Lake Erie Regional Grape Program

Vineyard Notes-June 2018

The Lake Erie Regional Grape Program

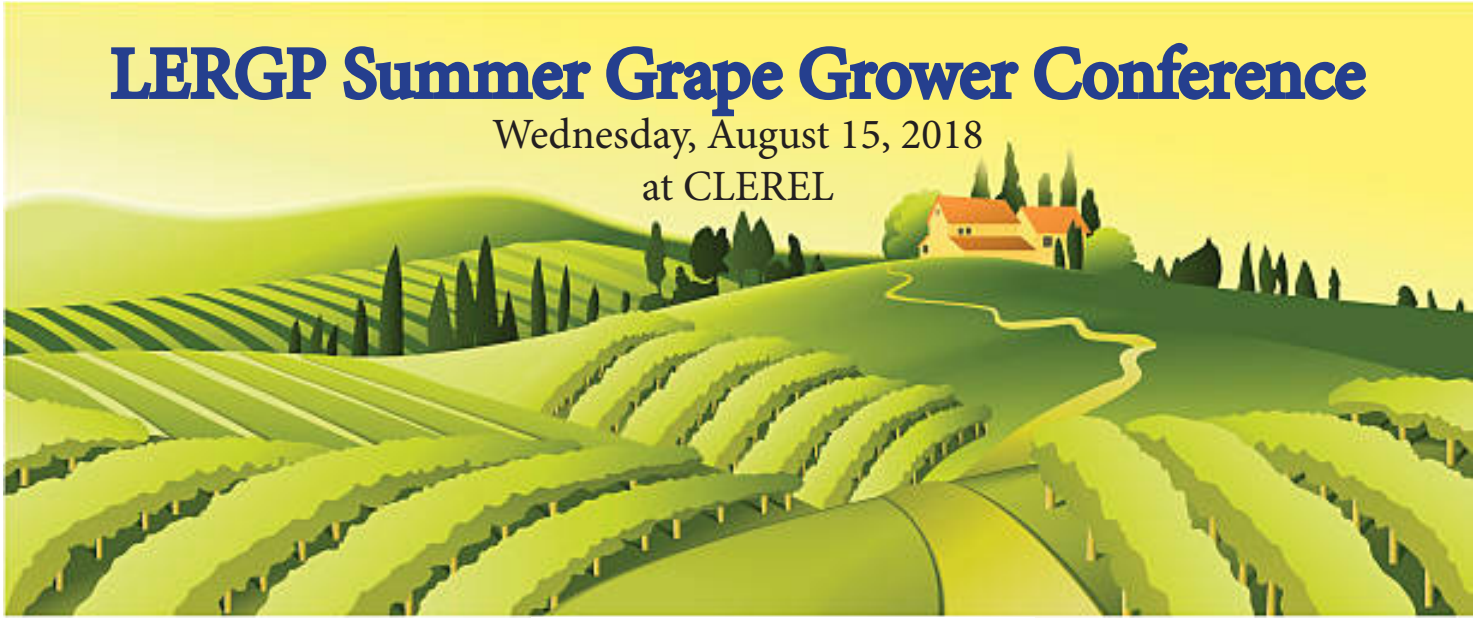
PENNSTATE

Cornell University
Cooperative Extension

Building Strong and Vibrant New York Communities

LERGP Summer Grape Grower Conference

Wednesday, August 15, 2018
at CLEREL



Topics of the day: 9:00am-3:00pm

Spotted Lantern Fly, should we be worried?
Powdery Mildew and Botrytis (pesticide points)
D.O.T. topics
Crop Insurance
Efficient Vineyard topics including demonstrations in the field
Carnegie Melon's vineyard robot , our variable rate thinner, NDVI sensors, and much more.

Guest speakers!

We will spend the morning inside, then after lunch head outside for more interactive talks around the farm.

$10.00 per person, includes refreshments and lunch

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

LAKE ERIE REGIONAL GRAPE PROGRAM

2018 SUMMER GRAPE GROWERS' CONFERENCE REGISTRATION FORM

Wednesday, August 15, 2018

Deadline for registration is Friday, August 10, 2018.

Name (1st attendee) _____ **$_____10.00_____**

Farm Name _____

Address, City, State, Zip Code _____

_____

Phone_____ **E-mail**_____

Are you enrolled in Lake Erie Regional Grape Program (LERGP)? **Yes_____No_____**

Additional attendees:	$10.00
	$10.00
	$10.00
	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 201 with any questions.

Business Management

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

Decreasing Farm Size

The obvious trend in vineyards and agriculture has been increasing farm size. While vineyards, particularly in NY & PA have not consolidated as quickly as other crops, there has been a moderate increase in average acreage over time. Looking at individual NASS census years the trajectory upward does have setbacks, likely related to lower grape prices. Given the long period of a poor grape market, we do have some anecdotal clues about the results of the 2018 census. A look at a typical vineyard budget can highlight the advantages and pitfalls of expanding vineyard operations. It also can provide some guidance in helping vineyards grow sustainably.

Most "grape growers" in NYS and PA continue to report having less than 5 acres of grapes. In fact, the most common acreage to report is less than 1 acre. However, 133 growers control 24,130 acres of grapes. These 133 growers represent all NYS and PA growers that report growing more than 100 acres of grapes.

