









Buds at CLEREL vineyard; Photo: Jennifer Russo

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# Business Management

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

## 2019 Coffee Pots and Industry Sentiment

First coffee pot of the year has wrapped up. The last newsletter touched on the challenges outlying areas like the west side of Erie have faced in the last 4 years, which is different than the business challenges in the core of the growing region. Despite that, an Ag Census is a lagging indicator. With new processors and a decline in surplus a sense of cautious optimism is pervasive throughout the region. Discussions with growers yesterday appear to reflect the ideal outcome cautious optimism. These growers are positioning themselves for success if markets do improve. Hopefully you are too. The focus is on small investments in production practices that position the vineyards for larger balanced yields.

These investments begin with care for vineyards that were lacking care. Vineyards without a marketing agreement received little or no care. Now growers look to ramp up production to meet demand. Despite an increase of labor cost supply was adequate to finish most pruning and has moved on to (sometimes intensive) renewal work. In particular, we see some minimally pruned vineyards were cleaned up. While costs were not tracked, rehabilitation typically costs 50 - 90 cents per vine or \$300 - \$600 per acre. What I mean by "rehabilitation" or "cleaned up" is a change in the pruning architecture. The boxed hedge is thinned out and dead wood is removed. If necessary, the fruiting zone is moved closer to the cord-on. We occasionally see payback in the first year if there is enough clean wood to yield a full crop. Heavy rehabilitation may take two years to pay back as bud counts can be quite low. Relocating the fruiting zone and renewing cordons can get average bud numbers down to 50 - 80.

In addition to investments in the trellis architecture we also see changes in spray strategy that indicate market optimism. Pre-bloom spray strategies seem to be influenced by a desire to preserve potential crop, despite incurring additional costs. Disease pressure was a challenge last year. For the moment Captan is a good material to consider for a 3" spray if you find the EBDC too costly at \$9 per acre. We've seen the temptation to carry Captan through the whole pre-bloom period. Given the small difference in cost, that's not a great idea. By the 10" stage it's worthwhile to begin investing in black rot protection. It's important to keep in mind that EBDC remains very inexpensive, despite perhaps not being the absolute cheapest option.

While some growers continue to expand, we are still a time away from the industry as a whole considering capital investments in equipment, vineyards and other large projects. Improving cash flow, reducing debt (leverage) and increasing sustainable yields is the best strategy for early cycle market recovery. Investments in equipment are probably things that growers should be thinking about for their long-term strategy but not necessarily executing until the market picks up a little more.

## Spray Season and Capital Investment

There was just a discussion around the office about a fairly expensive pruner that pre-prunes 30 – 40 acres per day. That might amount to 1,000 or more acres per season. The discussion led to the complexities of comparing multi-row machinery with its less advanced counterparts. With the upcoming spray season, it's good to think about future capital investments as you intensely use your current investments. How many rows should my sprayer be capable of spraying?

The average grower has 50 acres of grapes. In all cases this grower should have a single row sprayer. Investments in that sprayer should improve coverage, deposition and possibly ground speed. A single row sprayer at 3 mph has a theoretical capacity of 3 acres per hour. The simplicity of turning in headlands and refilling might mean an actual capacity of 2.5 acres per hour. From start to finish a spray application is 20 hours. Regardless of any outside variables this is all the average vineyard operation requires.

We know that 50 acres is a difficult vineyard size to realize profits. Our typical vineyard profile is not 50 acre vineyards. There might be a 200-acre vineyard a few 5 acre vineyards that average 50 acres. In that case the 200-acre vineyard might be spraying 220 acres. Multi-row sprayers vary significantly in cost per row. The sprayers use varying levels of technology to increase overall speed of application. Different engineering designs in an effort to improve coverage or reduce drift can also significantly impact cost. In general, multi-row sprayers range from a cost of \$17,000 per row to \$30,000 per row. On a per-row basis, the capital cost is less than single row sprayers.

