

Crop Update for Apríl 30, 2015

Crop Updates will be delivered on a weekly basis beginning today and running through the growing season.

Wednesday, May 6, 2015- Coffee Pot meetings begin-Dan Sprague's Farm, 12435 Versailles Plank Rd. Irving NY 14081

Friday, June 26 & Saturday, June 27, 2015- Hops Conference at CLEREL *(see flyer and registration form)*



Sunday, July 26, 2015- ISHS Shaulis Symposium at SUNY Fredonia

Monday, July 27-Wednesday, July 29- ISHS Conference at SUNY Fredonia

Use the included forms, go to our web-site or stop in the office to register.



**Check the web-site for more upcoming events and meetings.





Cornell University

Building Strong and Vibrant New York Communities Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.



2015 Coffee Pot Meeting Schedule

- May 6- 10:00am-Dan Sprague- 12435 Versailles Rd. Irving NY 14081
- May 13- 10:00am- Phillip Baideme- 7935 Route 5, Westfield NY 14787
- May 20- 10:00am- CLEREL, 6592 West Main Rd. Portland NY 14769
- May 27- 10:00am-Nick Mobilia- Arrowhead Winery 12073 East Main Rd. North East PA 3:00pm-Evan Schiedel/Roy Orton- 10646 West Main Rd. Ripley NY 14775
- June 3- 10:00am- Bob & Dawn Betts- 7365 East Route 20, Westfield NY 14787 3:00pm- North East Lab-662 N Cemetery Rd. North East PA 16428
- June 10- 10:00am- Peter Loretto-10854 Versailles Plank Rd. North Collins NY 14111 3:00pm- Dave Nichols-1906 Ridge Rd. Lewiston NY 14092
- June 17- 10:00am-Tom Tower 759 Lockport Rd. Youngstown NY 14174 3:00pm-Leo Hans-10929 West Perrysburg Rd. Perrysburg NY 14129
- June 24- 10:00am- Kirk Hutchinson-4720 West Main Rd. Fredonia NY 14063 3:00pm- Brant Town Hall- 1294 Brant North Collins Rd. Brant NY 14027
- July 1- 10:00am-Ted Byham 9207 West Lake Rd. Lake City PA 16423 3:00pm-Alicia Munch-761 Bradley Rd. Hanover NY 14136
- July 8- 10:00am- Rosemary & Brenda Hayes- 6151 Route 5 Brocton NY 14716
- July 15- 10:00am-Szklenski Farms- 8601 Slade Rd. Harborcreek PA 16421
- July 22- 10:00am- Paul Bencal-2645 Albright Rd. Ransomville NY 14131

Business Management

Kevin Martin Penn State University, LERGP, Business Management Educator

Forecasting Cash instead of Weather

The viticulturalists seem to be in agreement, an above average crop is not in the cards for 2015. With Lake Erie ice being measured in feet, just last month, it is no surprise a delayed growing season is starting to become a reality. As many of you realize, there should be little financial impact caused by a moderately delayed growing season.

Expenses for grape growers are really dialed in at this point. Many have already applied their most expensive spray of the season, high end pre-emergent. For those willing to make the investment, given the benefits, it should be a rewarding decision for them. While trellis repairs are not necessarily complete, supply purchases are often complete for 2015.

In terms of cash flow, this will give growers a good idea of where they stand. Forecasting out toward December does not involve too many transactions. From the standpoint of operational expenses, many Concord growers are more than halfway complete. It will be necessary for the average Niagara grower to budget for potentially significant retraining costs.

The remaining significant expenses are foliar spray programs, harvest and training. These practices vary from grower to grower. With the exception of harvest, the actual dollar amounts do not vary nearly as significantly as the practices themselves. For example, growers apply between three and six pesticide/fungicide applications. The variance in cost is typically less than \$50 per acre. Total harvest costs do not vary significantly between most operations. The structure of that cost and its impact on cash flow, though, can be significantly different. However, at this stage in your business operation, you're likely best off to stick with the model you currently have.

