LERGP Crop Update
June 23, 2016

Important dates:

June 29, 2016- Coffee Pot Meeting
10:00am- Kirk Hutchinson, 4720 West Main Rd. Fredonai NY 14063
3:00pm- Fred Luke, 1755 Cemetery Rd. North East PA 16428

every Wednesday following: Coffee Pot meetings- see enclosed schedule

August 2, 2016- Wine QualityWorkshop (rescheduled from April 13, 2016) at CLEREL
August 31, 2016- Cornell Vegetable Program Field Day at CLEREL
September 1, 2016- Cover Crop Conference at CLEREL

****Crop Updates will be circulated on a weekly basis beginning with this edition.****

Cover Crop Workshop and Field Day

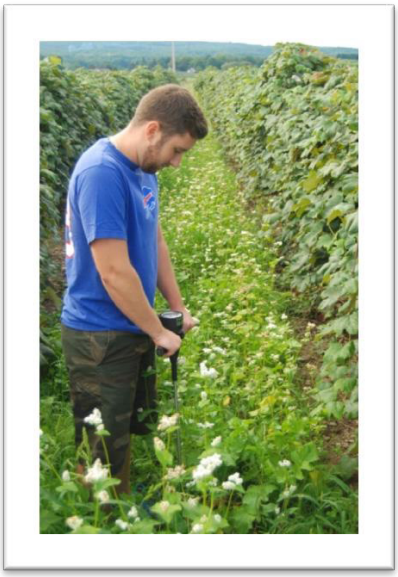
Lake Erie Regional Grape Program

September 1, 2016 @ CLEREL
9:00am-4:00pm
6592 West Main Rd.
Portland, NY 14769

Join the Lake Erie Regional Grape Program for a full day of education surrounding cover crops in Concord vineyards.

- Current research
- Leading scientists in cover crop research
- Tour demonstration plots
- Hear local growers sharing their experience

Fee: $ 10; includes morning refreshments and lunch



Register by August 25, 2016 at the LERGP web-site Registration or call Kate at 716-792-2800, e-mail: kjr45@cornell.edu

NY farm viability INSTITUTE

2016
LERGP Coffee Pot Schedule

May 4- 10:00am Betts 7365 East Route 20, Westfield NY 14787

May 11-10:00am Ann & Martin Schulze-2030 Old Commer Rd. Burt NY 14028

May 18-10:00am John Mason 8603 W Lake Rd. Lake City PA 16423

May 25-10:00am Dan Sprague- 12435 Versailles Plank Rd. Irving NY 14081

3:00pm Peter Loretto-10854 Versailles Plank Rd. North Collins NY 14111

June 1-10:00am Phillip Baideme- 7935 Route 5, Westfield NY 14787

3:00pm Tom Meehl Cloverhill Farm 10401 Sidehill Rd North East PA 16428

June 8-10:00am Earl & Eileen Blakely 183 Versailles Rd. Irving NY 14081

3:00pm- Paul Bencal 2645 Albright Rd Ransomville NY 14131

June 15- 10:00am Leo Hans-10929 West Perrysburg Rd. Perrysburg NY 14129

3:00pm -Evan Schiedel/Roy Orton- 10646 West Main Rd. Ripley NY 14775

June 22-10:00am Archer Pratz 9210 Lake Rd North East PA 16428

3:00pm-Alicia Munch-761 Bradley Rd. Hanover NY 14136

June 29-10:00am Kirk Hutchinson-4720 West Main Rd. Fredonia NY 14063

3:00pm Fred Luke 1755 Cemetery Rd. North East PA 16428

July 6- 10:00am David C. Nichols Farm 1906 Ridge Rd. Lewiston NY 14092

July 13-10:00am Beckman Bros. 2386 Avis Dr. Harborcreek PA 16421

July 20-10:00am Brant Town Hall- 1294 Brant North Collins Rd. Brant NY 14027

July 27-10:00am Tom Tower 759 Lockport Rd. Youngstown NY 14174

Business Management

Kevin Martin
Penn State University, LERGP,
Business Management Educator

The Expense of Row Middle Management

We really covered the gamut at coffee pot meetings this week. The focus of growers was right on; this would be a great year to invest in weed control. In the long-term, this year is starting to serve as a reminder on the importance of long-term investments in soil health and vine health to decrease the likelihood of drought stress.

