes will fix more nitrogen.

Nitrogen fixation

When organic matter is above 3%, nitrogen fixation can be helpful but should not be a primary goal. Advertised recommendations for medium red clover indicate that an early August planting may fix 65 lbs. of nitrogen per grape acre. For grapes, this may be too much and its release may not be well timed. Medium red clover seeded at rates of 5 – 7 lbs per acre will provide supplemental nitrogen at more appropriate rates when terminated. By cutting the cost of legume seed by 65%, growers can continue to use urea, which will ensure ideal timing for 20 -25 lbs of actual N around bloom. Well managed legume cover crops can fix 1lb. of nitrogen for $.75. While that is nearly double the price of urea, it is more available and stable. Given the differences in cost, until we know more about the efficiency of uptake and bloom availability, it makes sense to supplement urea not replace it altogether.

Weed Control

Companion crops, such as oats or wheat often provide moderate to excellent levels of weed control. At low rates these companion crops provide weed control in row middles at least as good, if not better than two applications of round-up. Due to timing issues, typically, only one application of

round-up is saved. While trips through the vineyard are not saved, the quality of the weed control is superior.

Annual rye grass outperformed grain rye and oats in trials so far. A rate of 4 – 9 pounds per grape acre would be appropriate depending on other seeds in the mix. Seed cost would range from $8 - $16 per grape acre. In addition to weed control, a companion crop would enhance the performance of other seeds and prevent erosion (particularly during harvest).

Erosion Control

Erosion control is often the primary concern of conservation programs. The environmental costs of erosion are high. Costs of erosion shouldered by growers are specific to sites, practices and weather. On most sites, in most years, erosion and field disturbance is not severe enough to justify a cover crop. Flooding or wet soil can require significant rehabilitation efforts in wet years. These costs can easily result in 3-5 days of labor and tractor work for a small 10-acre block. Erosion control, for most growers, is just an added bonus.

Barley, Cereal Rye, Sorghum and Cowpea are the highest rated choices for control. Cereal Rye is one of a number of companion crops often used in vineyards. If erosion is a severe problem, one might start to favor cereal rye for that block. Annual Rye grass, oats, wheat and radish are all very good at erosion control. Since most growers are not necessarily focused on erosion, a very good rating opens up the possibilities of nearly all companion crops commonly used in vineyards.

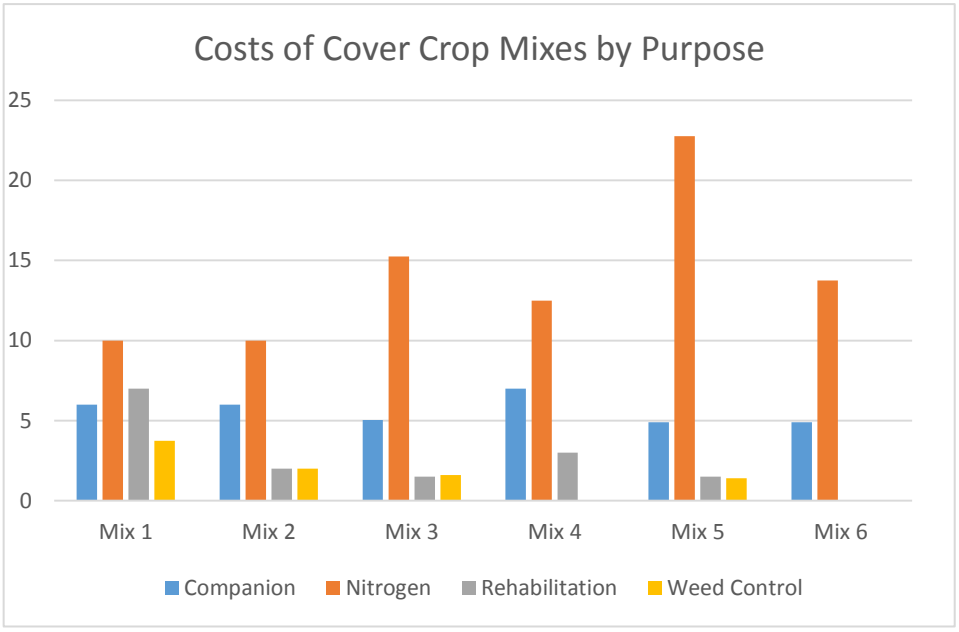
Managing Water Status

For growers that get the basics right, vine size is still driven by water status. In the east, this is typically outside of the control of the growers. Where drainage can be installed it usually is. Well drained soils are generally more productive and often profitable. Cover crops offer another tool, one that is badly needed as rainfall can manipulate production and vine size dramatically.

