

The Lake Erie Regional Grape Program *Crop Update July 13, 2017*

PENNSTATE



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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.

Dates of interest:



Wednesday, July 19- Coffee Pot- 10:00am-Liberty Winery, 2861 Route 20, Sheridan, NY 14135 - This is the last coffee pot meeting of the year.



Wednesday, August 2, 2017- LERGP Twilight Meeting, Gravel Pit Park, 10300 W Main St. North East, PA 16428

Friday, August 11- LERGP Summer Grower Conference- come join us in celebrating 25 years of service! See registration information at end of this Crop Update!



Saturday, August 12- *LERGP Open House- We would like to invite our neighbors to see what it is that we do here at CLEREL. There will be hayride tours of the facility and a hot dog lunch afterwards.*



Saturday, August 19- *LERGP Hops Production in the Lake Erie Region Conference- see registration information at the end of this Crop Update*

Business Management

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

Return on Investment and the Cents of Bulk Juice Production

Return on Investment (ROI) is a simple concept designed to evaluate the efficiency of an investment. In turn, it can be used to compare similar investments. Since capital is a finite resource, we can use ROI as one tool in a decision-making toolbox. Understanding the basics of ROI is relatively straightforward. Manipulating the inputs to accurately reflect the information you need to make a specific decision is a bit more nuanced.

The formula for ROI follows:

Gain and cost, however, are fairly ambiguous terms. Different definitions of gain and cost may be valid for purposes of an ROI calculation, to answer specific questions. Different definitions may also be used to suit the needs of an analyst or salesman. While no specific definition is required for accuracy, when using ROI to assist in the decision-making processes, it is essential to understand these inputs.

When making an investment in a vineyard a grower considers the ROI of his investment over the short term. In his particular expansion from 100 to 150 acres he does not believe capital investment in equipment will be necessary. He plans on marketing the grapes on the cash market. He also has a fairly good understanding of material and labor costs he realizes over his current 100-acre farm. For him, expenses are rather minimal, compared with other growers. Most of his equipment costs are fairly marginal, as no new investment is required. Depreciation of that equipment will be slightly faster. Expenses are mostly operating, interest and labor.

ROI =
$$(1350 - 1125)$$

1125
ROI = 20%

While this grower is relying on marginal costs to compute his ROI, another grower is ecstatic about his neighbor's newfound profitability. When another vineyard comes up for sale he purchases 100 acres, expanding his holdings from 150 to 250 acres. To keep things simple, all expenses remain equal, except this grower realizes an expansion will require him to rework harvesting. The bad news, he will have to reduce the amount of custom harvesting he does. While another option would be to buy an additional harvester, the grower determines cutting back is the least bad and most profitable option.

Reduction in Custom Operation: ROI = (1350 - 1285)1285 ROI = 5%

Purchase New Harvester:	ROI =	<u>(1350 – 1450)</u>
		1450
	ROI =	-6.9%

The good news, he isn't going to lose money, so long as he understands his enterprise adequately enough to not buy another harvester. With such low margins, he really needs to consider the investment carefully. He should not be making this investment for short or medium term gains. Perhaps he is tired of custom harvesting and finds ownership more desirable. Or perhaps a larger size will aid succession planning. His most important variable is his long-term outlook. Once interest and capital expenses are paid, and he owns the farm outright the outlook changes. Even with modest grape prices, his ROI will double. An established grower, primarily concerned with the medium-term, should avoid unnecessary risk associated with this type of expansion.

A new grower may need to calculate ROI very differently. With no equity or capital invested in farming, the decision to purchase grapes creates a need for capital investment. Tractors, equipment, financing, and even education are all costs that may need to be considered. To begin with, the conservative yield estimates shown above will simply not work. If a vineyard is average for the region, at 5.5 tons per acre, a new grower will not be able to justify paying market value for the vineyard. A new grower should seek out an above average to excellent site, preferably in disrepair. Without years to accumulate wealth, sweat equity becomes a reasonable alternative. The grower also needs to look at ROI from a cash flow perspective, and heavily discount delayed payments.

$$ROI = (1,200 - 2,125)$$

2,125
ROI = -43.5%

To ensure the yields necessary to sustain a ROI as a new grower, significant vineyard investments are required. At this point, starting alone, simply doesn't work. A grower will need to find start up assistance, business partners or other innovative strategies. Increasing yields can help but with current grape prices, new growers will not be able to grow themselves out of cash flow problems.

