Important dates:

July 20, 2016- Coffee Pot Meeting
10:00am- Brant Town Hall- 1294 Brant North Collins Rd. Brant NY 14027
There are only 2 more Coffee Pot meetings- July 20 and July 27.

August 2, 2016- Wine Quality Workshop (rescheduled from April 13, 2016) at CLEREL
August 3, 2016- Grape Twilight Meeting and Erie County Horticulture Society’s Annual Chicken BBQ
August 11, 2016 Craft Beverage Summit at CLEREL- more information to come soon.
August 31, 2016- Cornell Vegetable Program Field Day at CLEREL
September 1, 2016- Cover Crop Conference at CLEREL
Plan to attend the Cornell Fruit Field Day!

Mark your calendars for the Cornell Fruit Field Day, to be held in Geneva, NY on Wednesday, July 20. The 2016 version of this triennial event will feature ongoing research in berries, hops, grapes, and tree fruit, and is being organized by Cornell University, the NYS Agricultural Experiment Station (NYSAES), the College of Agriculture and Life Sciences Fruit Program Work Team, and Cornell Cooperative Extension.

All interested persons are invited to learn about the fruit research under way at Cornell University. Attendees will be able to select from tours of different fruit commodities. Details of the program presentations are still being finalized, but the event will feature a number of topics, including:

- **Berries**
  Spotted wing drosophila (SWD) research update | Hummingbird use | SWD monitoring network | Exclusion netting against SWD in fall raspberries | Monitoring and SWD management decisions in summer raspberry & blueberry | Behavioral control of SWD with repellents and attract & kill stations | Effect of habitat diversity on ecosystem services for strawberries | High tunnel production of black and red raspberries | Day-neutral strawberries and low tunnel production

- **Tree Fruits**
  Apple breeding & genetic studies | Research updates on fire blight, apple scab, powdery mildew | Bitter pit in Honeycrisp | 3D camera canopy imaging | Ambrosia beetle management trials | Malus selections for cider production | Precision spraying in orchards | Role of insects in spreading fire blight in apples | Bacterial canker of sweet cherry | Rootstocks & training systems for sweet cherry | NC-140 rootstock trials on Honeycrisp & SnapDragon | Pear rootstocks & training systems

- **Grapes & Hops**
  Sour rot of grapes | VitisGen grape breeding project | Precision spraying in grapes | Managing the spread of leafroll virus in Vinifera grape using insecticides & vine removal | Early leaf removal on Riesling | Overview of NYSAES hops planting | Powdery & downy mildew management in hops | Hops weed management & mite biocontrol | Update on malting barley research

- **also**
  FSMA (Food Safety Modernization Act) Produce Safety Rule

- **Fruit Field Day details**
  The event will take place at the NYSAES Fruit and Vegetable Research Farm South, 1097 County Road No. 4, 1 mile west of Pre-emption Rd. in Geneva, NY.

Arrive at 8:00 AM to get settled in. Tours begin promptly at 8:30 AM and are scheduled in the morning from 8:30 to 11:30 and in the afternoon from 1:30 to 5:00. Lunch will be served at the exhibit tent area between 11:30-12:30.

**Visit sponsors anytime from 11:30-1:30!** Learn about products and services from Agro Liquid | Arysta Life Science | Dow AgroSciences | Dupont | Farm Credit East, ACA | Finger Lakes Trellis Supply | LaGasse Works, Inc. | Lakeview Vineyard Equipment | NY Apple Sales | OESCO, Inc | Red Jacket Orchards | Superior Wind Machine Service | Valent USA Corp. | Wafler Farms | **tastings from War Horse Brewing**

- **Register now!** Admission fee is $50/person ($40 for additional attendees from the same farm or business), which covers tours, lunch and educational materials. **Pre-registration is required.** Walk-in registration may be available for a $10 surcharge on the day of the event. Register on the Cornell Fruit Field Day Event registration page, [http://events.cals.cornell.edu/ffd2016](http://events.cals.cornell.edu/ffd2016)
Cover Crop Workshop and Field Day

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
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
Limited Liability Companies: What’s your L in LLC

As growers increase in size an LLC becomes a tool to limit liability of increasing assets. Spray drift, tractor driving negligence, or medical bills from employee injuries are no longer of any concern. Hopefully most growers realize how untrue this statement really is. In fact, most growers will receive almost no liability protection from an LLC. Here’s why:

- Most of your assets are tied up in the company. The limits on liability only protect personal assets.
- Given that growers do nearly half of all farm labor themselves, more so when excluding low risk activities like hand pruning, in all likelihood the grower will be the individual acting negligently. An LLC does not provide much liability protection when you are acting negligently. It is more effective when an employee is negligent.
- Even if an employee is negligent it is still very likely an owner could be sued personally. There is often an argument that a boss or manager shared in negligence by providing inadequate training.