Theoretically, higher quality soils will be more resilient to excess and deficient rainfall, increasing productivity in unusually dry and wet years. We have already started to see cover crops influence vine size prior to quantifiable changes in soil health. Benefits of enhancing vine size significantly outweigh the costs of cover crop. With one notable exception, vine size improved significantly across all treatments, with all seed mixes. Improvements in smaller vines were most notable, thus variability within a block was somewhat reduced.

In well drained soils, cover crops provided significant and unwanted competition in a dry year. That competition could likely be eliminated by an early termination. If terminated at 6" of shoot growth, unwanted competition would not be expected. The impact in 2016, a historically dry year, was dramatic. Crop size, through berry weight, was significantly reduced. Vine size, impacting 2017 crop was also significantly reduced. Early termination will provide challenges to increasing organic matter and will reduce the overall benefits of cover crops. Even with early termination, it seems likely that impacts will still provide a meaningful difference in net profitability.

What We Cover Crop



All rates and costs are based on planted acres, which will vary in vineyards based on row spacing and seeder width. Average planting per grape acre is between 50% and 75% of grape acres. Figure 1 shows the cost per acre of each planting by purpose of seed. It should be noted that while some seeds are planted for a specific purpose, they do accomplish other things as well. Legumes can provide good weed control, for example, but the cost of a legume seed was assigned to nitrogen. If legumes were removed from the mix, often additional buckwheat (for weed control) or additional companion crops (for weed suppression) would be necessary.

Mix 1: Standard

Annual Rye Grass (12lbs), Medium Red Clover (6), Radish (1) $27

The standard seed mix will do a fairly good job of accomplishing the general purposes of cover crops. It represents a good place to start. Modifications of this mix will often enhance individual goals (such as weed control) but those enhancements may come at the expense of other goals.

Mix 2: Weed control

Annual Rye Grass (8lbs), Medium Red Clover (4), Radish (.75), Buckwheat (2.5) $20

The addition of buckwheat should enhance competition with weed populations. Its allopathic effects may also impact the relative success of other cover crops in the mix. To alleviate the impact, lower seed rates result in a lower planting cost for this mix.

Mix 3: Weed control + Nitrogen $24

Grain Rye (18), A. Winter Pea (9), Medium Clover (2.5), Buckwheat (2), Radish (.75) $22.50

This is a complicated enough mix so that it may perform quite differently across soil types. One concern with a mix like this is the potential for radish or buckwheat to outcompete other seeds in this mix. The Austrian winter peas in this mix do have the potential to fix a great deal of nitrogen. So much so, its role in the mix should be reduced if organic matter is above 3%. Otherwise, you may not need a urea application and will need to time termination very carefully to maximize investment in seed cost.

Mix 4: Erosion

Grain Rye (25), Medium Clover (5), Radish (1.5) $22.50

While we do not have data in vineyards, field crop extension guidelines suggest by switching to grain rye, erosion control should be enhanced when compared to rye grass. The improvement should be modest, as rye grass is no slouch. In Luke's trials, preliminary results indicated that weed control might be a bit less with this mix as compared to standard.

Mix 5: Standard Frost Mix

Oats (35), Crimson Clover (5), Radish (1.5) $22.00

A frost mix will either terminate itself or facilitate very easy termination in the spring. Particularly tall cover crops can enhance the risk of spring frost and many growers try to avoid crops that will reduce canopy air temperature in the spring. The biggest challenge with these mixes is realizing any benefits of spring weed control. A good stand of oats may provide weed control, similar to straw. Rolling would likely enhance that control, as wood higher seed rates if an adequate stand is not realized at 35 lbs.