As a grower, particularly in the short term, you have essentially no control over your revenue stream. While it is not flexible, it is fairly easy to forecast. A fair forecast would vary between \$0 and \$600 per acre. This range will depend on your market, yields and optimism.

With that lack of flexibility in mind, the need for emergency financing may be clear long before you actually see cash flow becoming a problem. Understanding the cost of your materials is a fairly simple way to see if financing will be necessary between now and January.

Cultural Practices

Luke Haggerty Viticulture Extension Associate Lake Erie Regional Grape Program

Under the Snowline

In the last crop update I talked about looking for trunk damage caused by the freeze damage. I had a few questions on where to make the cuts to get the best look. I try to aim for where I think the snow line is located. Snow can act as insulation protecting plant tissue from the frigid air above the snow. When assessing trunks I aim my cuts at the snowline because in most cases this is where the coldest temps were. Depending on what I see I might make a second or third cut. For example, if I make a cut at the

snow line and I do not see indicators of damage I will make a second cut above where I think the snow line is. This ensures I'm checking an area of the trunk that was exposed to the air/cold temps. In contrast, if I cut at the snowline and see indication of trunk damage I cut lower (6 inches above the ground) to see how low I find damage. When severe damage is found below the snowline, it is a good indicator the vine will not survive.

In order to show the difference above and below the snowline, I cut away the bark from three vines that show the varying degrees of damage above and below the snow line. The Concord trunk (left) shows very slight damage above the snow line and none below and is a good example of what a healthy trunk should look like with the bark peeled away. Both the Niagara and the Riesling show clear difference between the amount of damage above and below the snowline.



To learn more on how to evaluate trunk damage see the 2015 March Newsletter or the April 16 crop update <u>http://lergp.cce.cornell.edu/newsletter.php</u>.

Weed Control In Vineyards by Rob Crassweller

Editors Note: Please follow the link to an excellent article on vineyard weed control written by Dr. Rob Crassweller, Department of Plant Science, Horticulture, at Penn State University. In the article Rob writes of the need to identify weeds, types of weeds found in vineyards, why herbicides fail and finishes it off with a short discussion on resistance management in herbicides. The full article can be found at: <u>https://psuwineandgrapes.wordpress.com/2015/03/20/weed-control-in-vineyards/</u>

Last call for eNEWA-grapes

We have had a good response to our request for participants in the eNEWA project. As the growing season is rapidly approaching we are making a last call for those who would like to participate. As a reminder (or in case you have ignored the last three Crop Updates), eNEWA – grapes provides you to opportunity to get all the current weather and grape pest information found on NEWA (Network for Environment and Weather Applications <u>http://newa.cornell.edu</u>) without having to click through the website. eNEWA is a daily email that contains current weather and pest model information from a station, or stations, near you. The email will contain; 1) high, low and average temperature, rainfall, wind speed and relative humidity 2) the 5-day forecast for these weather parameters, 3) GDD totals (Base 50F), 4) 5-day GDD (Base 50F) forecast and 5) model results for powdery mildew, black rot, Phomopsis and grape berry moth. The weather information is provided for not only the current day but for the past two days as well.

We will be conducting a second year of beta testing of eNEWA for Grapes in 2015. You can choose from any number of stations located near you for delivery of this information via email each day at a time specified by you. Please keep in mind that you will receive a separate email (approximately 3 pages in length) for each station you choose. Once during the growing season and again after harvest, you will be asked to complete a short survey to assist us in improving the eNEWA for grapes email system. If you would like to be a part of this project just fill out the form found at: http://nygpadmin.cce.cornell.edu/uploads/doc_7.pdf and return to thw4@cornell.edu or print it off and put it in the mail to: Tim Weigle CLEREL 6592 West Main Road Portland, NY 14769

