LERGP Crop Update
June 9, 2016

Important dates:

June 15, 2016- Coffee Pot Meeting
10:00am- Leo Hans- 10929 West Perrysburg Rd. Perrysburg NY 14129
3:00pm- Evan Schiedel/ Roy Orton, 10646 West Main Rd. Ripley NY 14775

every Wednesday following: Coffee Pot meetings- see enclosed schedule

June 11, 2016- Hops Conference at CLEREL (see enclosed flyer for additional information)

August 2, 2016- Wine QualityWorkshop (rescheduled from April 13, 2016) at CLEREL

September 1, 2016- Cover Crop Conference at CLEREL

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

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.

2016 Hops Production in the Lake Erie Region Conference

June 11, 2016
9 AM - 4 PM
Cornell Lake Erie Research and Extension Laboratory
Meeting Room and Hop Yards
6592 West Main Road, Portland, NY 14769

Featured Speakers

Brad Bergefurd- Ohio State University
Margaret Kelly - NYS Ag & Markets
Jimmy Walsh- Brewer, Five & 20 Spirits & Brewery
Mario Mazza - Owner, Five & 20 Spirits & Brewery
Stephan Schmidt - Schmidt Farms
Justin & Chris Whipple - Whipple Brothers Farms
Samuel Filler - Empire State Development
Kevin Martin - LERGP Penn State
Tim Weigle - NYS IPM Program & LERGP

Becoming profitable with Hops Production

This workshop is designed to provide background and start up information related to hops production, as well as, offer information on the techniques that will help you to become profitable with hops production.

Topics will include choosing the right plants, site selection, trellis layout, and nutrition. Also covered will be how to work with a brewery to give them the hops they are looking for, and in what form.

There will be in-field opportunities to interact with speakers in the CLEREL hopyards.

Registration: $75 per person

To Register:

Contact Kate at (716) 792-2800 x201 or kjr45@cornell.edu
For credit cards please visit our website at:
http://lergp.cce.cornell.edu

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

Lake Erie Hops At CLEREL

IPM

Lake Erie Regional Grape Program

2016
LERGP Coffee Pot Schedule

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Business Management

Kevin Martin
Penn State University, LERGP,
Business Management Educator

The Bottom Line on Insecticide Costs

Woodrow Wilson said, “America cannot be an ostrich with its head in the sand”.
While insecticide costs remain relatively flat, the economics of insecticides are growing increasingly complex. It’s not the price changes in insecticides, it’s the increasingly complex challenges of management. Without adequate scouting and an adherence to economic thresholds growers can find themselves at one of two extremes. Conservative spending habits that do not effectively time and target the insects that are economically damaging crops. Aggressive spray programs that are not sustainable and perhaps still do not effectively time and target the worst offenders that are causing the most economic damage.

Sites in PA are struggling to economically manage grape berry moth. A comprehensive approach of fruit removal, use of intrepid, altacor, and contact sprays bracketing generations when coverage is difficult are necessary to prevent economic loss. In many NY vineyards, significant economic loss persists until a grower uses an excellent material just once. In some years spot spraying or two full applications are necessary. Overall a lot of growers effectively manage berry moth for $25 - $50 per acre. Other growers do not spray for berry moth at all.

Rose chafer, banded grape bug, and grape root worm are all insects that create significant economic harm. Targeting these insects does not necessarily time out well with grape berry moth at all. Unnecessarily targeting these insect populations, as they are far from universally present, lead to significantly higher chemical costs. While inexpensive materials can be used, seasonal maximums will limit options later on. If scouting reveals it to be necessary to target multiple insects, reserving one Leverage 360 for late season berry moth is probably a good economic strategy. These three insects, if left unchecked, easily cause the most significant economic harm. Over the long-term, crop losses of 50% or more in isolated spots are likely. Particularly with root worm, these insects can be controlled for less than $20 per acre in material costs. Despite the fact that the harm is severe and economic thresholds are low, materials can inexpensively and effectively control the problem as long as growers rigorously scout.