Mix 6: Frost Mix + Nitrogen

Oats (45), A. Winter Pea (9), Crimson Clover (5), Radish (.75) $31.00

Similar mix to above but more invested in nitrogen fixing crops. Both winter pea and crimson clover have survived our recent mild winters. Sustained low temperatures typical for our region usually winter kill these crops. Crimson clover is one of the easier clovers to terminate. Winter pea can also be terminated but also is typically low growing. That low growing habit may be enough to avoid termination if nitrogen fixation is a priority.

One note: Looking at the characteristics and price of berseem clover, it may be a good alternative to crimson clover. It is the least winter hardy, tolerates slightly alkaline soils better than other clover, and does well with low seed rates. It has not made our list of mixes as we have no direct experience with it. Give it a try if you want, I think we might.

Thanks

I want to thank Luke Haggerty for thinking up these crazy ideas and doing the work. I'm just the messenger, since he has moved onto Constellation Brands. It was great to work on a trial that was also focused on economic results for grape growers. I'd also like to thank Scott Ebert and CLEREL staff for their efforts as well. Good luck and happy planting.

Scott Ebert planting sunn hemp to rehabilitate soil for a future vineyard planting at CLEREL.

Cornell University
College of Agriculture and Life Sciences
New York State Agricultural Experiment Station

Economics of Cover Crops

Luke Haggerty[1], Kevin Martin[1] and Scott Ebert[2]

[1]Field Representative, Constellation Brands, [2]Assoc. Extension Educator, The Pennsylvania State University
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$216 Net Profit Margin Increase

Cost of Materials

Grower Guide to Mixes (Cost per Acre)

United States Department of Agriculture
National Institute of Food and Agriculture

Lake Erie Grape Processors

IPM

Tim Weigle, NYSIPM, Cornell University, LERGP Team Leader

Grape Berry Moth

The grape berry moth (GBM), Paralobesia viteana, is the primary insect pest of grapes grown in the eastern United States. The female GBM typically lays her eggs directly on the berry. When the eggs hatch, the larvae are in the perfect location to immediately begin feeding directly on the grape berries. Their feeding causes both crop loss and contamination, and damage from late season feeding creates an entryway into the berry for the complex of late season rots. Most growing regions can expect two to three generations of GBM each year. Over the past 30 years, GBM management recommendations have been driven by changes in grape prices, government insecticide regulations and canopy management practices. The latest model incorporates both weather data and an understanding of insect biology to improve risk assessment and inform spray schedules.

Grape Berry Moth Risk Assessment Protocol

Early systems were based on the application of three insecticides, using a timing that was based both on the grapevine's growth stage and the calendar. In response to dropping grape prices in the 1980s, the Grape Berry Moth Risk Assessment Protocol https://ecommons.cornell.edu/bitstream/handle/1813/5202/FLS-138.pdf was developed, based on the vineyard's history of grape berry moth damage, climate (i.e. winter low temperatures plus snow cover) and proximity to woods. This protocol provided growers with a roadmap for GBM management by specifying the timing of scouting and insecticide applications using the vineyard's risk classification. It was a significant step forward compared to the calendar-based insecticide program of the past, but its calendar-based mid- and late-season scouting and insecticide timings were not effective in controlling late-season GBM damage, which was on the increase due to the government's decertification of many broad-spectrum insecticides, new training systems that created larger, denser canopies (primarily in the Concord industry), and overall warmer temperatures throughout the growing and dormant seasons.

Phenology-Based Degree-Day Model

In response to the breakdown of the GBM RA Protocol, research and extension staff from Cornell, Penn State and Michigan State University sought alternative management strategies for GBM that replaced calendar-based scouting and insecticide sprays with a growing degree-day model to predict the peak of the damaging larval phase of each GBM generation. Because insect development is driven by temperature, the warmer the temperatures over a period of time the more quickly a grape berry moth will complete its life cycle. GBM typically completes two to three generations per year in New York State. Conversely, cooler temperatures will delay GBM development, requiring more time to complete a life cycle. Research showed that 810 degree days are required for grape berry moth to complete a generation, so in the model, a base temperature of 47.14°F is used.