Start up assistance can make all the difference to a new grower. Building the wealth required to sustain a reasonable salary and generate a small ROI above that salary draw is a real challenge. Start up assistance can take many forms. Gifts of land, labor and capital are all obviously helpful, but not always practical. Shared equipment agreements, however, can be a low cost strategy. Taking the example above, this following grower buys a high quality site in good condition. The higher

purchase price decreases the labor required by this new operator. He helps out a more established grower in exchange for an equipment share agreement.

ROI =
$$(1725 - 1575)$$

1575
ROI = 9%

These ROI examples do not in any way directly compare to each other. In my estimation, though, they represent the best tools for the specific example given. Not understanding the components of an advertised ROI is one common mistake. Another common mistake is trying to count all costs toward every decision. In doing so, a vineyard expansion might be incorrectly perceived as unprofitable. In reality, the costs associated with the new vineyard are costs that were already being incurred and would continue to be incurred whether the expansion happened or not.

While we are seeing a lot of evolution in the industry, the majority of growers are fairly stagnant. While that may have some negative connotations, a right sized vineyard is typically the easiest to manage. Even if an expansion may enhance the bottom line, it may be a decade before an investment is cash positive. For someone in their twenties, waiting a decade makes a lot of sense. For someone in their sixties, maintaining current profitability and realizing gains currently makes more sense. A typical one hundred acre grower controlling equipment expenses and maximizing vineyard production investments may reasonably expect an ROI like this:

ROI =
$$(1787 - 1681)$$

1681
ROI = 6.3%

Another important take away from this article is that these numbers are based on real-world examples. The general ideal that most growers are expanding is based on the economies of scale often realized in expansion. Not to be overlooked, however, are the growing pains and lack of efficiency realized in an expansion. Right sizing equipment to an operation is a common source of inefficiency in vineyard operations. Maximum efficiency of all vineyard equipment is impossible. However, approaching maximum efficiency on key components can be the difference between profit and loss.



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



NYS Grape Crop Insurance Performance



Learn more & sign up:

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









IPM

Tim Weigle, NYSIPM, Cornell University, LERGP Team Leader

Grape Rootworm – scouting conducted on July 3, 2017 in the eight project vineyard blocks and emergence of grape rootworm adults continued with higher populations found in all eight blocks. Populations ranged from zero, to moderate, to high levels (53) of adult grape rootworm found. Those vineyards where an insecticide had been applied decreased the populations to zero. All vineyard blocks will be scouted again next week to document continued emergence, or reemergence, patterns. We have found the shake and catch method works best to quickly identify the presence of grape rootworm adults. To use this method, construct a catching frame (we use a 2 foot square frame with white cloth stretched across it) and place it under the row. Give the top wire a few shakes and check the frame to see if grape rootworm were dislodged from the trellis. Check out the NYS IPM Factsheet to help with identification of the grape rootworm adult and its feeding damage at http://lergp.com/ipm/

If you have not scouted for grape rootworm, it is not too late. While you may be catching the tail end of the emergence, we are still finding enough adults to make it worth your time to scout vineyards with a history of grape rootworm or vineyards which seem to have a decrease in vine vigor for no apparent reason. We have several materials available for use against grape rootworm. In alphabetical order they are; Admire Pro, Danitol, Leverage 360, Sevin, and Sniper (a generic bifenthrin) If you are growing grapes in New York and want to use Admire Pro, Danitol, Leverage 360 or Sniper for grape rootworm you will need a copy of the FIFRA 2ee recommendation for that use. You can find a copy of these recommendations on the LERGP website under IPM at;

http://lergp.cce.cornell.edu/ipm.php?season=summer

If you applied a contact insecticide for grape berry moth at the 810 DD timing, you should have controlled at least a portion of the grape rootworm population in the vineyard as well. You should still scout using the shake and catch method to 1) ensure that there are no grape rootworms present and 2) determine whether or not the emergence continues and adults are present and feeding and require additional control.