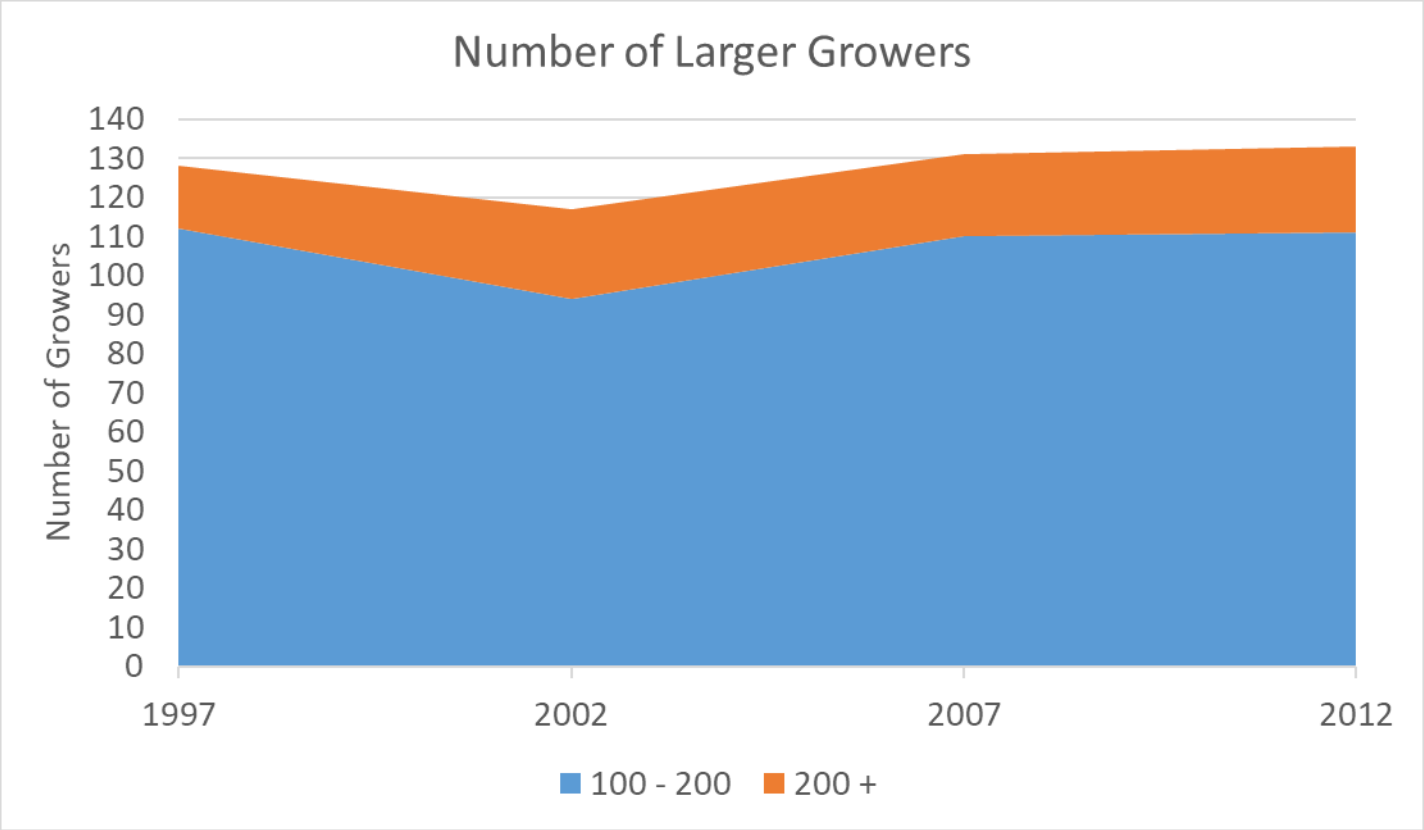
In this area of the market average farm size has consistently grown. For farmers growing more than 100 acres of grapes that average increased from 170 to 181 between 1997 and 2012. The number of growers in that group increased slightly from 128 to 133.

We know that larger growers should be more profitable than smaller growers. Our harvesters are under-utilized, even tractors are under-utilized. Margins are tight and farm sizes above 200 acres allow narrow profit margins per acre. With enough acres (200) it begins to resemble median income for the area (or more). In other words, these farms resemble organizations that can justify full-time employment for a reasonably skilled individual. While it appears that 200 acres is a number that makes sense for most operations, it can also be done with as few as 125 acres.

Economies of Scale: Larger vineyards should be more efficient.

When vineyard size increases operating expenses increase by at least 600 – 800 per acre. These expenses cover the cost of maintaining additional acreage. At 5 tons per acre a grower would appear to add significant benefit to the bottom line. When a 150-acre grower expands to 170 acres, that grower might increase profitability by $8,000. NASS survey, anecdotal evidence and common sense all add complexity to the simple model of expansion.

One conclusion that can be drawn from the NASS survey is that growers increase their farm size and sometimes contract or exit the industry after expansion. While partially driven by retirements, we are also seeing vineyards strategically contracting during this downturn.



Factors that undermine economies of scale.

Obviously the loss of a market and related challenges like allocation make these difficult decisions easy to calculate. Situations that relate to cash-flow, yield/productivity and profitability are more difficult. When we start to introduce other variables to vineyard expansion, the clear measure of profitability can become muddied. My recommendation is to use this as a guide for planning an expansion or considering a contraction. In general, my opinion is that it is very difficult to decrease a farm size and benefit in the long-term. It may be necessary, however, due to short-term needs.

A mortgage to purchase vineyard when grape prices were higher could easily add $600 per acre in debt service expenses. Over $400 might be to cover interest costs. A grower now needs 5 tons just to cover operational expenses and interest and 7 tons to service the entire debt. In theory if the loss is a result of building equity, that might not be a concern. However, the grower needs to have the cash available to cover that loss. That's not always realistic as delayed payments during vineyard expansion already present cash flow challenges.

