LERGP Crop Update
June 16, 2016

Important dates:

June 22, 2016- Coffee Pot Meeting
10:00am- Archer Pratz, 9210 Lake Rd. North East PA 16428
3:00pm- Alicia Munch, 761 Bradley Rd. Hanover NY 14136

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

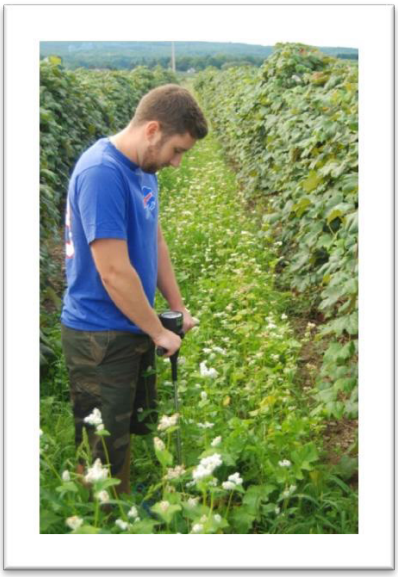
Lake Erie Regional Grape Program

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

Fuel costs remain down 40% from peak but up 16% YTD. A modest recovery across a majority of commodities would theoretically lead to higher input costs. Filtering out market volatility with prices so low is impossible. As long as prices for a variety of commodities continue to test lows, volatility will continue.

Macroeconomic indicators seemed to have hit the pause button as global weakness finally appears to be dragging down U.S. performance. A lackluster jobs report, revised GDP estimates and waning consumer confidence all point to stagnation in US growth. More often than not, this would lead to rising commodity costs due to a weakening US dollar. Since the strong dollar is driving the issue and stagnation is still strength, relative to global conditions, these indicators point to continued declines in exports and low commodity prices.

This likely means ongoing inexpensive fuel and fertilizer prices for grape growers. While we don't have robust economic data for juice grape prices it also likely means stable (low) juice prices in the medium term as well. Recent news indicates that the pause in US economic growth was enough to also result in a pause in federal reserve interest rate action. Not a big deal for most consumers, but Fed target rates do impact leveraged growers and processors in significant ways. The era of inexpensive debt looks very like to continue for the foreseeable future.

In real terms DAP prices are averaging $457 retail, nationwide. Retail potash prices are averaging below $350 per ton. While Urea futures show a modest uptick, current retail prices are $350 per ton as well. Urea and potash retail prices remain higher than underlying terminal prices suggest they should be. Even a modest change in terminal price, is not likely to result in increasing retail prices. The caveat of all fertilizer analysis is that distance to terminal price and order size can significantly impact retail price. Smaller growers in the Lake Erie region are a great distance from terminals and tend to purchase relatively small quantities. All this means that most local growers see retail prices higher than national average. In relative terms, that difference remains constant.

Products and services heavily used by vineyard operations are not all closely tied with a strong dollar, low interest rates, or inexpensive commodities. Paid labor typically represents 20% of vineyard costs. Depreciation represents another 18% of vineyard costs. Those percentages are accurate for typical vineyard operations. We've seen a range between 2/5 typical and 1.5x. Growers with input costs in those areas higher than typical have the potential to continue to face significant challenges. Inputs in those areas will continue to rise faster than inflation and/or grape prices.