So if an LLC doesn’t limit liability, what is a grower to do. For starters, as growers build assets adequate insurance is a must. While increasingly expensive, good liability insurance is still fairly easy to obtain for farmers. It’s a bit trickier as custom service operations grow. Sometimes splitting the business into two makes sense. Other times, it will make sense to purchase liability insurance that isn’t quite an umbrella but close enough.

Just because an LLC does not limit liability, it doesn’t mean it is not for you. Given the average age of growers, expedient and fluid changes in business ownership provide significant benefits. A sole proprietorship does not allow shared ownership, transfer of ownership is complicated as individual assets need to be transferred individually. Shared ownership results in the creation of a common law partnership.

While I do believe a partnership is the most undervalued business organization around, that doesn’t mean it is for everyone. A partnership will require a detailed ownership agreement and does not allow for quite the same free flow of ownership. When I say an ownership agreement is required, I mean “required”. The law provides default provisions that most business owners would find objectionable. Lawyers charge small fees to prevent large fights later on. Or, at least allow for a simple resolution. (If it is a decent lawyer). Often informal partnership agreements create problems as individuals do not anticipate a dispute. When a dispute does happen, the resolution has unexpected results. Finally, depending on how ownership is shared, with a significant partner an LLC may finally provide some measure of protection from liability. (Think, clear negligence of a single partner).

One final note, if you haven’t scrolled past looking for berry moth updates yet, the key to a good ownership agreement revolves around exit clauses. Spelling out a simple and inexpensive method of valuation is critical. Sometimes each partner is entitled to an expert while an independent auditor provides a 3rd expert trump card. That’s expensive. Other times, the accountant is named as the valuation expert. That’s not a bad solution, as long as the accountant knows about it. Finally, valuations may be based on fixed dollar amounts. Just understand that these agreements sometimes last longer than people expect. Fixed dollar amounts eventually become unacceptable.
Crop Estimation

This week CLEREL staff has been busy crop estimating vineyards around the area. Crop and berry size seems to vary between blocks and across the region. Our estimations ranged from 2 – 10 tons per acre, with most samples showing between 6 and 8 tons per acre.

Having an accurate crop estimation can help you make many cultural practice decisions throughout the rest of the season. For most of the ‘Grape Belt’ 30 days after bloom (DAB) occurred earlier this week, but using the estimation chart makes it easy any time of the year. I’ve received a few questions on crop estimation and wanted to break down the process.

1. Clean pick (harvester or by hand) 1/100 of an acre. Length of sampled area is determined by row spacing.

2. Weigh 1/100 acre sample (Ex. Sampled weighed 68.5 lbs)

Length of rope cut to row spacing (Ex. Row spacing at 9” this rope is 48.4”)

3. Use Dr. Bates: Crop Estimation and Thinning Table (Ex. Sample weighed 68.5 lbs 30 days after bloom estimation table show 6.85 tons/acre at final berry weight)

Crop estimating at 30 DAB for ‘Concords’ is common for most growers. When the berries are at 50% of the final berry weight (like the example shown above) all you needed to do for final estimation was shift the decimal point over one place. However, the estimation table will work throughout the season. One thing to keep in mind when using the chart is to double check you are using time of season (DAB) in the shaded area to match up the column below. Growers that have already done their estimations reported some higher than expected numbers.
## Dr. Terry Bates: Crop Estimation and Thinning Table: 7/16/2003

### Time of Season

<table>
<thead>
<tr>
<th>% of Final Berry Weight</th>
<th>20DAB</th>
<th>25DAB</th>
<th>30DAB</th>
<th>40DAB</th>
<th>50DAB</th>
<th>Veraison</th>
<th>Harvest</th>
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<tr>
<td>30</td>
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<td>40</td>
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<td>28.6</td>
<td>25.0</td>
<td>22.2</td>
<td>20.0</td>
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</table>

### Row Spacing

- Determines length of 1/100th of an acre
- 10.0 feet row spacing = 43.5 feet = 1/100th of an acre
- 9.5 feet = 45.9 feet = 1/100th of an acre
- 9.0 feet = 48.4 feet = 1/100th of an acre
- 8.5 feet = 51.2 feet = 1/100th of an acre
- 8.0 feet = 54.45 feet = 1/100th of an acre
- 7.5 feet = 58.1 feet = 1/100th of an acre

### Calculation

- 43,560 square feet per acre
- Divide by row spacing and then divide by 100 to get 1/100th of an acre

### Example:

A grower has 9 foot row spacing and clean picks 48.4 feet at 25 days after bloom. The fruit weighs 80 pounds and the grower estimates that the berries are between 35% and 40% of final berry weight. According to the table, the crop estimate is between 10.0 and 11.4 tons per acre.