Degree-day calculation example:

To calculate degree-days, the high and low temperature for a 24-hour period (usually midnight to midnight or 8 a.m. to 8 a.m.) are recorded. The high and low temperatures for the day are added and then divided by two to calculate the average daily temperature. The base temperature (which in the case of the GBM model is 47.14°F as opposed to the 50°F base temp we use for other practices in grapes) is then subtracted from the daily average to give the degree day accumulation for that day.

An example is provided below for a day with a high temperature of 84°F and a low of 56°F.

84 (high temp) + 56 (low temp) = 140

140/2 = 70 average temperature

70 (avg. temp) – 47.14 (base temp) = 22.86 degree days for that day

Degree-days are then added to get accumulated degree-days over days or weeks. If the average temperature is ever lower than the base temperature, zero degree-days are recorded for the day. There is never a negative accumulation of degree-days.

The research and extension team conducted trials to examine scouting and insecticide applications based on GBM life cycle development using degree-day accumulation rather than the calendar. Work continues on how to determine the best method for starting the accumulation of degree-days. Current research uses the date of wild grape bloom as the biofix, or starting date, because GBM development and wild grape phenology are closely linked early in the year. Other ideas for developing biofix dates are male pheromone trap catch results and degree-day accumulations with a January 1 start date. Research shows potential for a reduction in the use of insecticides using the phenology-based degree-day model without increased crop loss.

NEWA Location	Wild grape bloom date*	DD Total on July 10, 2017	Forecasted DD for July 15, 2017
Versailles	May 28	892	1015
Dunkirk Airport	June 1	831	949
Sheridan	May 28	931	1053
Silver Creek	May 31	857**	975**
Portland Escarp.	May 28	904	1027
Portland	May 29	900	1023
Westfield	May 28	937	1060
Ripley	May 28	940	1068
North East Escarp	May 27	922	1046
Harborcreek	May 28	934	1059
North East Lab	May 29	926	1051
Erie Airport	May 26	967	1094
Ransomville	June 3	818	941
Somerset	June 8	740	861
North Appleton	June 11	639	759
* Estimated date provided by NEWA website ** Data has been downloaded from sister site(s) since 7/5/2017 due to communication difficulties.			

Using the Model:

The model is available on the Network for Environment and Weather Applications (NEWA) website http://newa.cornell.edu. NEWA downloads weather parameters from weather stations across the state, so most grape growers are able to access results specific to their region. Growers are able to choose the weather station location and a biofix date (based on the timing of wild grape bloom near their

vineyard) to automatically generate predictions for their area. An example of how to use the model is presented in Table 1 below. Results for stations located in the Lake Erie region of New York and Pennsylvania as of July 10, 2017 shows that by the time you are reading this, most areas will be past the point where insecticide treatments will be effective (900 DD).

The exceptions to this are those areas in Niagara County and along the eastern portion of Chautauqua County where, according to the model larvae are still vulnerable to applications of contact insecticides like pyrethroids and carbamates. This becomes apparent when you access the model on NEWA which also provides Pest Status and Pest Management options toward the bottom of the model results page (Figure 1)

Accumulated degree days (base 47.14°F) wild grape bloom through 7/10/2017: 914 (0 days missing)

Daily Degree Days for Sheridan								
Base Temp	Past	Past	Current	5-Day Forecast				
	Jul 8	Jul 9	Jul 10	Jul 11	Jul 12	Jul 13	Jul 14	Jul 15
47.14F - GBM	22	20	25	25	25	26	23	22
Accumulation	886	906	931	956	981	1008	1031	1053

NA - not available

Download Time: 7/10/2017

Pest Status	Pest Management
Second generation larvae are protected within berries and completing their development.	The most effective time for treatment of second generation grape berry moth is over. Prepare to scout all vineyard blocks for grape berry moth damage when DD accumulation reaches 1470-1620 DD. During scouting, determine if the number of damaged clusters from previous generation exceeds the treatment threshold of 15%. If above threshold, control measures should be applied starting at 1620 DD.