When adding additional acreage through a purchase of an existing vineyard delayed payment and vineyard operating expenses will have varying impact on cash flow. On average, it's fairly close to $1,200 per acre. That includes the amount of debt service that may accrue prior to the first payment being made. For some growers, that delay is permanent. It is essentially another $1,200 of debt per acre that will not be worked through until after the purchase mortgage is paid off. While typically I would recommend having the available cash flow to cover those expenses,

it is not always realistic to grow the vineyard operation that slowly. If debt service is financing cash flow it adds to the minimum yields necessary to break even. Required production is 5.7 tons to break even and 7.7 to build equity and not impact cash-flow.

Another issue involves potential capital expenses. Increasing vineyard size may require additional capital investment. Ideal expansions more efficiently utilize existing equipment. Implements, tractors and harvesters all have their breaking points. A 50-acre expansion that requires the purchase of an additional tractor would add a cost of $120 per acre. Requiring more reliable equipment, such as a newer tractor can have a similar impact. New or additional harvesters are a capital expense than can undermine the profitability of vineyard expansion without careful planning to fully utilize the investment. By itself modest capital needs will not undermine the profitability of vineyard expansion. However, when combined with other factors, it can exacerbate cash flow and profitability issues.

Yield and productivity are similar to capital issues. Generally speaking, very few vineyard blocks take an inordinate amount of long-term specialized care that requires operational costs in excess of $800. With a budget of $800, the large majority of blocks will produce more than 4 tons per acre. Low yielding blocks can be profitable. If the removal of low yielding blocks from an operation decrease debt service, reduce equipment capital expenses, or result in structural changes in the operation it may make sense to reduce exposure to lower yielding blocks. Standing alone, however, low yields rarely provide justification.

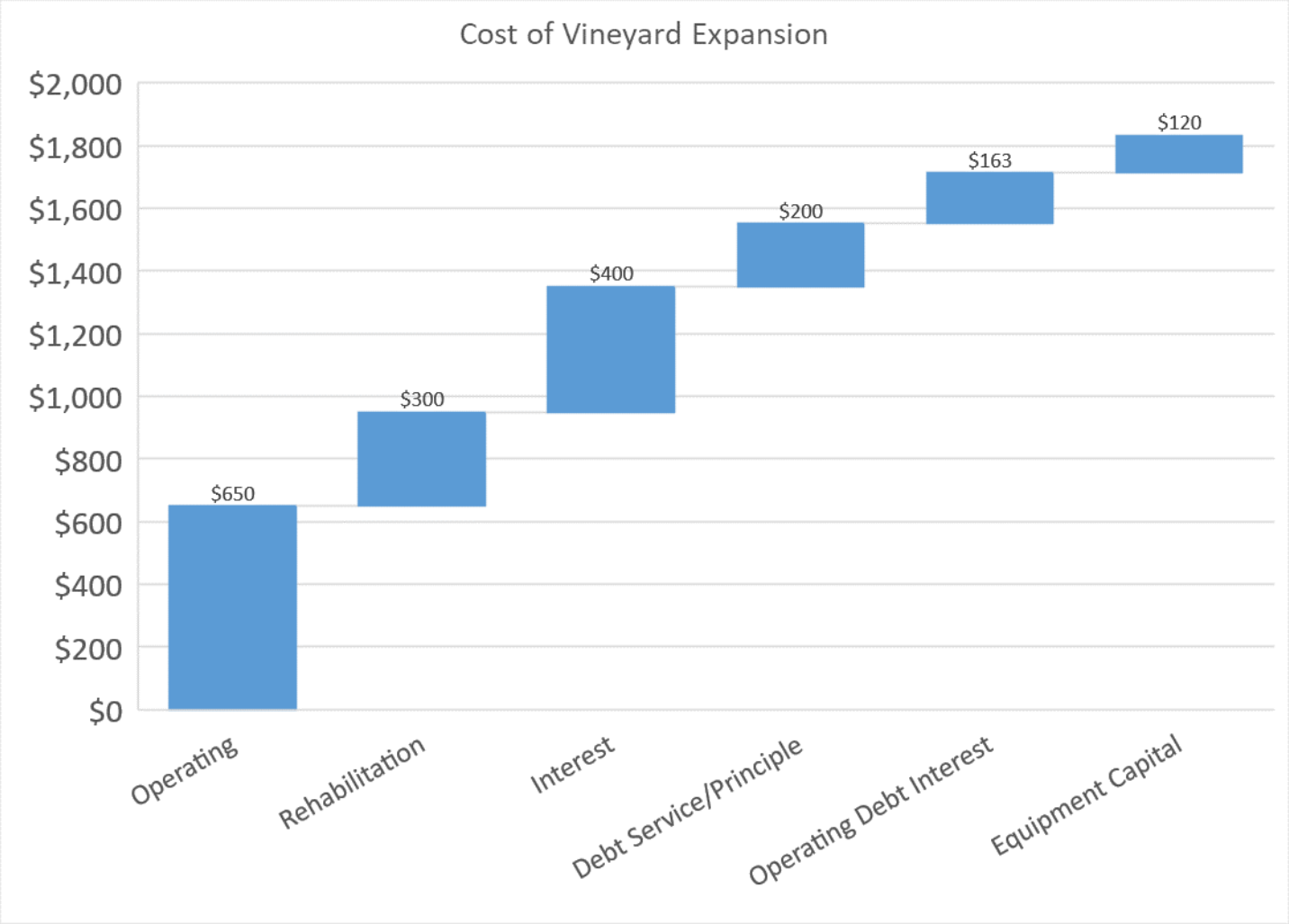
When decreasing farm size makes sense.