Bryan Hed

Lake Erie Regional Grape Research & Extensioin Center, Penn State University

2015 pre bloom disease management review By Bryan Hed

Well spring is here, and with a new season of grape production soon upon us, a review of prebloom disease management topics is in order. In addition to adjusting and carefully calibrating sprayers, take some time now, before bud-break, to acquaint yourself with the NEWA website (Network for Environment and Weather Applications) found at http://newa.cornell.edu . This website gives you easy access to a wealth of weather and pest forecast information from an extensive network of weather stations positioned all over the Northeast...and it's free. When you first access the site, you'll see a map of the northeastern U.S. You can use your cursor to navigate the map and click on the weather station nearest you (denoted by a leaf/rain drop icon) to tap into daily and hourly weather (temperature, rainfall, leaf wetness duration, wind speed, etc) near your vineyard or any location you choose (hmm, we had 21 below zero on February 16, I wonder how badly southern PA was hit...). Clicking on 'grapes' under 'crop pages' will give you access to disease forecasting models for the 'big four' like Phomopsis cane and leaf spot, black rot, and powdery and downy mildew. You can also access the grape berry moth degree day model that will help to take a lot of the guesswork out of timing your berry moth insecticide sprays later this year. Each model forecast is accompanied with disease management messages and explanations. For example, at our present stage of development, 'dormant', the website has this to add about Phomopsis control: Dead and diseased canes, arms, and pruning stubs should be pruned out to reduce inoculum. Dead canes and stubs can produce extremely high levels of Phomopsis spores over several years. In particular, growers seeking to minimize fungicide use should pay strict attention to the removal of infected wood from within the canopy \Box This is a great way to educate yourself on the challenges ahead as we strive to make the most effective and cost worthy decisions in our efforts to grow healthy grapes. Check it out!

For many of us, Phomopsis cane and leaf spot will be the first fungal disease we encounter during the early shoot growth stages in late April (?) and May. I have included several pictures below to help reacquaint you with symptoms on shoots, canes, and leaves. This fungus is often a threat during those long rain periods in May. Young shoots are capable of becoming infected as soon as they emerge and inflorescences (\$) can be impacted by this pathogen around the 3-6" shoot stage (basically when they become visible). Infections on newly emerged inflorescences can literally 'bite off' whole sections of the cluster and reduce crop potential very early in the season. Early infections on flower stems can move into berries later in the season, during ripening, and cause fruit drop or even fruit rot (either way, you lose). So, If weather is wet at this stage (3-6" shoots), an application of mancozeb, ziram, or captan will limit these infections that can lead to early destruction of clusters or sections of clusters, fruit rot, and ultimately, reductions in yield. Work by Wayne Wilcox has shown that this fungicide application can significantly increase yields and easily pay for itself (sprays at this time are generally pretty inexpensive). This spray can also protect against early shoot infections that become a source of

inoculum (canes) in the following year. So, fungicide applications at the 3-6" shoot stage double as an insurance policy against crop loss in subsequent years.

For symptoms on wood (below), look for scabby lesions on the first 2-4 internodes of year-old canes (from last year's infections in early May), and/or an abundance of old pruning stubs and older and dead wood.



Although the 1" shoot stage can be vulnerable to damage from this pathogen, the more critical stage is at 3-6" shoots, when more shoot, leaf, and cluster tissue is exposed and is highly susceptible (below).



<u>Sprays for powdery mildew</u> will likely be necessary at very early shoot growth stages for highly susceptible *Vitis vinifera* cultivars and/or where control of this disease was lacking the previous summer. Research at Cornell has shown that vineyards harboring high overwintering inoculum levels may require that control measures commence earlier the following season to avoid epidemic development and crop loss. A tenth of an inch of rain with temperatures above 50 F constitute a primary infection period for powdery mildew. Materials like sulfur, oils, Nutrol, and potassium bicarbonate materials may be good first choices for mildew at this stage. Keep in mind that you can't mix sulfur and oils, or oils and captan (read the labels!). For juice grapes like Concord and Niagara, powdery mildew control is generally not a concern at this time.