Disclaimer: *These are theoretical predictions and forecasts. The theoretical models predicting pest development or disease risk use the weather data collected (or forecasted) from the weather station location. These results should not be substituted for actual observations of plant growth stage, pest presence, and disease occurrence determined through scouting or insect pheromone traps.*

Why The History Lesson on the GBMRA Protocol?

So you may be asking yourself, "What's with the history lesson? If we have the new model on NEWA why bother talking about the GBMRA protocol?" The reason is I feel that as we moved into using the model we left some of the important components of GBMRA behind, primarily classifying vineyard blocks by their risk of economic damage from GBM and more importantly, scouting. It is important to realize that the risk for damage from grape berry moth can change over time. A low risk vineyard may not remain a low risk vineyard if changes in canopy density, sprayers (or the way a vineyard is sprayed), the insecticides used, and even changes in climate (both growing season and dormant) create a situation where GBM populations can build. Routinely assessing each vineyard block as to historical damage from GBM will allow you to develop a better management strategy against GBM using the new Phenology-based DD model. As far as scouting goes, the traditional calendar based timing of the third week of July and third week of August with the GBMRA has been found to no longer be effective. Using the model to determine timing of scouting allows for more accurate results as it is tied to the development of a specific generation, which can vary drastically year to year. ***Take home message: Scouting is still a key component of grape berry moth management.***

Dealing with Late Season GBM Damage

Over the years late season damage from GBM has seemed to be on the increase whether it be from our growing seasons being warmer resulting in more generations, increased canopy density making coverage at the end of the season more difficult or the use of less expensive (and less effective) insecticides for GBM management. During the 2016 dormant season the group (Saunders, Timer, Muza, Loeb, Hesling, and Weigle) that worked on the Phenology-based GBM model got together to look at how model recommendations can be improved at the end of the season. What we discovered was that the model works well for the second and third generations in predicting when egg laying is occurring. But by the time we get to the third generation there is so much overlap between generations that there is extended egg laying over a few week period. To better explain this, Jody Timer PSU, conducted an experiment where she looked at the eggs laid by a single female GBM. The eggs from this single female hatched over a 5 day period. To simplify things, that would mean there would be a five day span in the first generation of larvae hatching and getting into the berries of wild grapes or webbing clusters in commercial vineyards. For the second generation there would be eggs laid over the five day span that would then hatch over another five day span which would lead to larvae hatching over a 9 to 10 day span. This timeframe would increase even more for the third generation leading to an ever present population of GBM hatching, especially in high and severely high risk vineyard blocks. For those vineyards with a history of late season GBM damage, even when the correct materials are used and timed according to the model on NEWA, it is suggested that once the third generation is targeted using the GBM model on NEWA, the spray protocol change to ensuring coverage of GBM problem areas in the vineyard on a 10 to 14-day schedule. If at all possible, look at harvesting blocks at high risk for GBM damage as early as possible to limit the damage.

PA Update

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

Insects and Diseases: What to expect in Concord and Niagara vineyards for the remainder of the 2017 season

There is still a long way to go until harvest and anything can happen but this is my two cents worth as to what I expect concerning insects and diseases. (Expectations are based on the assumptions that pests have been adequately controlled up to this point and that the weather does not turn excessively wet).

Insects

Grape Berry Moth – Tim Weigle will be covering GBM in this newsletter so refer to his article. My only comments are, IF you have a history of problems with GBM in certain blocks then this year won't be any different. 1) Continue to check the GBM Degree Day Model in NEWA http://newa.cornell.edu/index.php?page=berry-moth to determine timings of insecticide applications and, 2) scout to determine if GBM is occurring in areas where they have not historically been a problem and to access the efficacy of treatments in areas that insecticides have been sprayed.