In the short-term, it's time to invest in chemicals to ensure very little competition under the trellis and in row middles over the next 30 days or more. Depending on current conditions, round up may not be the material of choice. While other options are more expensive, tools under $12 per acre remain available.

It's too late to expect cover crops to help anything this year but this reminder might serve as a reason to plant cover crops in August if soil moisture increases between now and then. It comes as no surprise we are seeing lower soil temperatures in vineyards that have terminated cover crops. We will also expect to see a delay in the onset of drought symptoms.

This year is shaping up to be a year when mowing row centers can be detrimental to economic sustainability. Chemical control is economically optimal in dry years. Deep disking is expensive and also increases the potential for drought risk. Shallow disking is a viable option, but it remains well less efficient than chemical control. Using disks to control weeds may require multiple passes, slower ground speeds and increase fuel consumption. The number of passes required to control weeds is really the wild card when it comes to this practice. At the very least, we typically expect disking to cost twice as much as chemical control.

That is not to say that disking a vineyard is always the wrong choice. It is, however, not the best choice when trying to efficiently maximize row middle management as quickly and thoroughly as possible.

Total floor weed control over the next 30 days will provide a greater return on investment than any other practice this year. I don't say that lightly, knowing a number of other practices are basically essential to produce anything resembling high quantity/quality fruit this year. None of those practices will do quite as much to improve long-term crop potential as inexpensively as early/mid summer weed control.

More to come on long-term sustainable efforts in row middle management. Over the long-term, investment and production strategies can reduce the urgency of row middle management.

Cultural Practices

Luke Haggerty
Viticulture Extension Associate
Lake Erie Regional Grape Program

Weather data and things to keep in mind during dry periods

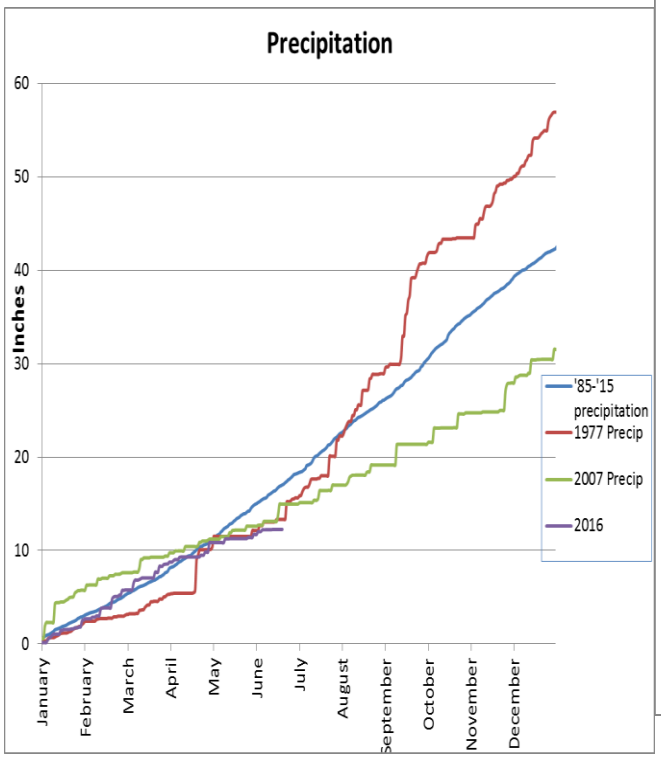
The hot and dry weather has started to become a concern for many area growers. As we go into the third week of June most of the area is between 4 and 6 inches of precipitation below the thirty year average.