Pennsylvania growers do not have this restriction as they can use any of the above mentioned insecticides as they are labeled for use in grapes.

Grape Berry Moth – According to the Phenology-based degree model found on NEWA, most sites have reached the point where insecticide applications at this time will not be effective. The exception to this is in Niagara County where Ransomville is at the end of the period where contact insecticides would be useful (while the timing for materials that need to be ingested (i.e. Altacor or Intrepid (PA only) no longer a good choice). Somerset and North Appleton are well behind in degree day accumulations in comparison to the other sites so the majority of insecticide options are still are still available. To help you make that determination for the NEWA site nearest you http://newa.cornell.edu you can scroll to the bottom of the grape berry moth results page for that station to find the pest status and pest management options tailored to that site.

	Wild grape	DD Total on	Forecasted DD for
NEWA Location	bloom date*	July 13, 2017	July 18, 2017
Versailles	May 28	967	1090
Dunkirk Airport	June 1	906	1025
Sheridan	May 28	1007	1130
Silver Creek	May 31	933	1052
Portland Escarp.	May 28	981	1102
Portland	May 29	978	1100
Westfield	May 28	1016	1138
Ripley	May 28	1021	1145
North East Escarp	May 27	1003	1127
Harborcreek	May 28	1016	1143
North East Lab	May 29	1009	1138
Erie Airport	May 26	1051	1179
Ransomville	June 3	889	1014
Somerset	June 8	809	934
North Appleton	June 11	704	826
* Estimated date provided by NEWA website			



CALS Approves Grape Pathology Position -

Hans Walter Peterson

After several months of uncertainty, we have just received official word that Cornell's College of Ag & Life Sciences (CALS) has given approval to hire a new grape pathologist after Wayne Wilcox's retirement. The exact responsibilities of the position aren't quite finalized yet, but it will include an extension component of some kind. The announcement was made by Marc Fuchs at the end of yesterday's hearing on the Grape Research Order.

We are obviously quite pleased to hear that this will be moving forward, and it is in no small part thanks to those of you who communicated with the Dean's office at CALS to let them know just how important this position is to the continued success of the grape industry in the Finger Lakes and beyond.

We don't have an idea yet about the timeline for moving ahead with the search, but these kinds of searches take some time to complete, between recruiting of candidates, interviews, and several other steps along the way before the new person can start. But at least we know there will be a process to do that beginning sometime soon.

We'll be sure to keep you informed as things progress with the search.



In the Vineyard (7-13-17)

Honeyvine Milkweed

An increasing number of vineyards in Erie County, PA are having problems with this perennial weed. Honeyvine milkweed (HvM), also known as climbing milkweed, is a twining, perennial vine which grows rapidly and can reach lengths greater than 10 feet. It reproduces both vegetatively (by sprouting shoots from buds on lateral roots) and by wind disseminated seed dispersal. An HvM vine produces pods which are 3-6 inches long with as many as 50 pods per plant each containing numerous seeds (Figure 1).



Figure 1. Clusters of Honeyvine milkweed pods. Photo: Andy Muza, Penn State.



Figure 3. Honeyvine milkweed starting to climb Concord trunk. Photo: Andy Muza, Penn State.

HvM that I saw yesterday ranged from 11 – 17 inches with some just starting to climb vine trunks (Figure 2 & 3). Scout vineyards now for this weed, flag and map Hvm locations, and spot spray using high rates of postemergence herbicides (e.g., glyphosate, glufosinate,



Figure 2. Honeyvine milkweed under the trellis. Photo: Andy Muza, Penn State.

or paraquat). Check Hvm areas on a weekly basis and continue spot spraying. **Don't let HvM get into the trellis.** Otherwise areas with HvM will become a major headache at harvest (Pods, Pods, Pods).