Japanese beetle – Currently, JB levels are low but will increase over the next few weeks. Peak activity of adult beetles in vineyards is in midsummer.
Beetles are most active on warm, sunny days and tend to congregate on vines to feed and mate in groups on the top leaves of the canopy (Figure 1). Although leaf feeding on Concord and Niagara vines may cause concern, serious widespread injury is not common in our region. Beetle infestations are usually concentrated in pockets and not uniformly spread throughout a vineyard block.

Figure 1. Japanese beetles feeding on Concord leaf. Photo: Andy Muza, Penn State

Research has shown that grapevines (especially Concords and Niagaras with large canopies) can tolerate a fair amount of leaf area loss without detrimental effects. However, no economic threshold level has been established for leaf injury on grapes caused by Japanese beetle. Therefore, growers have to rely on their judgement and experience to determine leaf injury levels they can tolerate.

Before deciding if an insecticide application is needed in any of your vineyard blocks consider: Japanese beetle population levels, varietal susceptibility, age of vineyard (i.e., young or mature), canopy size, and crop load.

Grape leafhopper – last season, due to the weather conditions, I expected GLH to be more of a widespread problem in our region. However, I only found a few areas towards the end of the season where an insecticide application may have been needed. At this point GLH levels are low and I don't expect GLH to be a widespread problem this season. But there will probably be hotspots in blocks towards the end of the season where population levels cause concern. So, while you are scouting for grape berry moth also check for grape leafhopper feeding injury to determine if treatment may be needed for this pest (Figure 2). Dry weather conditions, along with high crop load and high GLH populations in a block indicate the need for an insecticide application.

Figure 2. Grape leafhopper feeding injury on Concord leaf. Photo: Andy Muza

Diseases

Black Rot – only low levels of black rot leaf lesions have been observed in Concord and Niagara blocks in the vast majority of vineyards in our area (Figure 3). Only 1 Concord site had enough cluster infections to be considered a problem. Although Concords can still be infected up to about 5 - 6 weeks after bloom, black rot should be a minimal problem for the remainder of the season.

Downy Mildew – Mid July and the only downy mildew that has been found are a leaf lesion in a Delaware and Niagara block and an infected cluster in a Fredonia block (Figure 4). No downy mildew has been found, yet, in any Concord blocks checked.

Figure 3. Black rot lesion on Concord leaf. Photo: Andy Muza, Penn State

Inoculum levels are so low across the region that DM is not a concern for the remainder of the season in Concord vineyards. I also don't expect DM to be a problem in Niagara blocks unless a pattern of rainy weather develops to cause an unexpected flare up of this disease. As a precaution, varieties with a high susceptibility to DM (e.g., Niagara, Catawba, Delaware, Chancellor, Cabernet sauvignon, etc.) should be monitored during the remainder of the season.

Phomopsis – Good News/Bad News?

Good News - Although research at Ohio State indicated that berries remain susceptible throughout the season most phomopsis spores have already been released by bloom. Therefore, direct berry infection is likely to be low once berries become pea size. In fact a trial conducted by Wayne Wilcox showed that, "sprays applied before and just after cluster emergence provided nearly 70% control of berry infections". Phomopsis trials have shown that fungicide protection on rachises, pedicals and berries is important until berries have reached about pea size. This season many growers have protected clusters during this time period by applying an early spray (3-5 inch stage), and an immediate prebloom and postbloom spray containing a fungicide effective against phomopsis.

Figure 4. Downy mildew lesion on Niagara leaf. Photo: Andy Muza, Penn State

Bad News? By now many growers may have forgotten about the extensive wet and cool period during the first 2 weeks in May when shoot growth was at the 1-2 inch stage. This resulted in widespread shoot infections in Concord and Niagara vineyards since few, if any sprays were applied during this time. **IF** widespread berry stem (pedicel) infections also occurred then this can result in fruit infections later in the season when berries ripen. There is nothing that can be done about infections that have already taken place so we will have to wait

and see if phomopsis fruit rot is a problem at harvest.