<u>For black rot</u>, old fruit mummies and clusters (infected from the previous season) are prime sources of inoculum in spring and early summer, and thorough removal of all this material from the trellis during dormant pruning is *essential* to maintaining good control of this disease. Once on the ground, mummies can be buried with cultivation or mulch, reducing or eliminating their capacity to fuel new infections in spring. A fungicide application for black rot may not be necessary at these early shoot stages if good control of this disease was achieved the previous year and conscientious trellis sanitation has been implemented. On the other hand, inoculations we performed at these early shoot growth stages (simulating wet weather and an overwintering inoculum source in the trellis) can produce leaf and shoot infections in the cluster zone, that go on to release spores during early berry development stages, and that result in fruit infection and crop loss. An application of mancozeb, ziram, or captan for Phomopsis will also provide control of early black rot infections.





At about 10-12" shoot growth or the 5-6 leaf stage, a fungicide application at this time will limit infections of *Phomopsis* on shoots, and cluster and berry stems, especially in vineyards at high risk. Black rot control may not be critical for juice grapes at this time if excellent control of this disease was maintained in previous years and conditions are dry. However, protectant fungicides like mancozeb, applied for Phomopsis control at this time, will also control black rot, and it would be advisable to apply a fungicide for black rot if conditions are wet and warm, especially to Vitis vinifera and susceptible hybrids. As mentioned earlier, black rot leaf and shoot infections at this time can increase inoculum levels in the cluster zone, making black rot control more problematic during the fruit protection period (after capfall). If scouting reveals black rot lesions on leaves in the cluster zone, this is a great big red flag! Make sure your subsequent black rot sprays are effective and timely, especially during the fruit protection period. Downy mildew becomes a concern at this stage as well and fungicide sprays for this disease will be necessary for susceptible varieties, especially if conditions are wet. Mancozeb products offer one of the best control options for all three diseases. Ziram is a little weaker on downy mildew, and Captan a little weak on black rot, but these may also be an option if these diseases are not a priority at this time.

<u>Powdery mildew</u> is less of a concern at this time for juice grapes than for wine grapes, but may be necessary if susceptibility and risk of disease is high, especially for growers of *Vitis vinifera* and sensitive hybrid wine grapes. Sulfur is an inexpensive option for powdery on non-sensitive varieties. The sterol inhibitor fungicides may also be good choices at this time, providing they are still effective in your vineyard. Note that the sterol inhibitor and strobilurin fungicides have been in use for many years in Pennsylvania vineyards and are considered at high risk for the development of resistance by the powdery mildew fungus, that is, they may not be as effective as they used to be, or are ineffective. If you suspect powdery mildew resistance to these materials in your vineyard, either apply them in a tank mix with another active ingredient for mildew (like sulfur) or discontinue their use and use an alternative active ingredient. This is even more critical for the next two fungicide application timings; the immediate pre-bloom/first post bloom sprays.

Immediate pre bloom/first post bloom fungicide application.

These next two sprays - immediate pre bloom (just before the beginning of capfall) and first post bloom – are **critical for every vineyard, every year, for control of every disease!!!** Young fruit of every variety are most susceptible to all the major diseases (Phomopsis fruit rot, black rot, downy and powdery mildew) during the period from bloom to about 2-3 weeks after bloom. Apply your most effective materials (Strobies (if no resistance issues), Quintec (powdery only), Manzates/Ziram/Captan (for Phomopsis, black rot, downy mildew)). This is also the perfect time to consider some of the newer products like Vivando or Torino (for powdery mildew only), Revus Top (for powdery and downy mildew and black rot), Inspire Super (for powdery mildew and Botrytis), Luna Experience (wine grapes only, for powdery mildew, Botrytis, and black rot) and the newer downy mildew materials (listed below). Plan to apply for best coverage, every row, full rates, and shortest intervals (NEVER extend the interval between these sprays beyond 14 days).

<u>Phosphorous acid products</u> (aka phosphites, phosphonates) have become favorites for many growers as a means of controlling downy mildew. They are effective and 'friendly' to work with.

However, if you use these materials at this time, be mindful that, although they are extremely rain-fast, they still provide only limited protection against new infections. <u>Do not expect</u> phosphorous acid sprays to provide more than 10 days of protection, especially under high disease pressure.