Most of the factors discussed above are conservative, growers' actual results are often better. Specifically, these hypotheticals assume growers purchased vineyards when prices were high and are now dealing with mortgages based on those high vineyard prices. There are also assumptions that the vineyard is average to below average and production will not likely average more than 6 tons per acre.

A grower that has undergone a substantial expansion in the last five or ten years may be more vulnerable to financial stress than a grower that has not expanded their operation. It takes a significant period of time to grow the farm beyond just making a decision to farm. In a period of low prices these growers should expect cash flow to suffer. Benchmarking and forecasting future cash flows should provide the information required to make decisions about farm size.

These straightforward models will illustrate how long a grower is able to continue to spend the required 600 – 800 per acre to make sure the vineyard operation is productive and has the tools required to keep yields above average. At first, credit may be an option to improve cash flow and lengthen the amount of time the grower can continue to operate. Before accessing credit, it is important to determine how much time you're buying and if it is realistic to assume the market will turn around in that period of time. Maxing out operational debt while draining 100% of equity out of the farm can be disastrous. If it appears, based on current revenue, debt per acre is going to exceed $6,500 per acre before 2022, it may be time to consider exiting or downsizing. The older the grower, the smaller that number should be. The younger the grower, the larger than number can be.

Downsizing should be targeted at areas that will improve cash flow over the longest possible period. Yield and productivity should be weighed against the benefits of not farming the block. Land that is most valuable for purposes outside of vineyard operations should be the first to go. Rental land with low yields is also a good candidate, when rent payments are more than 10% of gross profits.



Growers may determine that additional acreage is losing money because it is not improving cash flow. If possible growers need to think critically about how that vineyard block will impact cash flow in the long-term. Growers should really plan on feeling poor when building certificates with a cooperative and when building equity in a farm. In the context of net worth some growers may actually have highly profitable blocks. These profits may be contributing to net worth even if cash flow is declining.

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IPM

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Results of Grape Rootworm Project –

Adult Grape Rootworm

Introduction Historically (early 1900s) grape rootworm (GRW) was the major insect pest of grapes growing in New York and surrounding states (Johnson and Hammar 1910). Adults do some minor leaf feeding in early to mid-summer. However, larval feeding on grape roots can reduce vine vigor or even cause vine death at high densities. For various reasons, including the seasonal use of broad-spectrum synthetic insecticides, the pest status of GRW declined during the second half of the 20th century. However, with the advent of more selective insecticides and the overall reduction in the number of applications during the season, reports of GRW adult feeding damage have greatly increased in recent years, especially in the Lake Erie Grape Belt. Because adults and their feeding damage are not obvious and larvae are pretty much hidden, it's likely that the impact of GRW is greatly under estimated by New York grape growers. Insecticide, targeting adult GRW during the pre-oviposition period (time between when adults emerge from soil and the start of egg laying), is the recommended method of control.

In conjunction with Greg Loeb, Entomology, Cornell AgriTech, we wrapped up a three-year project looking at the need for managing GRW populations (did management increase vine size and yield?), the optimal timing of insecticides for control of GRW adults and the development of a scouting protocol for GRW adults.

The cooperation of four growers allowed us to set up our experiment in eight vineyard plots located in the Lake Erie region with a history of GRW problems. Five of the vineyard plots were managed using scouting to time insecticide applications against grape rootworm adults while the remaining three blocks received no insecticide applications and acted as controls. Weekly scouting started in the first week of June, earlier than GRW should be present in the vineyard, in both years to allow the recording of first emergence. Scouting was conducted in every 4th, or 6th, row depending on block size. A 2-foot square catching frame constructed of wood 1x4's covered in muslin cloth was placed under the middle vine and the top wire was vigorously shaken to dislodge any grape rootworm adults in the canopy. This was repeated for every other post length for the entirety of the row. Catch information was relayed to cooperators on a weekly basis to assist in the determination of the need to apply an insecticide. Scouting results were used in combination with weather information from Network for Environment and Weather Applications (NEWA) stations in Portland to start collecting the baseline information for development of a degree-day model for timing of GRW scouting.

The vine shaking method used to capture adult GRW proved to be successful in monitoring for the presence of grape rootworm adults. As seen in Table 1, the scouting information from the first three years of the project shows that waiting until the Fourth of July weekend to scout Lake Erie vineyards for grape rootworm would be too late. In 2015 delaying scouting until the traditional timing would have delayed the decision on the need for control by three weeks. In

2016 and 2017 the delay would have been over 10 days. This project has shown that if insecticides were applied shortly after grape rootworm adults are found, populations are held in check for a minimum of a two-week period after application. In the first three years of the project, vineyards were scouted after an insecticide application until no adult GRW were found for two consecutive weeks. Because we saw such an extended emergence period in 2017 (from June 20 through September 9) in future years we plan to continue to scout further into the season to determine if GRW adults will reestablish in vineyards depending on which insecticide was used.

Table 1. Comparison of grape rootworm adult emergence by date and growing degree day for the 2015, 2016 and 2017 growing seasons using the Portland NY (CLEREL) NEWA station.

Emergence	Date 2015	Date 2016	Date 2017	January DD			April DD		
				2015	2016	2017	2015	2016	2017
First	June 10	June 21	June 20	642	761	766	642	714.5	741
Peak	June 17	June 21	July 3	784.5	761	991	784.5	714.5	967
Last	Aug 8	July 6	Sept 9*	1778.5	1073.5	2228	1778.5	1027	2203

* Scouting was terminated on September 9 even though adult GRW was found in control vineyards. Due to the potential longevity of the adult GRW, any continued findings were not expected to be from newly emerged adults.