The most effective control of HvM is to prevent establishment of this climbing perennial through scouting and early elimination. **Once established this weed is very difficult to eradicate**. Management attempts to eliminate HvM from a vineyard, or at least prevent further spread, will require a concentrated effort over a number of seasons which involves both persistence in monitoring and consistency in spot spraying. Also refer to article, "Honeyvine Milkweed in Lake Erie Vineyards" (LERGP *Vineyard Notes*, July 2014, pages 18 – 21) https://nygpadmin.cce.cornell.edu/pdf/newsletter_notes/pdf42_pdf.pdf

<u>Hail</u>

A few different hail events have been reported by growers in all of the counties covered by the LERGP Program. So far these hail events have not caused major problems. A minimal amount of injury to berries and little or no leaf shredding has occurred (Figure 4).



Figure 4. Hail injury on Concord berries. Photo: Andy Muza, Penn State.

<u>Diseases</u>

<u>Powdery Mildew</u> – cupping of leaves (caused by powdery mildew infections) showing up in more vineyards (Figure 5).

<u>Black Rot & Downy Mildew</u> – only a small number of black rot leaf lesions and no downy mildew found in any of the vineyards checked.



Figure 5. Cupping of Concord leaves caused by powdery mildew infections. Photo: Andy Muza, Penn State.

Research

Dr. Terry Bates, Director, CLEREL, Senior Research Associate, CALS Horticulture

One-Month Post-Bloom in Concord Vineyards



Concord 30 Days After Bloom: 7/12/2017

After bloom and fruit set, Concord berries enter a growth phase of both cell division and cell expansion. At 4-weeks post-bloom, Concord berries will reach approximately 50% of their final fresh weight but will still be in the middle of the rapid fruit growth (stage I). Berry size and weight in a cluster, vine, or vineyard varies at both 30 days after bloom and at harvest (as seen in the photo). Variation in berry growth is a function of both cell number (through cell division) and cell size (through cell expansion) – and these are controlled by both biological and environmental factors. The developing seeds produce auxin, cytokinin, and gibberellin and it is the balance of these hormones which influences the amount of cell division and expansion in the fruit. A berry with more seeds will tend to be larger than one with fewer seeds because of the seeds' influence on cell division and expansion. While all parts of the fruit are developing during stage I, it is the division and expansion of the mesocarp (flesh or pulp) that makes up most of the berry volume. Environmental factors, such as water availability, will also influence berry weight at 30 days after bloom by influencing cell expansion – again primarily in the mesocarp tissue.



Concord Fresh Berry Weight Curve:

Concord berry growth is currently in stage I of rapid cell division and expansion. In general, the 2017 season can be characterized by having favorable weather conditions during bloom and set, possibly leading to average to above average seed number (unless vines were severely water stressed in 2016). In addition, 2017 has had above average precipitation in area vineyards. Taken together, we are measuring above average fresh berry weight in Concord at 30 days post-bloom. The 2017 berry curve is currently tracking like 2015 and we should expect above average berry weight at harvest. In contrast, 2005 and 2016 were seasons that were warm and dry early which led to lower than average final berry weight. This information can be used for vineyard crop estimation procedures.



Concord Fresh Berry Weight Development: Stage I.

A cross-section of a Concord berry at 30 days post-bloom. In addition to seed development, the cell division and expansion of the mesocarp tissue has a considerable influence on fresh berry weight. Cell number will double two times during stage I through cell division. In addition, cell volume will increase through cell wall loosening and the expansion of cell vacuole volume. Presumably, the cell division hormone, cytokinin, diminishes through stage I, which slows cell division as the berries enter the lag phase of berry growth (stage II).



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!



2017 eNEWA Grape Project Subscription Sign-Up

Subscriber information	
Name	
Email address	_
City	

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

Lake Erie Region	Sheridan	Lakemont
Appleton, North	Silver Creek	Lansing
Appleton, South	Versailles	Lodi (Lamoreaux)
Dunkirk	Finger Lakes Region	Lodi (Shalestone)
Erie	Aurora	Lodi (Standing Stone)
Harborcreek	Branchport	Penn Yan
North East Escarpment	Dresden (FLGP/FLCC)	Romulus (B. wood Grove)
North East Lab	Dundee (Weimer)	Romulus (Thirsty Owl)
Portland	Fayette 3 Brothers	Varick (Swedish Hill)
Portland Escarpment	Geneva	Watkins Glen
Portland Route 5	Geneva (Bejo)	Watkins Glen (Lakewood)
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Select eNEWA Delivery Times (write in times below) Delivery requests should be on the hour.