Relatively new downy mildew materials

1. Revus; contains mandipropamid, registered in 08. Very effective on downy mildew in PA and NY trials.

Presidio; fluopicolide, registered in 08. Very effective on downy mildew in PA and NY trials. Label requires that Presidio be applied as tank mix with another downy mildew fungicide.
 Reason 500 SC; fenamidone, which is a quinone outside inhibitor; same mode of action as strobies, but not technically a strobie. However, treat it as a strobie with respect to resistance

management. Provided excellent control of downy mildew in Cornell trials.

4. Quadris Top; azoxystrobin + difenoconozole; for downy and powdery mildew, black rot, and Phomopsis. New combination of current chemistries. Its use on grapes in the Lake Erie region will be greatly restricted: with azoxystrobin in the mix, this can't be used in Erie county PA, and with difenoconazole in the mix, this can't be used on Concord.

5. Ranman; cyazofamid, a new chemistry for downy mildew. PA and NY trials show good to excellent efficacy against downy when applied alone and mixed with phosphorous acid.

6. Zampro; ametoctradin + demethomorph. The newest of the new downy mildew materials; a combination material that is very effective on downy mildew.

Downy Mildew: Plasmopara viticola

Yellow "oil"spots (spring)

red/brown angular spots (late summer)



A new material, Aprovia, may be available for 2015 (?), mainly for powdery mildew. Federal registration is anticipated in April of this year. This material is related chemically to Boscalid (found in Endura and Pristine) and Fluopyram (found in Luna Experience).

And finally, a short recap of some main points - in no particular order of importance - when planning your pre-bloom disease management programs...

- 1. Overwintering inoculum control = maintaining a relatively clean vineyard through to harvest (in the previous year) and subsequently, thorough sanitation during dormant hand pruning activities.
- 2. Good overwintering inoculum control will make seasonal disease control more forgiving ('I can't get a spray on because it won't stop raining; good thing I controlled diseases well last year!!'); consider it an insurance policy. Your pre-bloom spray programs will also be more effective as they are applied to control a smaller initial pathogen population this year.
- 3. Early spray programs are relatively inexpensive. If disease control was lacking last year, higher overwintering inoculum levels will require that you fire up your seasonal spray program earlier this year, especially if conditions are wet.

- 4. The bloom and early post bloom periods are the most critical for protecting your crop (\$) against all diseases; it is <u>never cost effective</u> to cut corners during those stages of crop development.
- 5. Scout your vineyards and develop your skills at identifying diseases; know what it is you're trying to control. Focus your scouting efforts in vineyards/vineyard areas where disease control has been most challenging (where you expect disease to show up first). Discovering disease in its earliest stages is key to controlling it, and you can't discover it early if you don't scout!
- 6. Know your fungicides; their strengths and weaknesses, the specific diseases each material controls, and their rotational partners for resistance management.
- 7. Read labels!...nuff said.
- 8. Prepare yourself to make the most of the 2015 growing season with a run through the NEWA system.



2015 Hops Production in the Lake Erie Region Conference

June 26 - 27, 2015

9 AM - 4 PM Cornell Lake Erie Research and Extension Center Meeting Room and Hop Yards 6592 West Main Road, Portland, NY 14769

Featured Speakers

Mike Roy - Roy Farms Inc., Moxee Washington* Mary Gardiner - Ohio State University David Spann - Chautauqua Soil & Water Beth Reed - Small Business Development Center Steve Miller - Hops Educator, Cornell CE Tim Weigle - NYS IPM Program & LERGP and many more to come...

*Sponsored by Ommegang Brewery

Single Day Registration:	\$75
Two-day registration:	\$125
Beer & BBQ Dinner June 26:	\$50

To Register:

Contact Kate at (716) 792-2800 x202 or kjr45@cornell.edu For credits cards please our website at: http://lergp.cce.cornell.edu

or use form on back



Class size is limited to 80 each day, sign up early to reserve your spot







Friday June 26 -

Focus on Getting Into Hops Production Classroom and in-field opportunities to learn first hand the hows and whys of hops production

Saturday June 27 -

Becoming profitable with Hops Production Now that they are in the ground and the trellis is up, learn about some of the techniques that will help you to become profitable with your hops production. Classroom and in-field opportunities