Upgrading single row sprayers to two row sprayers starts to make sense at 100 acres. A 100-acre grower with ample labor supply, which might mean 2 FTE, might find a single row sprayer to be adequate. A weekend warrior, or even a solo operator should begin to consider 2 row options at 100 acres. A single row sprayer might cover a 100-acre farm in two days or eight days depending on the supply of labor and weather. A two row sprayer would range from one day to four.

When considering an upgrade it is important to be confident in the ability of the sprayer to outperform coverage of the current sprayer. Late season spray coverage is usually fairly poor in Concord and investments that marginally improve coverage will yield economic benefits in years that demand late season spray.

To compensate for the extra cost that might be associated with better coverage a grower may trade down in sprayer size. Purchasing a multi-row sprayer with one less row than you thought you needed can be possible. To achieve the same speed, it can be less costly to invest in more efficient filling and mixing stations. As our large farms continue to expand and labor costs continue to increase this may be a moot point. Our largest farms will start to see current 4 row sprayers as inadequate. For now they remain the benchmark for our region with attempts at reaching 5-6 rows limited to other areas.



# **INSURING GRAPES**

NY, 2019

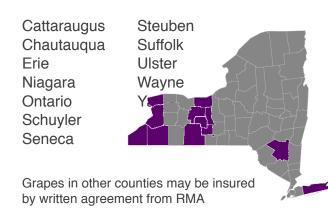
**Crop insurance** is a safety net for farmers that helps you **manage risk**. If you have a crop failure, crop insurance can help you farm again next year.

#### **Important Insurance Deadlines**

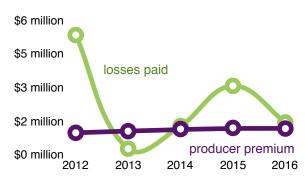
- Aug. 15, 2018: Premium Billing Date
- Nov. 20, 2018: Sales Closing, Policy Change, Cancellation, Termination Date
- Nov. 20, 2019: End of Insurance Period
- Jan. 15, 2019: Acreage / Production Report Date



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Cornell University delivers crop insurance education in New York State in partnership with the USDA Risk Management Agency. Diversity and Inclusion are a part of Cornell University's heritage. We are an employer and educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.











Tim Weigle, NYSIPM, Cornell University, LERGP Team Leader

#### What's The Best...?

One common question that I have picked up on during Coffee Pot meetings and phone conversations this spring is "What is the best herbicide program, roundup rates, etc. for us to use right now? And the answer that members of the LERGP extension team provide usually leave growers thinking that we are not comfortable giving a straight answer. In reality, what they are hearing is how far we have come as an industry from the days when the newsletter contained a broad stroke recommendation for growers across the belt to apply 2 lbs. of this material and 3 lbs. of that material on this date.

So how do you determine what's the best pest management option? There are a couple key components that need the experience of the vineyard operator to determine.

- 1) What is the severity of the pest are you going after? With weeds, are you dealing with perennial weeds, annual or biannual weeds, broadleaves or grasses and resistant weeds or weeds selected due to your current spray program? With any pest management strategy, resistance, or selection of a pest that is not controlled by a particular product is a concern. Look at spray records to determine the programs you have used in the past, scouting records to determine how well they worked, and harvest reports to see if pests impacted yield in any way. By answering these questions you will be able to determine what materials should be used, and when, to take care of the issues that are present in your vineyard. And chances are that you should be breaking your operation down by block so you can specifically deal with issues present within each specific vineyard. Sometimes something as basic as soil type can change the answer of what is best.
- 2) What rate per acre should be determined by correct identification of the pest you are dealing with, the sensitivity of the pest to the material (how often has it been used?), the severity of the pest population and is the material being applied at the appropriate timing? The first step in determining rate is to read the label as it will give you the rate, or at least a range of rates that can be applied for that pest in grapes. With the number of formulations available for some materials across a number of companies (take glyphosate for example Roundup vs the generics) it is critically important to read the label to see what the minimum and maximum rate is.