The growing degree-days for Table 1 are from our Network for Environment and Weather Applications (NEWA) weather station in Portland, NY. We are also using the NEWA station in Ripley, NY to provide weather information for the vineyard blocks in that region. Three years of weather data is not enough to develop a degree-day model with any measure of confidence, and 2017 served as a great example of how variable the emergence of grape rootworm, as well as the time populations are present, can be from year to year. As more data is collected over the years, we will be looking at the potential to refine a degree-day model by increasing the frequency of scouting near the date of predicted first emergence. This will help to tighten up the range of degree-days and remove some of the error present when scouting is done only on a weekly basis.

All participating vineyard blocks were assessed annually using NDVI (Normalized Difference Vegetation Index) sensors mounted on either a grower's tractor, or on a John Deere Gator operated by LERGP, staff starting in 2015. This information was then compiled into maps by Rhiann Eckstrom, GIS Mapping/Sensor Technology technician. This was done for both the treatment and control vineyards involved in the project to allow for comparison of changes in relative vine size due to treatment/no treatment of grape rootworm populations that may occur over time. The scans were conducted at approximately the same timing, just before peak emergence, each year. Rhiann then produced maps from the scan data to allow year-to-year comparisons of the range of relative vine size found in the vineyard block. Without validation using dormant pruning weights, these maps do not provide information on whether vine size is large or small. However, these maps can be used as an indication of whether or not the management strategies applied for grape rootworm are having an impact on improving vine size, or at least making vine size more uniform across the block. In Figure 1, the yellow and orange areas on the on the left side of the maps in 2015 and 2016 indicate vines with smaller canopies (vine size) relative to the vines in the green and blue areas (blue indicates the highest vine size). The map developed using the 2017 scan indicates that the western side of the vineyard has become more uniform (when compared to the 2015 and 2016 scans) while vine size in the

eastern side of the block has decreased. Scouting indicates that this comparative decrease was not due to the presence of grape rootworm. Rather, competition from the wooded edge during severe drought conditions in 2016 is thought to be the cause.

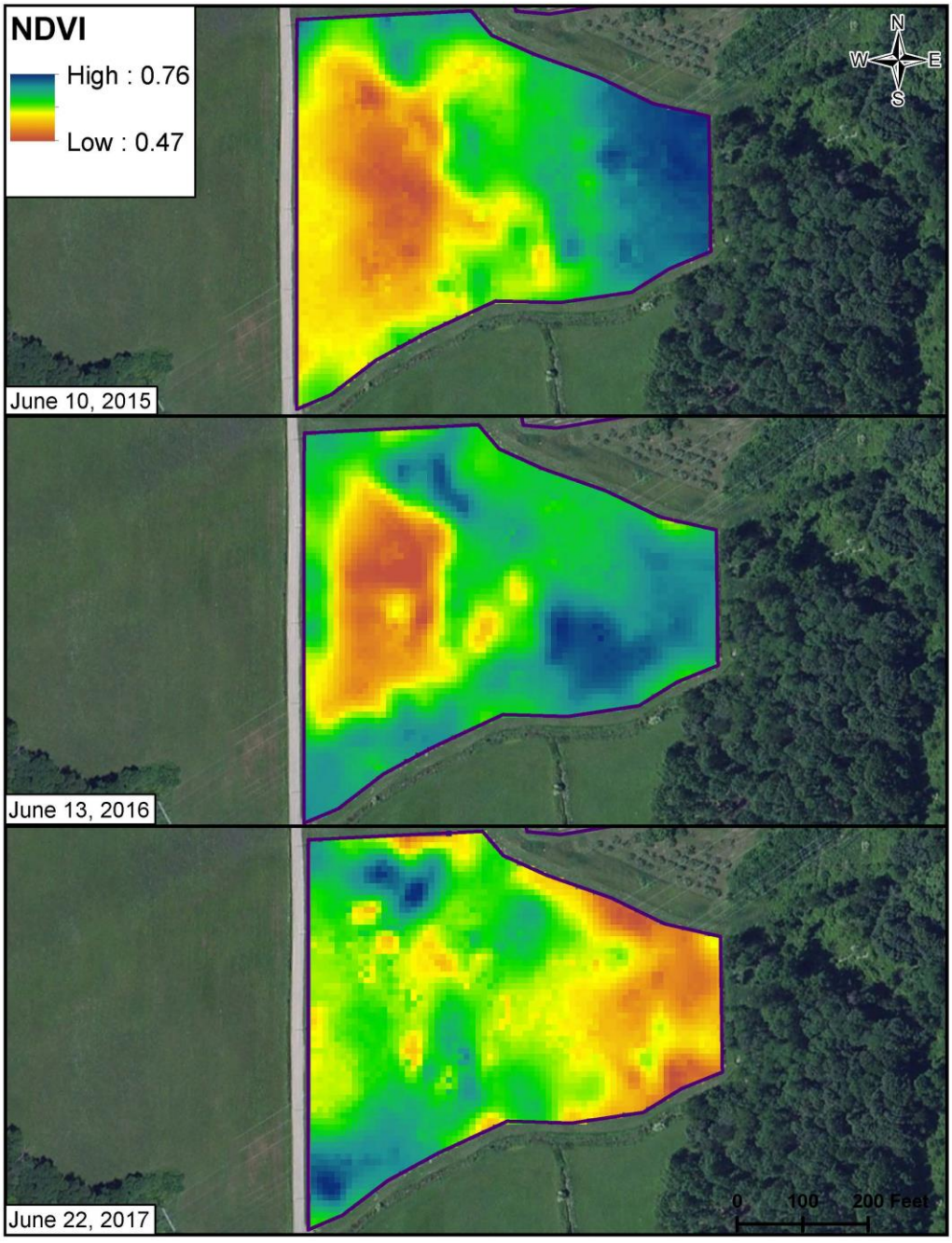

Figure 1. Comparison of vine size uniformity between years in a participating vineyard block that is being treated for grape rootworm as part of the project. Notice the decrease in the orange and yellow areas that represent relatively smaller vine size after one year of insecticide applications.