Cultural Practices

Luke Haggerty
Viticulture Extension Associate
Lake Erie Regional Grape Program

Grape Bloom and Fruit Set

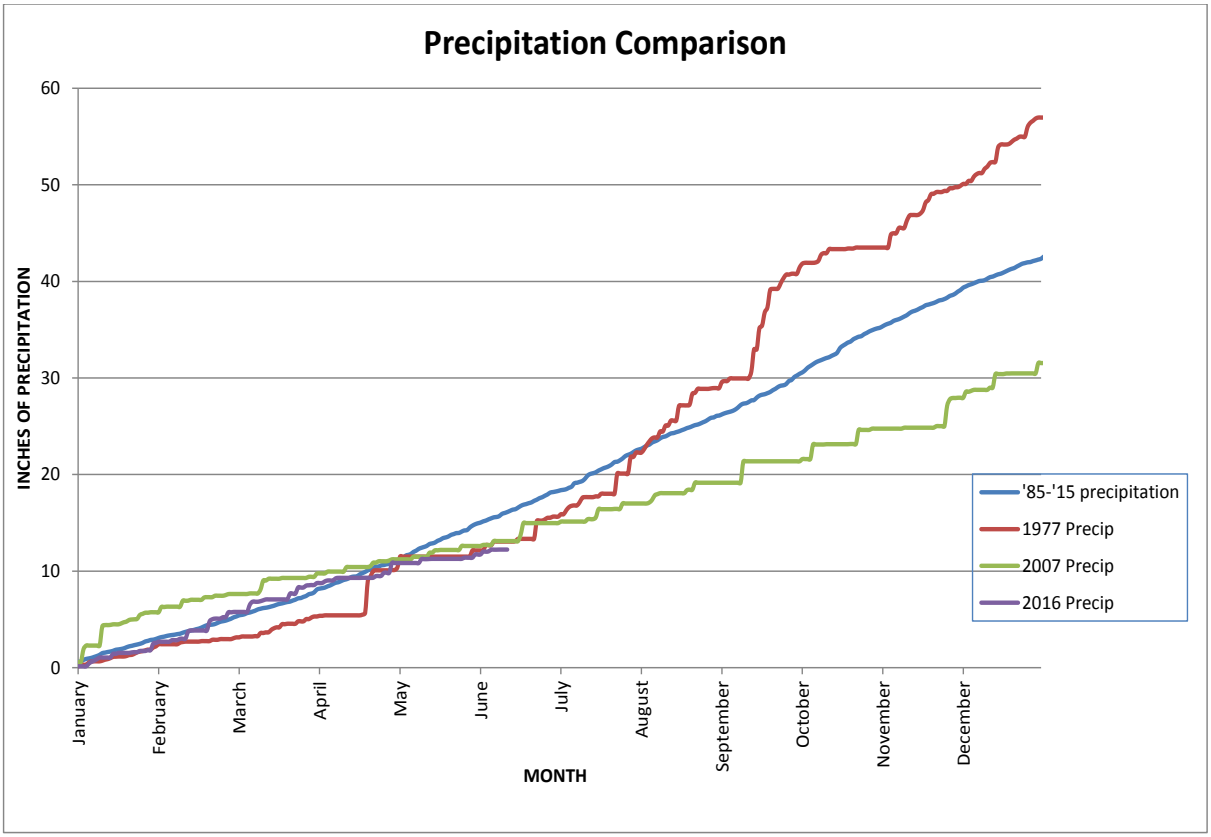
On Sunday June 12th, research support specialist, Ted Taft declared bloom on check vines at the Portland lab. The warm weather in late May and early June helped move things along, but the cool weather last week delayed bloom from our early predictions. However, bloom occurred two days before the long-term average of June 14th.

The current forecast (Thursday June 16th) is calling for a much needed rain that could bring relief to the dry conditions

Fruit set: Pollen tubes respond to temperature. Florets will fertilize within 12 hours when temperatures are between 77°F and 86°F and 24 hours with temperatures at 68°F and 48 hours with temperatures at 59°F. When temperatures fall below 59°F fertilization will not occur. With weather in the 60's and 70's during the week pollination should have gone well. We will have fruit set information after shatter (normally two weeks from bloom).

Causes for poor fruit set:

- **Weather:** Cool, wet, and overcast conditions.
- **Weather Events:** Basically any event that damages the vine or the canopy can result in poor fruit set, for example winter damage, hail, and early fall frosts.
- **Vine Nutrition:** Healthy vines have the best potential for vine fruitfulness. C:N ratio plays a large role in fruit set (needs to be balanced), and micronutrients boron and zinc are important for early season shoot growth.



The average GDD for June 16 from 1985-2015 is 644. We are currently at 589.5.
The average precipitation for June 16 from 1985-2015 is 16.21 inches. We are currently at 12.23 inches.