Marestail, or horseweed, provides a good example of how management mistakes of the past can be corrected as we go forward. We are seeing more examples of Marestail that is resistant to Roundup applications. John Wallace, weed scientist at Penn State recommends that herbicides for Marestail should be applied before the plant reaches pop can size. Glufosinate (Rely) is a material that has shown good activity against Roundup resistant marestail and growers are reporting that they have had good luck spraying marestail that has grown to knee high (well past pop can size) with higher rates. This approach worked well with Roundup at the beginning as well and should raise a red warning flag. It is suggested that using a lower rate of glufosinate at the proper timing will extend the amount of time that this material will be effective against this weed. If glufosinate starts to slip in managing marestail, continue to apply prior to the plant reaching pop can size with an increased rate of the herbicide. And look at rotating modes of action from the start. Ground covers have shown to be very effective at out competing marestail in the row

middles and mowing prior to the plant going to seed has been shown to reduce the population as well. Knowing that this weed will grow and produce seeds in both the spring and the fall is an important component in managing this pest.

Please feel free to contact any member of the LERGP extension team with the "What is best?" question. Just be ready to have a conversation about what is best for your personal situation, and not a one size fits all 2 lbs. of this on this date type of answer.



# Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

## **Progression of Bud Break**

Buds are certainly pushing and progressing all over the region. Here at the Cornell Lake Erie Research and Extension Laboratory we are seeing signs of pink Concord leaf tips starting to peel away from the buds. Using the Modified Shaulis Field Score below, 50% of your buds need to be at a 4.0 on the scale in order to call bud

break. I did have to look at quite a few buds to find the one in the picture below, but it's a good sign that the buds are getting close to full bud break. However, on our farm there is a large variation of progression, with buds just coming out of dormancy, some that are at 'full swell' stage and other that were wooly and pink.

After today's phenology



Bud at CLEREL May 8, 2019

data collection, here at CLEREL, on May 8<sup>th</sup> 2019 our buds are 49.25% at a 4.0 on the Modified Shaulis Field Scale...sooooo close!

At this point in the growing season, we suggest focusing on your soil amendments, not fertilizer just yet. Soil amendments modify the soil structure as they work into the soil profile and decompose, allowing soils to absorb and retain water and nutrients more efficiently. Lime and gypsum are excellent soil amendments that can be used separately, together, or in a rotation to improve soil conditions. However, understanding the differences between lime and gypsum, and how they impact soil chemistry, is important when choosing the right amendment, or combination of, to achieve a more balanced soil.

Lime is an acid-soluble material that is applied to vineyards to raise the pH of acidic soils. It comes in many forms including calcium carbonate (CaCO<sub>3</sub>), magnesium carbonate (MgCO<sub>3</sub>) and others. It can be applied in a single pass with a lime spreader. Gypsum is not acid soluble and will not change the soil pH. It helps to shift

#### Modified Shaulis Field Score

**Dormant Bud** 

S

1.0

| - |      |  | ho                                |
|---|------|--|-----------------------------------|
|   | 2.0  | First Swell<br>brownish wool clearly<br>visible              | ot and                            |
|   | 2.5  | Intermediate Swell<br>half or more of bud<br>doeskin visible | noot and Inflorescence Developmen |
|   | 3.0  | Full Swell<br>pink on side of bud                            | rescer                            |
|   | 4.0  | Budbreak half or more of leaf edge exposed                   | nce De                            |
|   | 4.5  | Leaf Emergence   | evelop                            |
|   | 4.8  | Full Leaf Blade Visible                                      | ment                              |
|   | 5.1  | Flat Leaf Stage<br>one leaf perpendicular to<br>shoot        |                                   |
|   | 9.05 | First Bloom<br>5% florets open                               | Flo                               |
|   | 9.50 | Bloom<br>50% florets open                                    | lowering                          |
|   | 9.80 | 80% Bloom<br>majority of caps off                            |                                   |
|   | 10.2 | Fruit Set berry abscission                                   | Berry Deve                        |
|   |      | fruit >2mm diameter  | De                                |
|   | 10.7 | Pea-sized Berries<br>fruit 7mm diameter                      | /elop                             |
|   | 10.9 | Berry Touch  | ment                              |
|   | 11.5 | Veraison<br>5% of berries have color                         | Ripen                             |
|   | 12.0 | Maturity<br>Fruit ripe for harvest                           | ening                             |
|   |      |  |                                   |

the Ca and Mg levels in soil and offers a readily available form of sulfate sulfur, a valuable secondary nutrient that benefits the soil. The sulfate in gypsum binds with excess Mg in the soil to form soluble Epsom salt, which moves lower into the soil profile. This Mg is replaced by Ca, improving water holding capacity, root development and soil quality.