In this example, it appears that the area effected by root feeding by grape rootworm has increased in canopy size and become more homogenous after two years of insecticide applications. Continued canopy mapping using NDVI will assist in determining the effectiveness of grape rootworm management practices.

Insecticides targeting the GRW adults are currently the only management method available and for many years the only active ingredient that was labeled for use against grape rootworm in NYS was Sevin (carbaryl). An earlier project by Loeb and Weigle looked at adding insecticides with active ingredients other than those found in Sevin, the only material legal to use for GRW at the start of the project. This project resulted in FIFRA 2(ee) Recommendations being available for another four materials with different modes of action; Admire Pro Systemic Protectant (imidacloprid), Danitol 2.4EC (fenpropathrin), Leverage 360 (imidacloprid & beta-cyfluthrin), and Sniper (bifenthrin). Unfortunately, all of these active ingredients, including carbaryl, meet the EPA criteria for acute toxicity to bees. However, they can different widely in their total impact on the environment.

One way to measure a pesticide's impact on the environment is by using the Environmental Impact Quotient. The Environmental Impact Quotient (EIQ) was developed in 1992 by Kovach, et al as a way to organize environmental impact data into a form that would allow growers a method to easily assess, and take into consideration, the impact of their pesticide choices on farm workers, consumers, and the environment.

Table 2 Field EIQ[1] rating of pesticides labeled for use against grape rootworm as well as the rating for the consumer, worker and ecological components.

Insecticide	Rate/Acre	Field EIQ	Consumer	Worker	Ecological	Active Ingredient
Sevin XLR	2 qt	40.1	9.7	2.5	84.1	carbaryl
Admire Pro	1.4 fl oz	1.4	0.4	0.3	3.5	imidacloprid
Danitol	10 fl oz	4.9	0.4	1.2	13.1	fenpropathrin
Leverage[2] 360	3.2 fl oz	1.5	0.4	0.3	3.7	imidacloprid
		0.7	0.1	0.1	1.8	beta-cyfluthrin
Sniper	3.2 fl oz	2.2	0.4	0.7	5.6	bifenthrin

[1]Kovach, J., Petzoldt, C., Degni, J., and Tette, J. 1992. A method to measure the environmental impact of pesticides. New York's Food and life Sciences Bulletin 139:1-8.
[1] Eshenaur, B., Grant, J., Kovach, J. Petzoldt, C., Degni, J., and Tette, J. www.nysipm.cornell.edu/publications/EIQ. Environmental Impact Quotient: "A Method to Measure the Environmental Impact of Pesticides." New York State Integrated Pest Management Program, Cornell Cooperative Extension, Cornell University. 1992 – 2017.
[2] Leverage 360 combines two active ingredients, imidacloprid and beta-cyfluthrin and therefore has two EIQ ratings.

As shown in Table 2, Admire Pro has the lowest EIQ of the labeled materials, and is recommended as being the low cost alternative for grape rootworm management when applied at the rate stated in the FIFRA 2(ee) recommendation. However, it has not been used by any of the growers in this project, primarily due to its active ingredient being active only against grape

rootworm and no other primary or secondary pest present at the time of the application. Another factor is that there is a limit of 2.8 fluid ounces of imidacloprid applied to foliage in a season. Since imidacloprid is also found in broader spectrum products like Leverage 360, which is also used to manage grape berry moth, an early season Admire Pro for grape rootworm would limit options for grape berry moth later in the season. The addition of the four new materials that are available through FIFRA 2(ee) recommendations not only add new modes of action for resistance management, they all have significantly better EIQ ratings than the standard carbaryl treatment.

We have switched the focus of the GRW project in 2018 to start looking at longevity of the materials after application. We will continue to scout for the entire season to determine the longevity, as well as the efficacy, of the five insecticides labeled for use against GRW. The best results shown by NDVI scans were in a vineyard that received an early season application for GRW, based on scouting, followed by two insecticides targeting grape berry moth later in the season.

Using catch trays to catch the GRW that fall after shaking the top wire

If you are interested in learning how to implement GRW scouting and management techniques in your vineyard IPM strategy, please contact me at thw4@cornell.edu or (716) 792-2800 x203

2018 eNEWA Grape Subscription Testing Sign-Up

Subscriber information

Name_____

Email address _____

City_____

Select Location(s) (circle as many as you like, or write in below)

_____

Lake Erie	**Lake Erie**
Appleton, North	**Ransomville**
Burt	**Ripley**
Corwin	**Sheridan**
Dunkirk	**Silver Creek**
East Fredonia	**Somerset**
East Westfield	**Versailles**
Erie	**Westfield**
Fredonia	
Hanover	**Other: Please fill in**
Harborcreek	
Lake City	
North East Escarpment	
North East Lab	
Portland	
Portland Escarpment	

Select eNEWA Delivery Times (write in times below) Delivery requests should be on the hour.

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PA Update

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

Spotted Lanternfly – a new invasive pest

Spotted lanternfly, *Lycorma delicatula* (White), is a new invasive insect that was first discovered in the United States in Berks County, Pennsylvania in September 2014. This planthopper is native to China, India, Japan and Vietnam. It is suspected to have been introduced into southeastern PA on shipments of stone from China that were infested with egg masses.