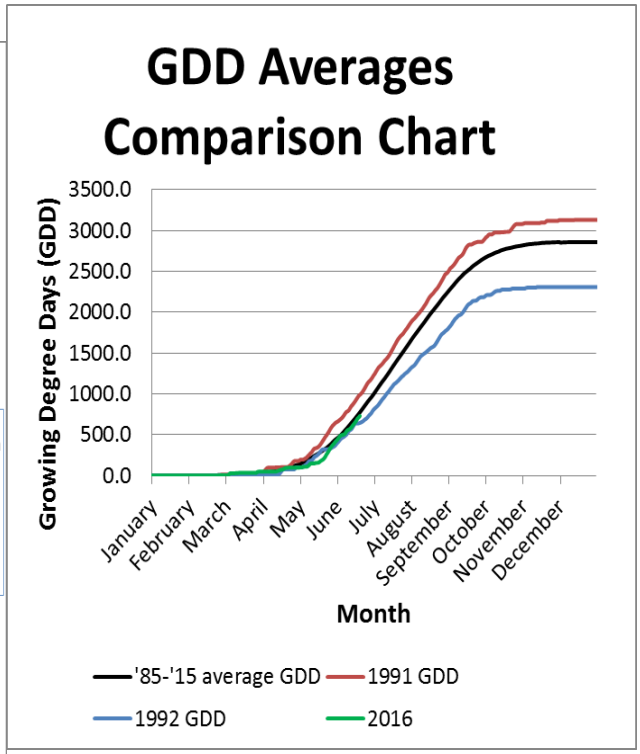
Outside of irrigation, there are a few cultural practices that you can do to help conserve soil moisture. Take care of the weeds, under the trellis and in alleyways! Herbicide control will reduce competition for moisture and nutrients. Increase organic matter. Organic matter will act as a sponge and help retain soil moisture and nutrients. Cover crops and mulch additions are two good ways of increasing soil organic matter. Adding mulch has been very effective in smothering out weeds and retaining moisture. Mowing row centers **will not** help conserve soil moisture. Past works have shown that after mowing row centers plants continue to pull moisture and nutrients.

Lake Erie Grape Region NEWA Weather Data

Location	Precip. Past 7 days (in)	Precip. June total	Precip May total	Total March GDD
North East Lab, PA	0.11	1.46	2.13	706
Harborcreek, PA	0.15	1.18	1.68	705
North East Escarpment	0.49	1.77	1.52	657
Ripley	2.39	3.49	1.50	709
Portland CLEREL	0.01	0.87	1.48	692
Portland Escarpment	0	1.22	1.56	748
Dunkirk	0.02	1.61	1.13	629
Silver Creek	NA	NA	1.78	641
Sheridan	0.02	1.59	1.85	698
Versailles	0.06	1.08	1.72	657
Appleton North	0.03	0.98	0.71	558
Somerset	0.03	0.97	0.94	641
Ransomville	0.01	0.82	0.92	701