Research

Dr. Cain Hickey, Post Doctoral Associate

Now that most are well into, or through bloom, it is appropriate to think about vineyard nutritional status, as bloom is a common phenological stage to conduct tissue sampling for vine nutrient analyses. Essential vine mineral nutrient concentrations change throughout the season. Rather than tediously conducting several tissue samplings, bloom is a common stage that many growers and researchers will sample tissues for nutrient analysis. A common question is "what constitutes a tissue sample"? Nutrient concentration standards have been developed for petioles (the slender "stem" that connect the leaf blade to the shoot) and they are an easy standard tissue to sample. As such, petioles can be collected at bloom to determine nutrient sufficiency / deficiency in comparison to published standards, but can be collected at any time of year for comparison across vineyard blocks. At bloom, the petioles opposite the medial cluster are collected for nutrient analysis. Sample size required to constitute a sample is dependent on the size of the petiole, which can change between varieties. For Concords, 50-60 petioles per sample provide labs ample tissue to evaluate nutrient concentrations. If you are growing other varieties, adjust petiole amount per sample accordingly – if smaller than Concords, increase petiole number per sample. Each robust change in vineyard topography (i.e. hillside vs. low lying regions), soil patterns, and/or vine growth habits should warrant a separate composite petiole sample. If nutritional deficiency is a cause of abnormal vine growth or leaf symptoms, it will be manifested as a pattern as opposed to random. It is best to sample from a large number of vines in a section of vineyard rather than sampling many petioles from one vine. For example, it is better to sample three petioles each from 20 vines compared to 10 petioles each from six vines to make up a 60 petiole sample. Samples can be brought into the CLEREL, and the price is $30 / sample to be processed and analyzed. If you bring 5 or more the price decreases to $28/sample.

Interpreting results: There can be many factors resulting in vine mineral nutrient deficiency rather simply deficient soil mineral nutrient concentrations. These factors include, but may not be limited to, the chemical, biological, and physical properties of the soil, root growth and distribution, and vine and crop size. Because the soil greatly influences nutrient availability to vines, soil sampling is also recommended to get the broader picture of vineyard nutritional status. There is a lot of information available regarding nutritional balance in vines, and how nutritional deficiencies can be corrected. Our team at CLEREL will be glad to provide assistance with interpreting your tissue nutrient analysis results.

Many points contained herein adopted from, and suggested further reading for vineyard nutrient management, and common foliar nutrient deficiency symptoms:

Bates TR and Wolf TK. 2008. Nutrient management. *In* Wine Grape Production Guide for Eastern North America. TK Wolf (ed.), pp. 141-168. Natural Resource, Agriculture, and Engineering Service (NRAES) Cooperative Extension, Ithaca, N Y.

The forecast looks to be warm and dry over the next several days. Thus, the crop potential set by pruning practice will be hopefully optimized by relatively high fruit set percent.

See everyone soon – Cain

IPM

Tim Weigle, NYSIPM, Cornell University,
LERGP Team Leader

Grape Rootworm – scouting conducted on June 14, 2016 in the eight project vineyard blocks found no damage, or grape rootworm adults present. However, our results from last year showed that grape rootworm emergence can go from 1 to 300 per block in a week's time. Last year we had peak emergence at the June 17 and 24 scouting dates. We have had a few reports from growers that they are just starting to see the adults and some damage so now is the time to start scouting those blocks with a history of grape rootworm, or those where vine vigor has been going downhill without a known reason.

Banded grape bug – we are getting a lot of questions concerning the black beetles, with a red or orange shield, being found in the vineyards. Chances are these are the adult stage of banded grape bug. Good news is that the adults are no longer a pest of grapes as they have become beneficial insects, looking for soft bodied insects to feed on. 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

Grape Berry Moth – according to the NEWA model we are still well below the 810 DD (257 DD as of June 15) needed to time an insecticide application in vineyards at intermediate and high risk for damage from grape berry. While research has shown that the 10-day post bloom application of insecticide is not effective in reducing late season damage in these vineyard classifications, this timing has been shown to have some effectiveness in severe risk vineyard blocks.

Diseases – 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 1.35" rainfall through the first half of June; on the dry side. We have accumulated about 219 growing degree days (gdds) for the month. According to Accuweather, warm dry conditions are in store for the weekend.