Spotted lanternfly (SLF) is reported to be a serious pest of grapes in Korea and has also been recorded as feeding on 67 host plants in that country. Many of these same host plants can also be found in PA and NY. Consequently, SLF poses a serious economic threat to various crops including grapes, apples, stone fruit, hops, as well as, ornamental trees and the timber industry.

It is important to note that tree-of-heaven, *Ailanthus altissima* is a highly preferred host plant of this insect and these trees provide ideal sites for monitoring for the presence of this invasive insect. Tree-of-heaven is a fast growing, invasive tree that is native to China and was introduced in the late 1700's in America for use as an urban tree (For information concerning tree-of-heaven refer to: "Invasive Exotic Plant Species: Ailanthus (*Ailanthus altissima*)" and "Managing Tree-of-Heaven *(Ailanthus altissima)* on Roadsides" under **Resources**).

Spotted lanternfly: Life Cycle, Description and Feeding
In Pennsylvania SLF has 1 generation/year and develops from an egg to a wingless nymph to a winged adult.

Figure 1. Egg masses of spotted lanternfly covered by waxy deposits.
Photo – A. Cusumano

Eggs – SLF overwinter in the egg stage. Egg masses are comprised of 30-50 eggs and are covered with a waxy secretion resulting in a gray-brown coloration which looks like a smear of mud on the surface where they are laid (Figure 1).

Nymphs – The nymphal stage has 4 instars. The 1st instar is less than ¼" long. The coloration of the first 3 instars is black with white spots and has been described as looking "tick-like" (Figure 2). The fourth instar is red and black with white spots and over ½" long (Figure 3). In southeastern PA, nymphs begin hatching in late April or early May.

Figure 2. First instar nymph of spotted lanternfly.
Photo from – treephilly.org

Adults – The head and legs of the adult are black and the abdomen is yellow with black bands. The wings cover the body "tent-like" while the insect is feeding or resting on a surface (Figure 4). The forewings are gray with black spots (near the wing base), with black and gray markings near the tips. The hindwings are colorful and comprised of a red area with black spots, with a white band and black area near the tips. The hindwings are only visible when the insect is alarmed or in flight.

Figure 3. Fourth instar nymph of spotted lanternfly. Photo from – treephilly.org

In southeastern PA, SLF reach adulthood around late July and are about 1" in length. SLF adults begin mating in early fall and will aggregate in large numbers most commonly on tree-of-heaven. Females begin laying eggs in late September or early October. Egg laying continues until females are killed by cold temperatures. SLF females lay at least 2-3 egg masses with 30-50 eggs/mass. Females will deposit eggs on tree trunks, limbs or **any smooth surface** (e.g., vehicles, farm equipment, rusty metal, outdoor furniture, etc.).

Feeding - The spotted lanternfly has a piercing-sucking mouthpart which is used to extract phloem sap from plants. Feeding by large aggregations of this insect can reduce plant vigor, may increase susceptibility to diseases, and can result in mortality of the host. In addition, the copious amounts of "honeydew" excreted from feeding SLF results in extensive sooty mold growth which covers leaves and contaminates fruit (Figure 5). Younger SLF instars typically prefer to feed on the more succulent parts of plants (e.g., stems, leaf veins). Older nymphs (fourth instar) and adults can feed on woody tissue such as trunks, limbs, and canes.

Figure 4. Three adult spotted lanternfly. Photo – Erica Smyers, Penn State

Quarantine/Management/Research

Quarantine – In 2014 the Pennsylvania Department of Agriculture (PDA) initiated a quarantine in 5 townships in eastern Berks County, PA. Due to the spread of SLF the quarantine has currently been expanded to include 13 counties in southeastern, PA. Extensive surveys by PDA for detection/evidence of SLF are continuing throughout Pennsylvania. (Monitoring for SLF is now also being conducted in other states including New York).

Management – PDA is using an IPM strategy targeted against all life stages of the SLF. This includes: 1) Locating and destroying egg masses; 2) Locating sites where tree-of-heaven (*Ailanthus altissima*) are growing and removing the majority of these trees; 3) Treating stumps of removed trees with herbicides to prevent re-sprouting of shoots; 4) Treating remaining *Ailanthus* trees (trap trees) at the site with a systemic insecticide (i.e., dinotefuron) to kill feeding SLF; and 5) Using a large scale Tree Banding Program (sticky bands) targeting sites with SLF populations. In addition, Volunteer Programs (Egg Mass Scraping & Tree Banding) have also been initiated to incorporate the assistance of homeowners and the general public.

Figure 5. Sooty mold on upper surface of grape leaf. Photo – Erica Smyers, Penn State

Research – Currently, extensive research on SLF is being conducted on many fronts (e.g., insecticide efficacy trials, trap and lure development, investigations concerning biological control, etc.).

Spread of Spotted Lanternfly

In addition to the 13 counties in southeastern, PA., SLF was recently found in 3 additional eastern states. In November 2017, a single female was found in New Castle County, Delaware and a dead SLF in Delaware County, New York. In January 2018, egg masses and a dead adult were found in Frederick County, Virginia.

(Note: The most likely long distance dispersal of SLF is by movement of egg masses and fertilized females on vehicles (e.g., cars, campers, railway cars) or contaminated materials from sites with SLF).

REPORTING

Early detection is vital for the management of SLF. Therefore, if you observe an insect or egg mass that you suspect is SLF then collect a specimen and/or take pictures, record the location, and immediately report it.

PENNSYLVANIA

Erie County, PA – Commercial grape growers should contact Andy Muza (Tel: 814-825-0900, e-mail: ajm4@psu.edu) or contact PDA at Badbug@pa.gov or by calling the Invasive Species Hotline at (1-866-253-7189).