Note: All Weather data reported as of 6/23/2016
NA=Sensor Malfunction



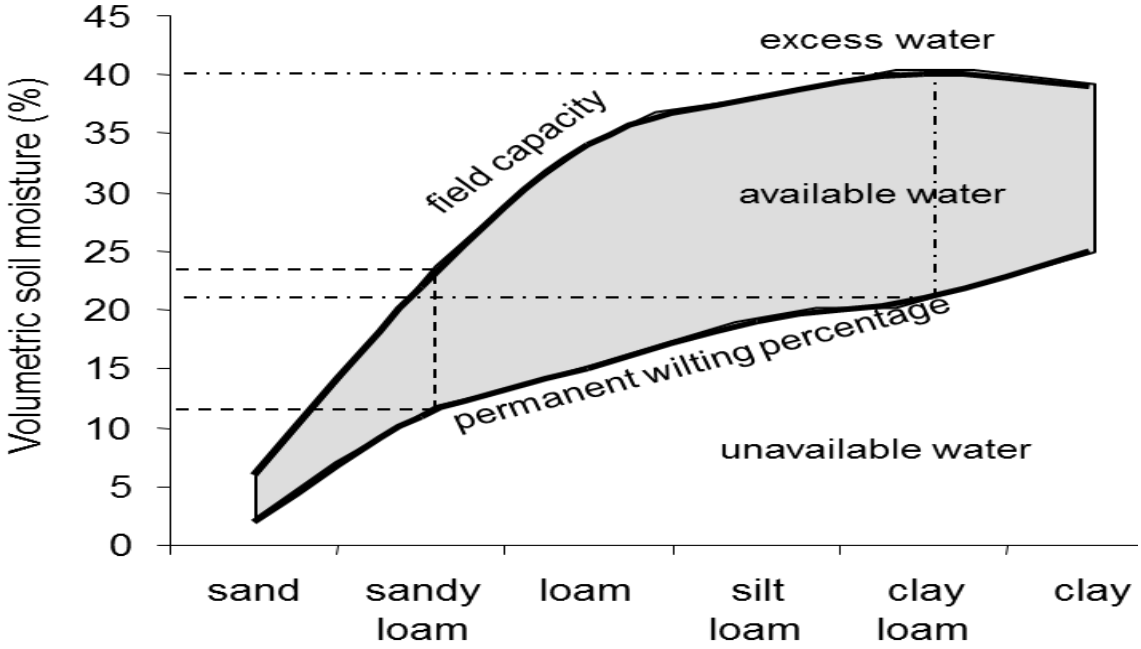


Research

Dr. Cain Hickey, Post Doctoral Associate

How will this dry weather affect my vineyard?

This depends on many factors including vine age, rooting pattern and depth, exposed canopy leaf area, and soil texture (i.e. sand vs. clay). Young vines may experience more water stress than mature vines because of their shallow rooting patterns and relatively small root volume. However, because their exposed leaf area is relatively low, relatively less water is pulled through young vines compared to mature vines. Clay/loam typically has greater water holding capacity than sand/loam. However, this doesn't necessarily mean that relatively more water is available for vine uptake in clay dominated soils. See the diagram, below (provided by Terry Bates), for volumetric soil water content as it relates to the field capacity, plant available water, and permanent wilting point in plants. This figure is a general rule of thumb and, therefore, may not pertain to all scenarios. To put this figure into practical, rather than theoretical, terms - the average volumetric soil water content that I measured in a Concord vineyard yesterday was 13.6% at approximately the six-inch depth. This would suggest that, unless these vines were planted in a sand or sandy loam, they would be at their permanent wilting point. However, we know that grapevines root much deeper than six inches and, thus, the vines were not at their permanent wilting point. The vine hydration status I measured in this same vineyard was at a point where photosynthesis *could* be limited during at least part of the day. This would be much more of a concern if we were in the post-veraison period, when berry sugaring is dependent on carbon assimilation (i.e. photosynthesis).



Since growers do not have expensive equipment to measure soil and vine moisture status, there are midday observations that indicate vine drought stress. If tendrils are drooping, leaves are curled or flagging, shoot internode lengths are relatively short, or leaves feel warm to the touch, your vines may be experiencing some drought stress.

The more direct answer to “how will this dry weather affect my vineyard?” is that I generally see few negative effects of the current weather patterns on current-season vineyard health and crop potential. Weather has been dry with generally seasonal temperatures through bloom, likely resulting in decent fruit set. As we learned from Bryan Hed yesterday at the coffee pot meeting at Jim Pratz’s vineyard, the current weather patterns are ideal for disease management, but do **not** warrant sprays to be skipped – particularly the important post-bloom sprays for the mildews, phomopsis, and black rot. Of course, there are always exceptions. In this case, one exception is that the current weather patterns are not ideal for newly planted vines that have limited root systems. If you recently planted vines and haven’t already watered them, it may be prudent to water them soon. Since most local vineyard are not equipped with irrigation, this may mean that pulling a water tank equipped with hose(s) is the way to go. Another potential negative effect of the current drought period is reduced berry size. As a component of yield, berry size reduction could limit overall crop tonnage. Berry growth can resume if we begin to receive regular and ample rainfall, but, if drought persists, berry weight may remain low through harvest. The silver lining with reduced berry size and water content is that it takes less *absolute* sugar to result in a given sugar concentration (°Brix), and to receive premium tonnage rates.

The 10 day forecast looks to be much of the same. Get out and scout your vineyards for the above-mentioned indicator symptoms of vine drought stress and call the CLEREL here if we can be of any assistance or if you have questions. Good luck with your post-bloom sprays – it does not appear that rain will complicate your spray scheduling. Hopefully, however, rain will complicate some management practice soon, because this will mean that we are receiving rain. See everyone soon – Cain.