### Disclaimer:

This table gives the relationship between time of season and % final berry weight on an average year. Year to year variability in weather related berry growth adds error to this table. Information on current year berry growth can be obtained from the Fredonia Vineyard Lab (or) it is strongly suggested that individual growers start collecting berry weight information from their own individual vineyard blocks.
Concord Berry Curve

The latest collection for the berry curve showed below average berry weight at 1.27 grams 29 DAB. Collecting multiple samples from around the belt we have seen a large variation in berry size. Small berries were less than a gram and large berries weighed 1.8 grams, putting projected final berry weight between 2 and 3.6 grams berries. Although the pruning system contributes to much of this variation (see lower graph), lack of water on certain sites may also be contributing to smaller berry size.
Weather Update

The lack of rain has been a continued topic in conversation for a few weeks now. Another dry week has contributed to changes to the NOAA ‘Drought Monitor’, Niagara county, part of Erie county and most of the Finger Lakes status upgraded from “Moderate Drought” to “Severe Drought” status. The greater part of the Lake Erie region has stayed at “Moderate Drought” status.

<table>
<thead>
<tr>
<th>Location</th>
<th>Precip. July Past(13) days</th>
<th>Precip. June total</th>
<th>Precip. May total</th>
<th>Total March GDD</th>
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</thead>
<tbody>
<tr>
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<td>Harborcreek, PA</td>
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<td>North East Escarpment</td>
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<tr>
<td>Ransomville</td>
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<td>0.93</td>
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</table>

Note: All Weather data reported as of 7/13/2016
NA=Sensor Malfunction

Cumulative Base 50 Growing Degree Days
@ 6592 W Main Rd, Portland, NY 14769
Accumulated Precipitation at CLEREL

Inches

Month

January February March April May June July August September October November December

Accumulated precipitation

'85-'15 precipitation

2016
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
David Miskus
NOAA/NWS/NCEP/CPC

http://droughtmonitor.unl.edu/
Grape Berry Moth – according to the NEWA model, with the exception of North Appleton, all the stations indicate we are well past the 810 DD needed to time an insecticide application in vineyards at intermediate and high risk for damage from grape berry (even if using a contact insecticide where you would delay applications to 811 and 900 DD). The table below shows the GBM model results from NEWA for sites in the Lake Erie region using the estimated date of wild grape bloom (the biofix that is used to start the grape berry moth model.

<table>
<thead>
<tr>
<th>NEWA Location</th>
<th>Wild grape bloom date*</th>
<th>DD Total on July 14, 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Versailles</td>
<td>May 30</td>
<td>981</td>
</tr>
<tr>
<td>Dunkirk Airport</td>
<td>June 3</td>
<td>902</td>
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<tr>
<td>Sheridan</td>
<td>May 31</td>
<td>1008</td>
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<tr>
<td>Silver Creek</td>
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<td>902</td>
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<tr>
<td>Portland Escarp.</td>
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<tr>
<td>Ripley</td>
<td>May 31</td>
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</tr>
<tr>
<td>North East Escarp</td>
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<td>888</td>
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<tr>
<td>Harborcreek</td>
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<td>June 3</td>
<td>930</td>
</tr>
<tr>
<td>North Appleton</td>
<td>June 10</td>
<td>768</td>
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</table>

* Estimated date provided by NEWA website

Continue to access the grape berry moth model for the station(s) nearest you on the NEWA website [http://newa.cornell.edu](http://newa.cornell.edu) to get a “heads-up” on when you should start scouting for the next generation of grape berry moth. Accessing the GBM model page on NEWA also provides you with information on the pest status and what pest management measures should be taken as shown in the figure below.

Grape Rootworm – scouting conducted on July 12, 2016 in the eight project vineyard blocks found no reemergence of grape rootworm adults in vineyards that have received an insecticide (after scouting indicated a need for treatment). Interestingly, in the two blocks which have not received an insecticide this year, scouting found no grape rootworm the past two weeks. We will continue to scout for grape rootworm to determine if there is continued emergence in any of the blocks.