Other PA Counties – Commercial grape growers should contact the local Penn State Extension office or PDA at Badbug@pa.gov or by calling the Invasive Species Hotline at (1-866-253-7189).

NEW YORK

Counties in the Lake Erie Region - Commercial grape growers should contact Tim Weigle (Tel: 716-792-2800, e-mail: thw4@cornell.edu) or NY Division of Plant Industry at (800) 554-4501, plants@agriculture.ny.gov .

Other NY Counties - Commercial grape growers should contact Tim Weigle (Tel: 716-792-2800, e-mail: thw4@cornell.edu) or your Regional Grape Extension Program/local Cornell Cooperative Extension office, or NY Division of Plant Industry at (800) 554-4501, plants@agriculture.ny.gov .

Resources

Extensive information about SLF (e.g., how to identify and control, how to report an infestation, how to comply with quarantine regulations, etc.) is available through Penn State Extension and the Pennsylvania Department of Agriculture.

Penn State Extension - Spotted Lanternfly website

https://extension.psu.edu/shopby/spotted-lanternfly

Pennsylvania Department of Agriculture - Spotted Lanternfly website

http://www.agriculture.pa.gov/Plants_Land_Water/PlantIndustry/Entomology/spotted_lanternfly/Pages/default.aspx

Spotted Lanternfly (National Pest Alert), May 2018. USDA-NIFA Regional IPM Centers https://www.ncipmc.org/action/alerts/lanternfly.pdf

Emerging Invasive Insects in Eastern New York https://blogs.cornell.edu/jentsch/files/2013/11/Jentsch.InvasiveInsectPests.SLF_.7.21.15.sm_.RedSz_.-2hge4s4.pdf

Invasive Exotic Plant Species: Ailanthus (*Ailanthus altissima*). Virginia Cooperative Extension, Publication 420-322 https://pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/420/420-322/420-322_pdf.pdf

Managing Tree-of-Heaven *(Ailanthus altissima)* on Roadsides. Roadside Research Project, Fact Sheet 3, Penn State http://plantscience.psu.edu/research/projects/vegetative-management/publications/roadside-vegetative-mangement-factsheets/3ailanthus-on-roadsides

LERGP
2018 COFFEE POT MEETING SCHEDULE

Date	Time	Location	Address
May 2, 2018	10:00am	Clover Hill Farm	10401 Sidehill Rd. North East PA 16428
May 9, 2018	10:00am	Ann & Martin Schulze Winery	2090 Coomer Rd. Burt NY 14028
May 16, 2018	10:00am	Sprague Farms	12435 Versailles Rd. Irving NY 14081
May 23, 2018	10:00am	NE Fruit Growers	2297 Klomp Rd. North East PA 16428
May 30, 2018	10:00am	Double A Vineyards	10277 Christy Rd. Fredonia NY 14063
June 6, 2018	10:00am	Fred Luke Farm	1755 Cemetery Rd. North East PA 16428
June 6, 2018	3:00pm	Thompson Ag	Corner of Hanover and Dennison, Silver Creek NY 14136
June 13, 2018	10:00am	Jim Vetter Farm	12566 Versailles Rd. Irving NY 14081
June 13, 2018	3:00pm	Jerry Chessman Farm	11725 Middle Rd. North East PA 16428
June 20, 2018	10:00am	Duane Schultz	3692 Wilson Cambria Rd. Wilson NY 14172
June 20, 2018	3:00pm	Brant Town Hall	1272 Brant Rd. Brant NY 14027
June 27, 2018	10:00am	Betts Farm	7365 East Route 20 Westfield NY 14787
June 27, 2018	3:00pm	Beckman Farms	2386 Avis Dr. Harborcreek PA 16421
July 11, 2018	10:00am	CLEREL	6592 W. Main Rd. Portland NY 14769
July 18, 2018	10:00am	Tom Tower Farm	759 Lockport St. Youngstown NY 14174
July 25, 2018	10:00am	Ziesenheim	8760 W. Lake Rd. Lake City PA 16423

INSURING GRAPES

NY, 2017

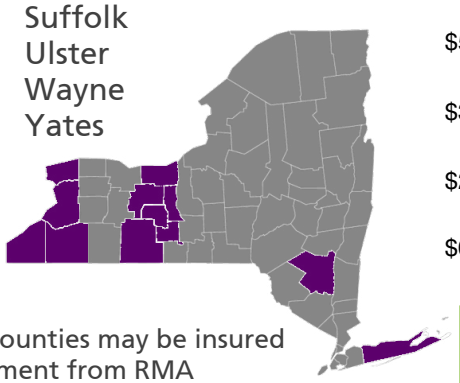
Crop insurance is a safety net for farmers that helps you **manage risk**. If you have a crop failure, crop insurance can help you farm again next year.

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

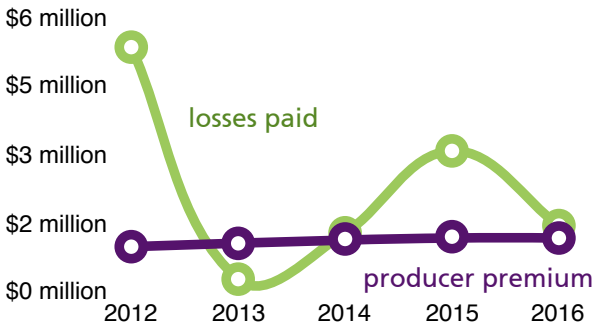
Over 40 grape varieties are insurable in these counties:

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

6592 W. Main Rd.
Portland NY 14769

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6592 West Main Road
Portland, NY 14769
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Cornell University
Cooperative Extension

PENNSTATE

College of Agricultural Sciences