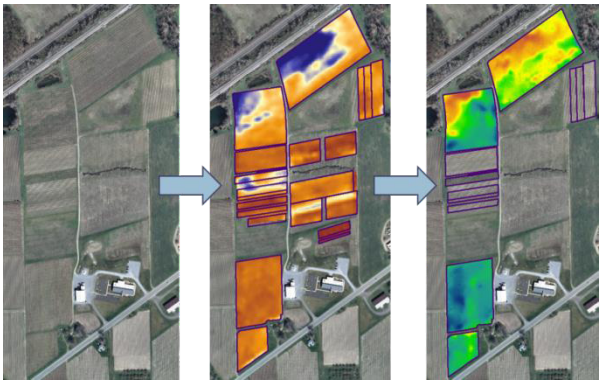
Leaf hopper and Japanese beetle are a bright spot in the insect world. Timing is not important, economic harm is not significant and inexpensive materials are generally adequate. In most years timing will coincide with grape berry moth. That’s not to say that significant numbers do not emerge in other times during the year (beats me, ask an expert), it is only to say that from an economic perspective you can wait it out. Leaf feeding typically is an aesthetic nuisance. Vine size and fruit loss are areas of severe economic harm; these insects do not cause that type of harm. Leaf feeding, in unusual years, may impact brix accumulation. Even if it does, that type of harm is usually not significant. With some processors barely paying premiums for brix, the premiums that do exist only justify additional insecticides if we know brix will be impacted. We can’t justify an insecticide application based on chance and expect a positive outcome; typically economic damage cannot be observed.

This is simply a long way of saying that the economics of insecticides are growing increasingly complex as pressure and species change for some growers. With that complexity comes an increasing need for differential block management based on scouting results. Remaining competitive and cost effective become increasingly unlikely without a comprehensive and differential approach, particularly for growers spread over a larger geographical area.