In our Lake Erie Region, we suggest spreading 2-3 tons per acre of 100% equivalent lime, any pumace that you've waited to spread, mulch, and get your cover crops planted as soil amendment additions. Hold off on any nutrient additions at this time. The grapevines have around 80% of their nutrient reserves below ground in their root systems at this point, and use those nutrients to push the buds and grow the shoots. When the shoots get to around 4 inches in length, that is when we suggest to apply more nutrients to aid in vine growth. The period of two weeks before 'Bloom' and 4 weeks after 'Bloom' are crucial for nutrient additions. Applying nitrogen now while the vines are using the stored nutrients, with or without a stabilizer, is likely to wash away, unused. Check with your supplier to see if blending your fertilizers is an option to reduce passes in your vineyard.

### **Coffee Pot Meetings**

Come join fellow growers and the Lake Erie Regional Grape Program Extension Team in casual conversations over timely vineyard topics. Bring questions to the table and enjoy a cup of coffee and donut while you are there. The LERGP held their second week of Coffee Pot meetings yesterday at Sprague Farms in Irving, NY and last week's was held at John Mason Farm in Lake City, PA. We respect the need for you to be out in your vineyards, so you will notice a change to the Coffee Pot meeting format this year. We have elected to hold only morning Coffee Pot Meetings at rotating farms in each county, and we want to offer the opportunity to get our Team out in your vineyards to address any questions or concerns that you may have. If the Coffee Pot Meetings are in your area, then please take advantage of this offer to get another set of eyes on your vines.

Next week, our team will be out to Paul Bencal's Farm located at 2645 Albright Rd, Ransomville, NY 14131. One thing that hasn't changed is the ability for participants to earn New York and Pennsylvania Pesticide Recertification credits by attending the meetings. Coffee Pot meeting locations change each week, there will be a Coffee Pot meeting held in a location near you a number of times during the growing season. Check for locations on the Coffee Pot Schedule located at the end of this Crop Update.



# PA Update

Andy Muza, LERGP Extension Educator, Penn State University

## **In the Vineyard** (5-9-19) –

Grape flea beetle and climbing cutworm - Within the next few days most Concord buds will

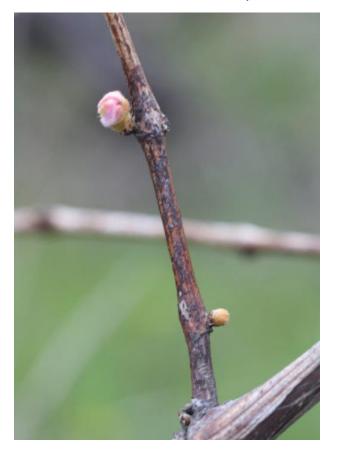
be past the stage (bud swell) where the threat of economic injury from these pests will be of concern (Figure 1). However, any blocks in the bud swell stage (i.e., various wine grape varieties) should still be scouted for potential bud injury. Areas with bud injury of 2% or greater would warrant an insecticide treatment.

Phomopsis - the abundance of Phomopsis cane lesions throughout vineyards in the Lake Erie Region indicate that inoculum levels range from moderate - high (Figure 2). Frequent and extended periods of rainy weather during the early season provide ideal conditions for infections to occur. Be prepared to apply a broad-spectrum protectant fungicide application (i.e., mancozeb, captan, ziram) when



Figure 1. Grape flea beetle injury on Concord bud. Photo - Andy Muza, Penn State

shoots are around 3 inches long, especially if an extended period of wet weather is predicted during this time. Check the NEWA station <a href="http://newa.cornell.edu">http://newa.cornell.edu</a> closest to your vineyard blocks for



5 - day weather forecasts and Phomopsis model information. Fungicide protection against Phomopsis infections on rachises, pedicels and berries is important until berries have reached about pea size.