Phenology: Here by the lake, we have racked up about 513 gdds since April 1. At our location, Concord bloom began on June 11 (right at average) and we are currently at about 80% bloom. 50% bloom occurred about June 14-15.

Diseases: We have had little or no precipitation over the past 10 days, and as a result, there is little disease pressure in most of the belt. The dry weather has left little or no chance for downy mildew development. Given the greater than average level of overwintering inoculum for this disease, I'd say we have dodged a bullet so far this year. Keep an eye on the weather for precipitation events however. When these occur, scouting about 5-6 days later will reveal if downy mildew infections have occurred; you'll see the characteristic 'downy' white sporulation of this disease on unprotected leaves and clusters. With the abundance of overwintering inoculum, the potential for epidemic development is greater than usual. However, it will still depend heavily on the weather; downy mildew development has a very strict requirement for rainfall/wet plant surfaces.

Powdery mildew primary infection periods require rainfall of at least 0.1" with temperatures above 50F. We have had just three powdery mildew primary infection periods that fell within the first week or so of this month; enough to get the disease going. Primary infections of powdery mildew can go on to produce spores that do not require water for dispersal or infection but I suspect inoculum levels and disease pressure are still very low.

Despite the dry weather, plan carefully for that immediate post-bloom spray: 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. Good timing with these two sprays should leave Concord fruit squeaky clean with respect to downy and powdery mildew this year. The threat of black rot will remain however, in vineyards with high overwintering inoculum levels.

In the Vineyards, PA

Andy Muza
County Extension Educator
Penn State, LERGP

In the Vineyard (6-16-16) – Andy Muza

Diseases

Vineyards that I checked yesterday afternoon had very little disease. Small amounts of phomopsis shoot and leaf lesions were observed and only 2 leaves were found with black rot lesions. The leaves with black rot were from a site near the woods with a past history of black rot problems. No powdery or downy mildew lesions were seen in any vineyards scouted. Even though disease pressure has been low up to this point, rainfall events now can cause inoculum release of phomopsis, black rot and downy mildew spores at a very susceptible time period in berry development.

The first POSTBLOOM spray should be applied 10-14 days after the IMMEDIATE PREBLOOM spray. This spray is extremely important for the protection of developing fruit from infections due to phomopsis, black rot, downy and powdery mildew. **Do Not** extend this spray beyond 14 days from your last spray.

Black Rot lesions on Concord leaf

Insects

Rose Chafer
Vineyards with a history of rose chafer problems or blocks with sandy soils should continue to be scouted daily for at least another week. Even if an insecticide application has been applied scouting should be continued. In some seasons population levels at certain sites were high enough to warrant a second application. An insecticide application is recommended if a threshold of 2 beetles per vine is reached. Insecticides for management of rose chafer (2016 New York and Pennsylvania Pest Management Guidelines for Grapes, page 73) include Assail, Danitol and Sevin. See last week's Crop Update for additional information.

Grape Tumid Gallmaker
Galls caused by the grape tumid gallmaker were observed at several sites. Growers have also reported finding galls in vineyards throughout the region.

Grape tumid galls on Concord flower cluster

Grape tumid galls on Concord leaf

The adult grape tumid gallmaker is a small midge (fly) which lays eggs on developing grape tissue. Larvae hatch from eggs and bore into developing tissue (leaves, flower clusters, tendrils) causing swollen, reddish galls. The small, orange larvae complete their development within the swollen tissue, exit the galls and drop to the ground to pupate Although seeing these galls in the vineyard can cause concern the economic loss is usually negligible. Even though galls have been found every season, I have yet to see an infestation that warranted an insecticide application in a Concord vineyard.

A NYS IPM Program fact sheet on grape tumid gallmaker can be found at: https://ecommons.cornell.edu/bitstream/handle/1813/43134/tumid-gallmaker-FS-NYSIPM.pdf?sequence=1&isAllowed=y

2016 eNEWA Grape Project Subscription Sign-Up

Subscriber information

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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.

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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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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.

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THE LAKE ERIE REGIONAL GRAPE PROGRAM at CLEREL
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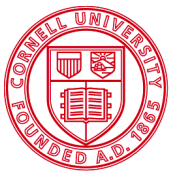

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