Powdery Mildew – Last season powdery mildew leaf infections were light – moderate in the majority of Concord and Niagara vineyards in our region. So far this season leaf infections are relatively low but there is still a long way to go to harvest.
"How extensive will leaf infections become this season?" and "Should I apply another fungicide application for powdery mildew?" Both are excellent questions to which I cannot provide definitive answers. Beltwide I expect that leaf infection levels will be greater than last season but will not reach anywhere near the level of WOW a White Out. A block by block assessment is the best approach in deciding if another fungicide application for powdery should be applied. Consider disease pressure, crop load and seasonal ripening conditions in making your decision.

INSURING GRAPES

NY, 2017

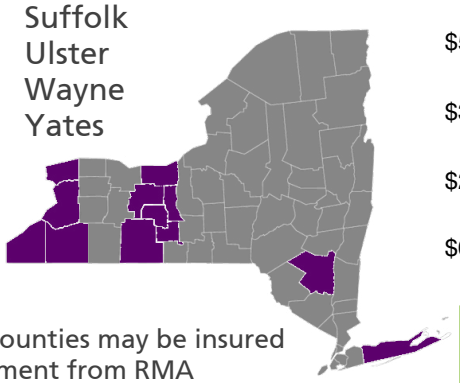
Crop insurance is a safety net for farmers that helps you **manage risk**. If you have a crop failure, crop insurance can help you farm again next year.

Important Insurance Deadlines

- **Aug. 15, 2017:** Premium Billing Date
- **Nov. 20, 2017:** Sales Closing, Policy Change, Cancellation, Termination Date
- **Nov. 20, 2017:** End of Insurance Period
- **Jan. 15, 2018:** Acreage / Production Report Date

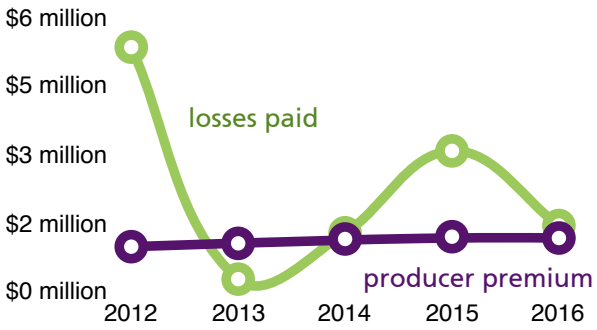
Over 40 grape varieties are insurable in these counties:

Cattaraugus
Chautauqua
Erie
Niagara
Ontario
Schuyler
Seneca
Steuben
Suffolk
Ulster
Wayne
Yates



Grapes in other counties may be insured by written agreement from RMA

NYS Grape Crop Insurance Performance



for every $1 grape producers spent on crop insurance premiums from 2012 to 2016, **they received $2.07** in losses paid, on average

Learn more & sign up:

Explore your personalized crop insurance costs and loss payments under different yield outcomes at ag-analytics.org. To sign up, contact a crop insurance agent. Find an agent using the Agent Locator tool at rma.usda.gov/tools/agent.html

Ag-Analytics.org
@aganalytics

USDA

Lake Erie Regional Grape Program

Open House

Cornell University
Cooperative Extension

Welcomes our neighbors, near and far, to come celebrate 25 years of service with us. We are holding an Open House with hayrides through the vineyards, food and a chance for us to let people know what we do here. This is a FREE event!

When: Saturday, August 12, 2017
Time: 10:00am - 1:00pm (hayrides on the half hour)
Where: CLEREL (Cornell Lake Erie Research & Extension Laboratory)
6592 West Main Rd.
Portland, NY 14769

Questions? Call Katie at 716-792-2800

2017
LERGP Hops Production in the Lake Erie Region Conference

Saturday, August 19, 2017

CLEREL-6592 West Main Rd. Portland, NY 14769

9:00am-4:00pm

$50.00- includes program, morning refreshments and a catered lunch

Join us for a day of Hops talks and a harvester/harvesting demonstration, followed by tours of the hopyards with time for open discussion.

Questions?: call Katie 716-792-2800

Register on-line at: https://lergp.cce.cornell.edu

You can print a hard copy registration from this link and mail it in or use a credit card to register on-line.

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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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