Mail to: Tim Weigle, CLEREL, 6592 West Main Road, Portland, NY or scan and email to thw4@cornell.edu

Make Sure You Are Counted In The Census of Agriculture

Currently, the census is the only complete count of U.S. farms and ranches and the people who operate them. It includes even the smallest plots of land – rural or urban – growing fruits, vegetables, or raising food animals, if \$1,000 or more of such products were raised and sold, or normally would have been sold, during the census year. The information produced by the Census of Agriculture guides Congress, agribusiness, policymakers, researchers, local governments and many others on the creation and funding of agricultural programs and services – decisions that can directly impact your local operations and the future of the agriculture industry for years to come.

<u>Please note that new farmers or existing farmers who have not participated in a prior Census of</u> <u>Agriculture still have time to sign up to be counted through the end of June at https://www.agcounts.</u> <u>usda.gov/cgi-bin/counts/.</u> The survey takes less than a minute – and will ensure that you receive a Census form (that you can fill out in paper form or online.) If a farmer/rancher is not on our list frame by June 30th, 2017, the producer will not have an opportunity to participate in the 2017 Census of Agriculture.

For more information about the census, please visit <u>www.agcensus.usda.gov</u>, follow NASS on Twitter @usda_nass, or call (800) 727-9540.

This is a list for organizations that provide services to beginning farmers in the Northeastern US.

To unsubscribe from this list, send a plain text email message to <u>bflearningnetwork-L-request@cornell.edu</u> with the word "leave" in the body of the message.

To join the list, follow the above instructions but type «join» in the message body.

THE 2017 CENSUS OF AGRICULTURE IS COMING! Make sure you are counted. Sign up at www.agcensus.usda.gov.





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*

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 (1 st attendee)		\$	
Farm Name			
Address, City, State, Zip Code			
D hawa			
Phone	E-mail		
Are you enrolled in Lake Erie	Regional Grape Program (LERGP)?	YesNo)
	REGISTRATION FEES		ć 20.00
LERGP Member attendee			\$ 20.00
Non- member			\$100.00
		\$20.00 \$20.00 \$20.00 \$20.00 \$20.00 \$20.00	*Please add a \$20.00 late fee for each reservation made after August 4, 201 TOTAL \$
Please make check payable to (US funds only	LERGP (Lake Erie Regional Grape Pi /)	rogram) and mail	to: Kate Robinson LERGP 6592 W Main Rd Portland NY 14769
Name	NY DEC/PA PDA N	NUMBER	
Name	NY DEC/PA PDA N	NUMBER	
Name	NY DEC/PA PDA N	UMBER	
Date Ck. Rec'd Amo	Call Kate at 716-	792-2800 ext 202	with any questions.



\$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.





Hops Production in the Lake Erie Region Saturday, August 19, 2017 CLEREL 6592 West Main Rd Portland NY 14769 9:00am-4:00pm



Grower Registration Fee- \$50.00- includes, program, morning refreshments and catered lunch

Please provide the following informa	tion:	
Farm Name:		
Name:		
Mailing Address:		
City, State, Zip Code:		
E-mail:	Telephone:	
Names of additional attendees:	\$50.00	
	\$50.00 \$50.00	
	\$50.00	
	Total:	
	Payment type:	
	Received:	

Questions? 716-792-2800

Please send to: Attn: Kate Robinson Lake Erie Regional Grape Program 6592 West Main Rd. Portland, NY 14769



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Hours of Operation: Monday - Friday 8:00am - 5:00pm Saturday 8:00am - Noon



LERGP Links of Interest:

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

LERGP Web-site: http://lergp.com/

Cornell Lake Erie Research & Extension Laboratory Facebook page https://www.facebook.com/Cornell-Lake-Erie-Research-and-Extension-Laboratory-678754995584587/?fref=ts

Efficient Vineyard Web-site: https://www.efficientvineyard.com/

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

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

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

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

NEWA: http://newa.cornell.edu/





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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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