IPM

Tim Weigle, NYSIPM, Cornell University,
LERGP Team Leader

Grape Rootworm – scouting conducted on June 21, 2016 in the eight project vineyard blocks found emergence of grape rootworm adults present in all blocks, with many of the blocks at population levels requiring treatment. If you have not scouted blocks with a history of grape rootworm, now would be the time to get out and take a look. 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
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 NEWA model we are still well below the 810 DD (452 DD as of June 23 at the Portland Lab) needed to time an insecticide application in vineyards at intermediate and high risk for damage from grape berry. We are looking toward the second week of July before we accumulate 810 DD with the current long range forecast. However, it is recommended that you continue to check the grape berry moth model for the station nearest you on the NEWA website http://newa.cornell.edu to get the latest model information.

Banded grape bug – Just a reminder that we are past the point where banded grape bug is considered a pest. The black beetles with a red, or orange, shield being found in the vineyards are typically the adult stage of banded grape bug. While the adults are no longer a pest, if you see a good population of banded grape bug adults in a portion of a vineyard block, make a note of it so you will be sure to scout that area next spring when the nymphal stages of banded grape bug are out and chewing on the florets. A NYS IPM Program fact sheet with a photo of both the adult and nymphal stage can be found at; https://ecommons.cornell.edu/bitstream/handle/1813/43073/banded-grape-bug-FS-NYSIPM.pdf?sequence=1&isAllowed=y

Diseases – It may sound like a broken record but not much has changed across the belt since last week. Bryan Hed does a great job of covering these every week in the Crop Update but I want to stress that the immediate pre- to immediate post-bloom period is when the primary inoculum for powdery mildew, black rot, downy mildew and Phomopsis peaks. The lack of rainfall and therefore, infection periods, we have seen this spring means there is still plenty of inoculum ready to be released. Make sure you get your protective sprays on prior to a rain event and tighten up your spray interval if the thunderstorms they keep predicting ever come true.

North East PA Update

Byran Hed
Research Technologist
Lake Erie Grape Research
and Extension Center

Weather: At our site, we have recorded just 1.46” rainfall through June 22. We have accumulated about 369 growing degree days (gdds) for the month. According to Accuweather, warm dry conditions are in store for the weekend.

Diseases: Dry conditions continue to prevail, making this an easy year to control fungal grape diseases like downy mildew, black rot, and Phompsis that are dependent on rainfall and plant tissue wetness to infect and spread. Keep an eye on the weather for precipitation events however. With the abundance of overwintering inoculum for diseases like downy mildew, the potential for epidemic development is greater than usual should conditions become wet.

We have had just four powdery mildew primary infection periods in June, fewer than usual. However, primary infections of powdery mildew go on to produce spores that do not require water for dispersal or infection and therefore, it is about this time of year that we consider every day a powdery mildew infection period. That said, I suspect that inoculum levels (and hence disease pressure) are still lower than usual.

Despite the dry weather, plan carefully for that immediate post-bloom spray and include spray materials for all four major diseases (powdery and downy mildew, black rot, and Phomopsis). Use your best materials, full rates, good coverage (every row!), and don’t allow more than 14 days to transpire between the immediate pre and post bloom sprays. These two sprays are the most important disease management sprays all year; don’t cheat on these two sprays.

In the Vineyards, PA

Andy Muza
County Extension Educator
Penn State, LERGP

In the Vineyard

Scouting vineyards this week has been boring from an entomology and plant pathology perspective (very few insects and diseases to report). However, from a grower's viewpoint this is good news so let's hope that boring is the norm as the season continues.

Diseases

No symptoms of downy mildew or black rot were observed and only a low level of leaves were found with phomopsis lesions. Powdery mildew was found on a couple of leaves and clusters but these infections were in a low input vineyard which may or may not have received a fungicide application this season.

Concord leaf with powdery mildew lesions

Phomopsis lesions on Concord leaf

The first postbloom spray should have been applied within 14 days of the immediate prebloom spray with fungicides effective against phomopsis, black rot, downy mildew and powdery mildew. If, for some reason, the first postbloom spray has not yet been applied be sure not to delay application any longer. Even though disease levels are currently low, due to lack of rainfall in our region, berries are still in a very susceptible stage for infection from all of our major diseases. If the current trend of dry weather continues through the season then powdery mildew may be the only disease which has the potential to cause problems this season. Stay tuned.