2015 Hops Production in the Lake Erie Region Conference

June 26 - 27, 2015

9 AM - 4 PM Cornell Lake Erie Research and Extension Center 6592 West Main Road, Portland, NY 14769

Registration Form

Farm/Business Name			
Name of Attendee (s) _			
_			
City	State	Zip	
Email	Phone		
Friday registration - \$75 X	number attending		=
Saturday registration - \$75	X number attending		=
Friday and Saturday registr	ation - \$125 X numbe	r attending	=
Beer and BBQ Dinner on F	riday June 26 - \$50 nu	umber attending	=
Total			\$

Please make check payable to: Lake Erie Regional Grape Program To register with a *credit card*, please visit our website http://lergp.cce.cornell.edu Questions? Contact Kate at (716) 792-2800 x202 or email at kjr45@cornell.edu

THE INTERNATIONAL SOCIETY FOR HORTICULTURAL SCIENCE (ISHS) Presents

"<u>II International Workshop on Vineyard Mechanization and</u> <u>Grape and Wine Quality</u>"

July 26- July 29, 2015 Fredonia, New York, USA

Sponsored by the ISHS working group on Vineyard Mechanization and Vine Berry Fruits

In collaboration with Cornell Lake Erie Research & Extension Laboratory Portland, NY and Cornell University New York State Horticultural Society New York State Agricultural Experiment Station, Geneva





II International Workshop on Vineyard Mechanization and Grape and Wine Quality

Invitation

On behalf of the ISHS Fruit Section Working Group on Vineyard Mechanization and Vine Berry Fruits, we invite you to an International Workshop on Vineyard Mechanization and Grape and Wine Quality to be held in Fredonia, New York, USA.

The <u>II International Workshop on Vineyard Mechanization and Grape and Wine Quality</u> will be held from Sunday, July 26 to Wednesday, July 29th 2015 at SUNY Fredonia. The workshop will kick off on Sunday with a Shaulis Symposium focused on grapevine physiology and mechanized grapevine production. Monday will be a full day technical and winery tour to the Cornell Lake Erie Research and Extension Laboratory and Lake Erie Region wineries. This will be followed by a day and a half of technical presentations and posters on: precision viticulture, sensing technologies, variable rate management, fruit quality, and economics.

Primary Topics of the Symposium

- Horticulture: Grapevine Physiology and Mechanized Production
- Engineering: Mechanized Tools for Vineyard Operations
- Sensing Technology: Spatial Vineyard Measurement
- Variable Rate Management: Zonal Application for Yield and Quality
- Fruit Quality and Economics: Impact of Mechanized Systems

Sponsors

E. & J. Gallo Winery

If you would like to sponsor this event, please call Katie at 716-792-2800 ext 201 for more information.

For detailed information and registration for this event, please use the following link: http://events.cals.cornell.edu/ishs

LERGP Website Links of Interest:



Check out our new Facebook page!!

Cornell Lake Erie Research & Extension Laboratory Facebook page https://www.facebook.com/pages/Cornell-Lake-Erie-Research-Extension-Laboratory/146971918664867

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

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

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

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

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:

Andy Muza, (ajm4@psu.edu)Extension Educator, Erie County, PA Extension, 814.825.0900 Tim Weigle,(thw4@cornell.edu) Grape IPM Extension Associate, NYSIPM, 716.792.2800 ext. 203 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

This publication may contain pesticide recommendations. Changes in pesticide regulations occur constantly, and human errors are still possible. Some materials mentioned may not be registered in all states, may no longer be available, and some uses may no longer be legal. Questions concerning the legality and/or registration status for pesticide use should be directed to the appropriate extension agent or state regulatory agency. Read the label before applying any pesticide. Cornell and Penn State Cooperative Extensions, and their employees, assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsements of products are made or implied.

Cornell University Cooperative Extension provides equal program and employment opportunities. Contact the Lake Erie Regional Grape Program if you have any special needs such as visual, hearing or mobility impairments. CCE does not endorse or recommend any specific product or service.

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



Cornell University Cooperative Extension



College of Agricultural Sciences