Figure 2. Phomopsis lesions on Concord cane. Photo - Andy Muza, Penn State.

# PA Update

Bryan Hed, Research Technologist, Lake Erie Grape Research and Extension Center

**Weather**: We have accumulated just 0.87" of rainfall so far in May and just 83 growing degree days since April 1 (rather cold).

**Phenology**: Well, what a difference a week doesn't make. I've been poised to call 50% bud burst in Concord for the past several days, but there has been very little progress since last week. We were at 25-40% here at the North East lab (by the lake) yesterday, and I expect to be able to call 50% for today (May 9). Vineyards I looked at along Sidehill road (farther inland) were about at 50% bud break on Monday, May 6, when warm temps pushed 70F.

**Diseases**: As very little has changed since last week, here's a repeat for disease management. See the comments from Andy Muza as well.

The first disease we should be concerned about is Phomopsis. Early spring rains release spores of the Phomopsis fungus that emanate from cane lesions (from shoot infections that occurred last year) and from older and dead wood in the trellis (from infections that occurred two or more seasons ago). New shoots are vulnerable to infection just after shoot growth begins. Inflorescences are generally first vulnerable a little later at about 2-3" of shoot growth, when they first become exposed. That is why the first spray of mancozeb or Captan for Phomopsis is generally timed to intercept that 3-5" shoot stage. But in broader terms for early shoot infections, that's a ballpark figure. In other words, if you see a long, wet forecast timed to hit at 1-2" (like in 2017 when virtually every Concord vine in the belt was nailed with Phomopsis), you may want to at least gear up to cover your vineyards most at risk first. If temperatures are warm, shoots will move from 2" to 3-5" while you're filling your spray tank anyway. Last year, the rains at about 1-2" shoots left a new "crop" of Phomopsis lesions on the first couple of nodes/internodes because we were waiting for 3-5" again, which, relative to the weather, was too late; its not the easiest target to hit. Fortunately, as in 2017, the rains hit before maximum exposure of inflorescences and most of the damage was observed as shoot lesions as opposed to cluster stem lesions, minimizing crop loss.



## Save the date for your next fit test!

#### **Western New York**

Locations:

May 14: Amos Zittel & Sons, 3275 Webster Road, Eden, NY 14057

May 15-16: CCE Lake Erie Regional Grape Program, 6592 West Main Road, Portland, NY 14769



Scheduling appointments:

Monday, April 15-Friday, May 10



The New York Center for Agricultural Medicine and Health (NYCAMH) and HealthWorks is pleased to provide respirator fit testing clinics in your region in 2019.

During the clinics NYCAMH will provide medical evaluations; respirator fit tests; and WPS compliant trainings on how to properly inspect, put on, take off, fit, seal check, use, clean, maintain, and store respirators.

Clinic appointments are one hour long, and groups of 4 workers can be seen at a time. Medical evaluations, fit tests, and trainings are available in both English and Spanish.

If you are unable to attend the clinic in your area you may schedule an appointment at another clinic location.



Bassett Healthcare Network
New York Center for Agricultural
Medicine and Health



Bassett Healthcare Network HealthWorks

## Save the date for your next fit test!

To schedule an appointment please call the NYCAMH office during the **date range listed above** and ask to speak with farm respirator clinic scheduler.

We can be reached at 607-547-7014 or toll-free 800-343-7527 Monday-Friday, 8:00 AM-4:30 PM

When calling to schedule an appointment please have the following information available:

- Total number of people attending from your farm
- Name of each person being scheduled
- Language spoken by each attendee
- Make and model of each respirator to be tested

A respirator fit test ensures that a particular make, model, and size of respirator fits the wearer's face and will meet the wearer's needs. A fit test is specific to the make, model, and size of respirator.

If a worker wears more than one style of respirator, including filtering facepieces, they must be fit tested for each one. Please keep in mind while determining who will come to the clinic that a clean-shaven face is a necessity for masks to be effective and for fit testing to be possible.