Insects

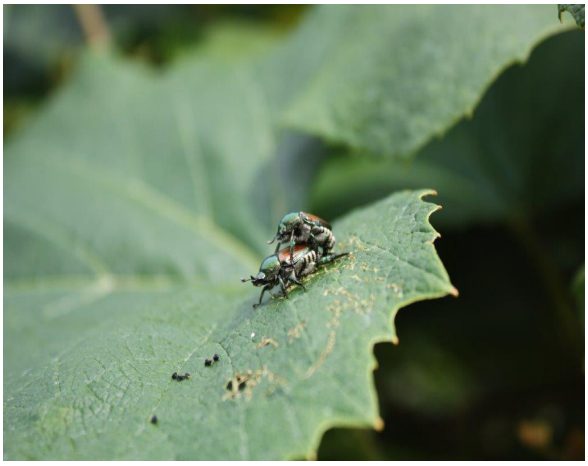
Rose chafer – adult beetles are still hanging around in Concord vineyards at very low levels. At this stage, the potential of any additional significant feeding is over for the season for Concord sites. Blocks of wine grape varieties which are behind Concord development, particularly blocks on sandy sites, should continue to be scouted.

Rose Chafers on Concord cluster

Grape Berry Moth – only a small number of clusters were found with webbing from GBM larvae even at severe risk sites. Be sure to follow the GBM Degree Day Model in NEWA (http://newa.cornell.edu/index.php?page=berry-moth) to determine when an insecticide application should be applied in high and severe risk sites.

webbing from GBM larva in Concord cluster

Japanese beetle – the first beetle of the season was recorded at a Concord site.



Japanese Beetles on Concord leaf

2016 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)

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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)**
Ransomville	**Hector**	
Ripley	**Interlaken (Airy Acres)**	

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

Cornell University
Cooperative Extension

Winery Quality Control Workshop

Stabilize your wine – Filtration, Sulfur Dioxide and Potassium Sorbate

PENNSTATE College of Agricultural Sciences

Registration: 8:30am; Program- 9:00am-4:00pm
Cost:$50.00 per person(includes morning coffee and lunch)
Where: CLEREL, 6592 West Main Rd. Portland NY 14769
716-792-2800 ext-201

Denise Gardner, Enology Extension Associate, Penn State University
Chris Gerling, Enology Extension Associate, Cornell University
Anna Katharine Mansfield, Associate Professor of Enology, Cornell University

Sulfur dioxide

- pH and SO_2 relationship
- the breakdown of SO_2
- how to add SO_2 to wine

Potassium sorbate

-what is potassium sorbate?
-why is it used in wine?
-the pros/cons of sorbate

Filtration

-explanation of filtration and its uses
-the difference between nominal and absolute
-how to ensure your filtration unit is working
-bottle sterility tests.

Please Register by July 22, 2016

Name of Winery represented:_____Phone:_____
Email:_____
Name(s) of attendees: 1)_____ 2)_____ 3)_____
4)_____ 5)_____6)_____
Total cost @ $50.00/person x ___person/people = $ _____

Please make checks payable to LERGP and mail to:
LERGP, 6592 West Main Rd. Portland NY 14769, ATTN: KATE
Contact Kate at kjr45@cornell.edu or 716-792-2800 ext 201 for more information.

***You may also register on-line at http://lergp.cce.cornell.edu/. You can register up to 3 participants and pay with a credit card.

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Phone: (301) 512-3977
jsmosier1@gmail.com

7653 Dutton Rd.
Harborcreek, PA 16421

LERGP Website Links of Interest:

Check out our new Facebook page!!

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

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-cc

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

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

Lake Erie Regional Grape Program Team Members:
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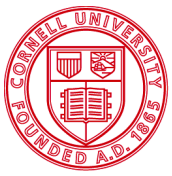
Kevin Martin, (kmm52@psu.edu) Business Management Educator, 716. 792.2800 ext. 205
Luke Haggerty, (llh85@cornell.edu) Grape Cultural Practices, 716.792.2800 ext. 204

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



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