If you find you have grape rootworm in a vineyard block, please give me a call (716) 792-2800 as I would like to continue to collect grape rootworm adults and/or grape rootworm eggs for our potted vine studies.

While it is never too late to scout for grape rootworm damage in your vineyards, I would do the shake test to determine if rootworm adults are still present in the vineyard. Like many other insect pests, finding damage does not mean you should spray. Grape rootworm spends a majority of its time underground as larva so at this time of year you may be spraying for a pest that you have no chance of hitting.
In the Vineyard

Diseases

**Powdery mildew** – the only disease that growers will have to contend with for the rest of the season is powdery mildew unless the weather changes dramatically to extended periods of rainy weather. In some vineyard blocks checked this week powdery mildew was easy to find on berries (Figures 1 & 2). However, the majority of blocks looked pretty good.

![Figure 1. Concord cluster with powdery mildew infection](image1)

![Figure 2. Split Concord berry due to powdery mildew infection](image2)

As mentioned in last week’s Crop Update, if you are finding a lot of infected berries in your blocks then examine your prebloom and postbloom fungicide application records (e.g., fungicides used, intervals between sprays, every row vs. every other row sprayed) to determine possible reasons for high infection rates. This is important so that you can change management practices for next season. Although berries are now resistant to additional infections I did see an increase in pedical and rachis infections (Figure 3). Powdery mildew on leaves is still at low levels.

![Figure 3. Powdery Mildew on pedicals and rachis on Concord](image3)

In Concord vineyards an additional fungicide application for powdery may be beneficial this season, especially in blocks with heavy crop loads. Conduct crop estimations in your blocks and continue monitoring for powdery mildew buildup to determine if any additional management is required.

Insects

**Grape Berry Moth** – At one Severe Risk site GBM eggs were found on 12% (3/25) of the clusters examined. No eggs were found at other sites checked. As expected, the percentage of damaged clusters increased at High and Severe Risk sites.

According to the GBM Degree Day Model in NEWA [http://newa.cornell.edu/index.php?page=berry-moth](http://newa.cornell.edu/index.php?page=berry-moth) an insecticide for grape berry moth should have been applied by now.
**Japanese beetle** – population levels continued to increase in vineyards (Figure 4). Again, as mentioned last week, mature Concord vineyards do not routinely require insecticide applications for this pest. However, scout your blocks to determine if population levels have increased to the point where treatment is necessary.

*Figure 4. Japanese Beetles feeding 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)

<table>
<thead>
<tr>
<th>Lake Erie Region</th>
<th>Sheridan</th>
<th>Lakemont</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appleton, North</td>
<td>Silver Creek</td>
<td>Lansing</td>
</tr>
<tr>
<td>Appleton, South</td>
<td>Versailles</td>
<td>Lodi (Lamoreaux)</td>
</tr>
<tr>
<td>Dunkirk</td>
<td>Finger Lakes Region</td>
<td>Lodi (Shalestone)</td>
</tr>
<tr>
<td>Erie</td>
<td>Aurora</td>
<td>Lodi (Standing Stone)</td>
</tr>
<tr>
<td>Harborcreek</td>
<td>Branchport</td>
<td>Penn Yan</td>
</tr>
<tr>
<td>North East Escarpment</td>
<td>Dresden (FLGP/FLCC)</td>
<td>Romulus (B. wood Grove)</td>
</tr>
<tr>
<td>North East Lab</td>
<td>Dundee (Weimer)</td>
<td>Romulus (Thirsty Owl)</td>
</tr>
<tr>
<td>Portland</td>
<td>Fayette 3 Brothers</td>
<td>Varick (Swedish Hill)</td>
</tr>
<tr>
<td>Portland Escarpment</td>
<td>Geneva</td>
<td>Watkins Glen</td>
</tr>
<tr>
<td>Portland Route 5</td>
<td>Geneva (Bejo)</td>
<td>Watkins Glen (Lakewood)</td>
</tr>
<tr>
<td>Ransomville</td>
<td>Hector</td>
<td></td>
</tr>
<tr>
<td>Ripley</td>
<td>Interlaken (Airy Acres)</td>
<td></td>
</tr>
</tbody>
</table>

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
Winery Quality Control Workshop
Stabilize your wine – Filtration, Sulfur Dioxide and Potassium Sorbate

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 SO₂ relationship
- the breakdown of SO₂
- how to add SO₂ 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

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:

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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