It is important to us that your workers be protected from any respiratory hazards. It is important to us that you be protected from potential OSHA or DEC fines. If you have any questions, please call us.

# Seeder Loaner Program: For Vineyard Use

Purpose: Cover crops can be a useful tool in improving soil physical, chemical, and biological properties. The purpose of this no-till seeder loaner program is for grape growers to gain experience with cover crop seeding in their own vineyard operations.

The Cornell Lake Erie Research and Extension Laboratory acquired this five-foot seeder from Chautauqua County Soil and Water and our intent is to loan out the implement at no charge to Lake Erie Regional Grape Program members for vineyard use. Since this is a no-fee program, we need to minimize the burden on CLEREL staff. We ask that you pick up and drop off the seeder by your own means, operate the equipment as if it were your own, and return it in good working order.

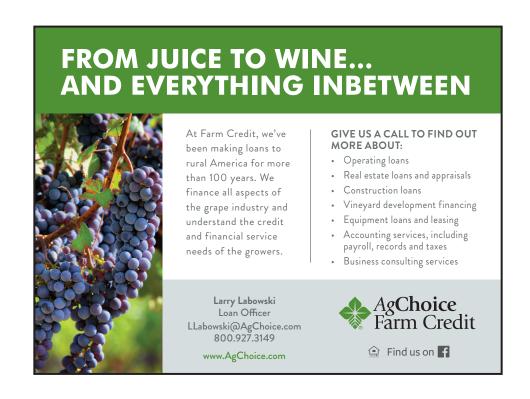
Thank you for your cooperation in this program for your fellow growers. If the seeder becomes abused, broken, or unsafe to operate, the CLEREL Director will discontinue the program.

#### Criteria:

- Must be a member of the LERGP
- To be used in Vineyards for moderate amounts of acreage
- Maximum 3 days/ use
- Must pick up and return by own means- we do not deliver or pick up
- Must return in same working condition as picked up

#### Procedure-

Grower will call LERGP and schedule a time to come get the seeder. Once here, grower will inspect the equipment and, if needed, attain basic instructions of use for the seeder. A profile sheet will be filled out to gather grower information and signed agreeing on terms. Upon return of the equipment, an inspection of condition will occur.



# LERGP 2019 COFFEE POT MEETING SCHEDULE

| 1 | Date                      | Time    | Location                 | Address                                  |
|---|---------------------------|---------|--------------------------|--|
|   | May 1, <mark>20</mark> 19 | 10:00am | John Mason Farm          | 8603 West Lake Rd. Lake City PA 16423    |
|   | May 8, 2019               | 10:00am | Sprague Farms            | 12435 Versailles Rd. Irving NY 14081     |
|   | May 15, 2019              | 10:00am | Paul Bencal              | 2645 Albright Rd. Ransomville NY 14131   |
|   | May 22, 2019              | 10:00am | Arrowhead Winery         | 12073 East Main Rd. North East PA 16428  |
|   | May 29, 2019              | 10:00am | Militello Farm Supply    | 2929 Route 39 Forestville NY 14062       |
|   | June 5, 2019              | 10:00am | North East Fruit Growers | s 2297 Klomp Rd. North East PA 16428     |
|   | June 12, 2019             | 10:00am | Thompson Ag - Corner of  | Hanover & Dennison Silver Creek NY 14136 |
|   | June 19, 2019             | 10:00am | Kirk Hutchinson          | 4720 West Main St. Fredonia NY 14063     |
| V | June 26, 2019             | 1       | NO COFFEE POT            |  |
| K | July 3, 2019              | 10:00am | Betts Farm               | 7366 East Route 20 Westfield NY 14787    |
|   | July 10, 2019             | 10:00am | Jim Vetter               | 12566 Versailles Rd. Irving NY 14081     |
|   | July 17, 2019             | 10:00am | Trolley Line Vineyards   | 11480 E. Main St. North East PA 16428    |
|   | July 24, 2019             | 10:00am | Brian Chess              | 10289 West Main Rd. Ripley NY 14775      |
|   | July 31, 2019             | 10:00am | Tom Tower Farm           | 759 Lockport St. Youngstown NY 14174     |