Cultural Practices

Luke Haggerty
Viticulture Extension Associate
Lake Erie Regional Grape Program

NDVI Opportunity

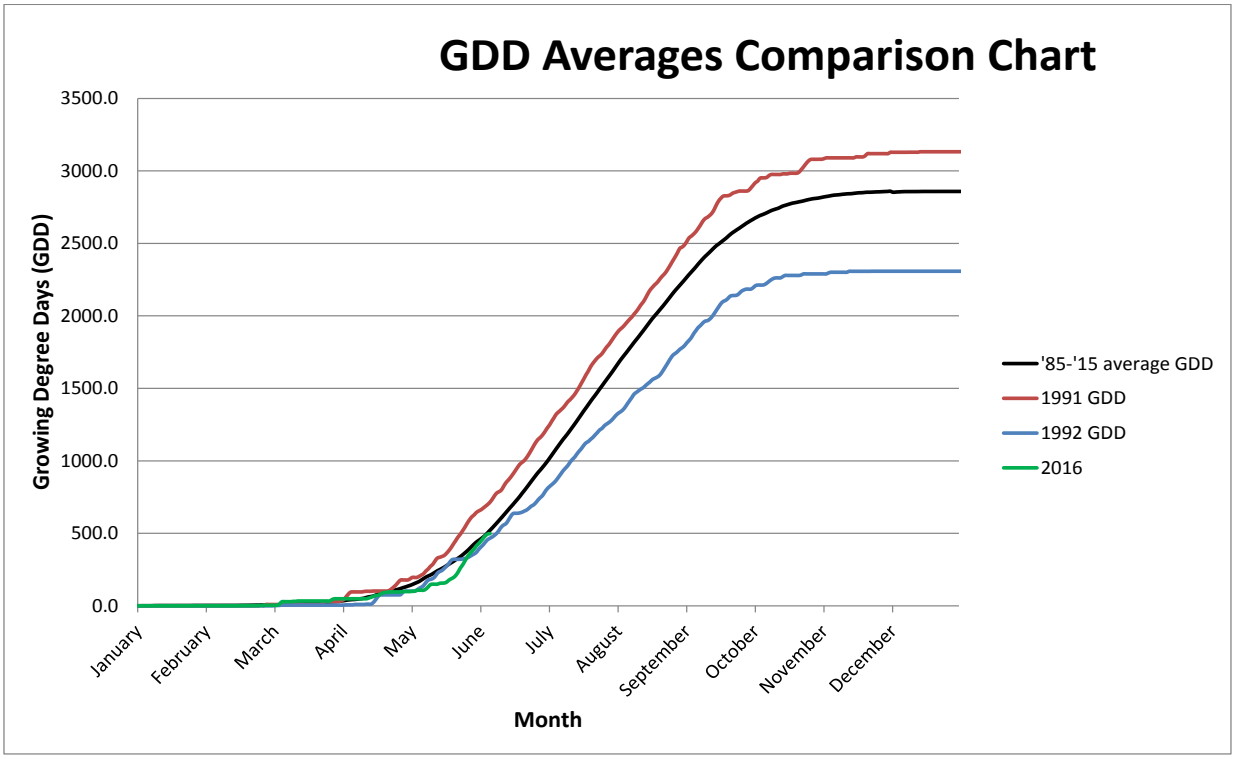


Dr. Terry Bates, Senior research associate and director of the Cornell Lake Erie Research and Extension Laboratory (CLEREL) has spent 10 years adapting off-the-shelf-technology normally used in row crops like corn and soybeans to collect data and measure vine size in vineyards. This technology utilizes Normalized Difference Vegetation Index (NDVI) to measure the amount of grape leaf surface that makes up the vine canopy. Large vigorous vines have a high NDVI value, whereas weak vines with less leaf area give a small value. To collect this information for an entire vineyard, NDVI sensors and a GPS unit are attached to a tractor or ATV that is driven up and down the grape rows collecting data and a location every second. The final product is a map, created using thousands of data points, that shows high, medium, and low growing areas within a vineyard.

Now that the 2016 growing season has started LERGP is gearing up to start using NDVI sensors in area vineyards. As we continue to develop cutting-edge methods for assisting growers, the creation of NDVI maps have been helpful to the growers who have them. These maps allow growers to easily identify problem areas in their vineyards and incorporate targeted strategies for improvement. The sensor program has been a source of information used for vineyard auditing, identifying management classification, accurate sampling and crop estimation. Efforts are now focused on creating methods for grower to become more involved.

In past years the NDVI sensing and mapping program has been free for area grape growers, this is still true, but there are a few changes this year. With growing interest and popularity we are shifting to a more hands on approach. Before we would collect this information and now with industry support we are making the equipment available for growers via loaner systems. Instead of LERGP making a separate pass through your vineyard interested growers will attach the loaner system to their tractors and collect the date while they spray. By doing this we will be able to cover more vineyards and give growers the opportunity to become more familiar with this type of technology.

If you are interested the process is simple. Get ahold of Luke or Kevin and we can talk about specifics. Our technician Scott will set up a time to install the equipment and show the operator how to use it. Growers collect data while making passes through their vineyard. When finished our GIS specialist will make NDVI maps. Using the maps, LERGP staff will assist growers in applying management strategies for improving low producing areas. This will allow grape growers to diagnose the causes of variation and create management plans. For more information email Luke (llh85@cornell.edu) or Kevin (kmm52@psu.edu) of call (716) 792-2800.



The 30 year average for June 8 is 521. This June 8th we are at 498.5

Research

Dr. Terry Bates, Cornell University, CLEREL Director
Dr. Cain Hickey, Post Doctoral Associate

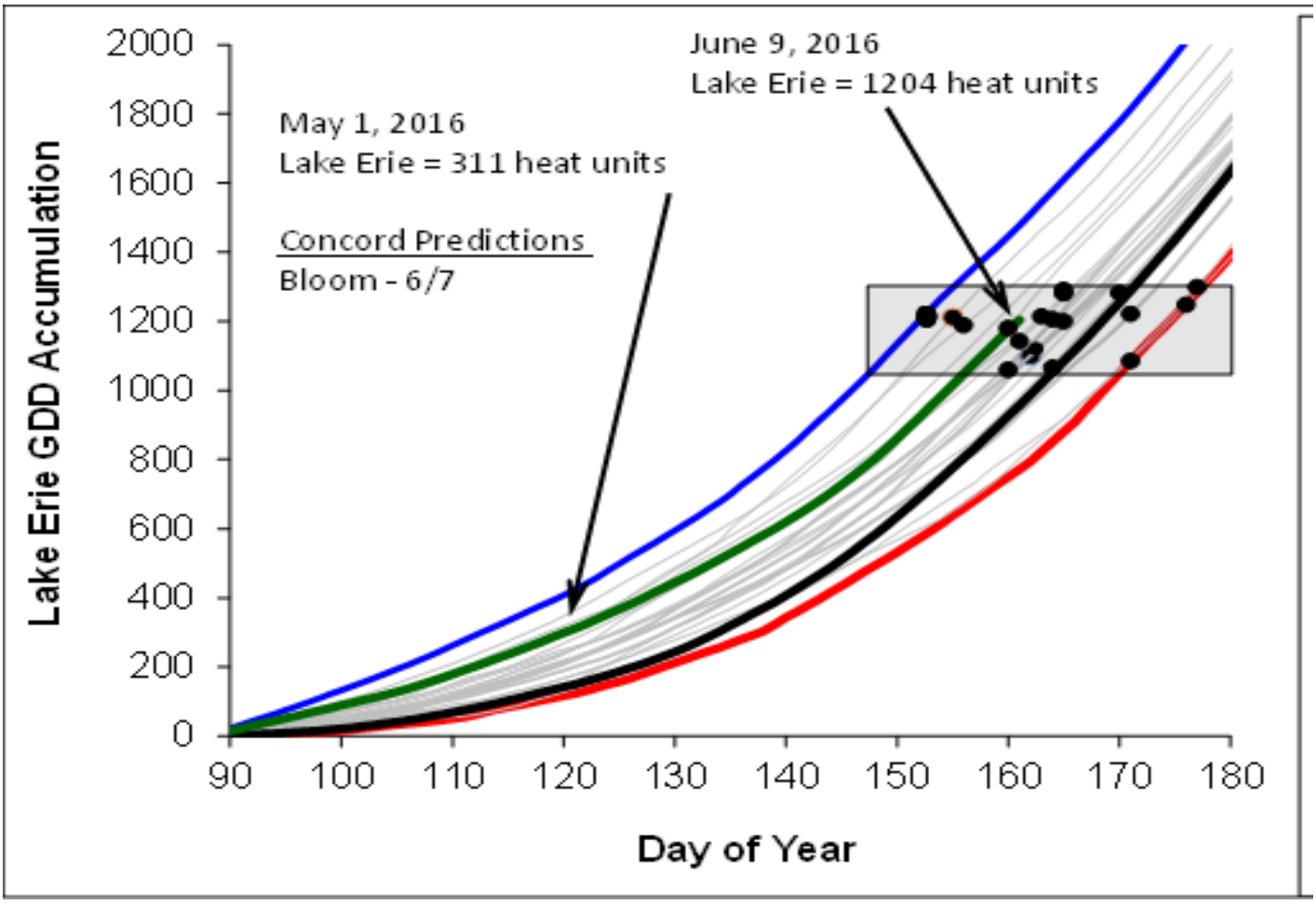
Bloom update:

Bloom prediction: Most are likely taking advantage of the current weather patterns, and are out getting their pre-bloom sprays on today and tomorrow. Some may be wondering when bloom (defined here as 50% cap fall) will be. Bloom prediction is difficult – even when focusing on one variety alone, such as Concord. Microclimates really make all the difference, and in the Lake Erie region, this is often defined by proximity to the lake shore. For example, earlier this week, I saw trace (≤ 5%) bloom in a vineyard south of route 20 in Harborcreek, PA. However, I received a report this morning that trace bloom had not yet occurred in a vineyard only about 5 miles north of the previous-mentioned vineyard. Bloom in Niagara county was reported on Tuesday, seven days after wild grape bloom. With trace bloom occurring last week in Niagara county, the area quickly reached bloom before slowing down due to cooler temperatures. Wild grape bloom in North East, PA was reported around May 30th away from the lake. Trace bloom in Concords was also reported early this week. Thanks to the Extension team for relaying grower reports and observations of bloom from the four coffee pots over the last eight days.

Because of its great buffering capacity on air temperature, the lake temperature appears to be the best bloom predictor for the Lake Erie region for the several weeks leading up to the pre-bloom period. Using April 1 as a start date, the accumulation of about 1200 lake heat units has historically equated to bloom. However, when immediate pre-bloom is upon us (i.e. right now), the air temperature appears to confound the ability to accurately predict bloom. A few warm, sunny days can turn trace bloom into full bloom in short order; by contrast, a few cool, cloudy, rainy days will seemingly not advance phenology. To put this in terms of the current pre-bloom period, air temperature was atypically warm a couple weekends back, became seasonal, and, most recently, became cool. If the warm weather was maintained, we here at the CLEREL may be at, or even past, 50% bloom (in line with the current lake heat unit accumulation as of today – see figure). Currently, however, we are at trace bloom. Thus, we may be right on schedule with the historical average bloom date here at the CLEREL (June 13/14).

Bloom weather: As it relates to maximum fruit set (and, thus, crop yield potential), it is ideal to see bloom time periods that are characterized by warm, dry weather, and a rapid transition from cap fall to fruit set. Cool and rainy bloom-time weather reduces pollen viability and germination rates, which can decrease fruit set. Assuming most are at, or nearing, trace bloom, the bloom-time weather forecast for the region looks promising for a good fruit set. While Saturday's rainy/windy weather may look intimidating for those who may be closer to 25% bloom, it will at least be warm, and appears to be the only day in the forecast that will bring such weather.

I wish everybody a warm and dry bloom/fruit set period, and I'll look forward to seeing everyone at a future meeting. -Cain


June 9, 2016
Lake Erie = 1204 heat units
May 1, 2016
Lake Erie = 311 heat units
Concord Predictions
Bloom - 6/7
Lake Erie GDD Accumulation
2000
1800
1600
1400
1200
1000
800
600
400
200
0
90
100
110
120
130
140
150
160
170
180
Day of Year

IPM

Tim Weigle, NYSIPM, Cornell University,
LERGP Team Leader

We had some interesting discussions at yesterday's (June 8, 2016) Coffee Pot meetings. Trace bloom is being found in vineyards here and there across the grape belt from Niagara County to the other side of Erie, PA. The only exception to this seems to be in vineyards on the shores of Lake Erie in Chautauqua County where reports are florets are still pretty tight and will be need a few more days of sunshine and warmth for trace bloom to occur. Trace bloom signals the end of the use of EBDC products if you are growing Concord or Niagara for any of the major processors in the area. When you switch over be sure to include materials that cover all four of the major diseases (powdery mildew, downy mildew, black rot and Phomopsis) as they all are at peak spore production during the bloom period.

Look at last week's Crop Update for the discussion on the importance of determining wild grape bloom for use with the Grape Berry Moth model found on NEWA. Remember that you are looking for 50% bloom in wild grape for this model, not just trace bloom.

There have been reports of banded grape bug feeding in vineyards in Chautauqua County. This is showing up as brown, or missing, florets in a cluster that is otherwise sound. Good news is the banded grape bug is at the point in its lifecycle that is going from a pest (nymphal stages) to a beneficial insect (adult stage that is a predator of soft bodied pests like aphids) so there is no need to include an insecticide in the tank specifically for this insect. Keep track of where you are finding banded grape bug feeding this year so you will be able to target those areas for scouting next spring.

Grape rootworm is just starting to show up. Last week's scouting found no grape rootworm adults and this week's scouting has been delayed until today (Thursday) due to the rain and wind that has been a constant in the area lately. If last year was any indication, we should start seeing grape rootworm adults and feeding starting in the very near future. Again, this is not a pest that needs an automatic insecticide application for all vineyards. Scout by block and treat when foliar feeding by adults is found. There are a number of insecticides that can be used for grape rootworm now via 2ee recommendations. Admire Pro, Danitol, Leverage and Sniper can all be used against grape rootworm, you just need to have the 2(ee) recommendation in your position when spraying. The 2(ee) recommendations can be found on the Lake Erie Regional Grape Program website under current projects. Just scroll down the page and you will find the link in the left hand column. http://lergp.cce.cornell.edu/current_projects.php

There was a great discussion on resistance management at the Niagara County Coffee Pot hosted by Paul Bencal. Take home messages – You have to know the mode of action to effectively manage resistance. Look for the number, or number/letter combination, found on most new pesticide labels. This code will tell you the mode of action group the pesticide falls under. Rotating pesticides within the same group will not change modes of action used and they will not be useful in managing resistance. So, you are still stuck reading the label, but the answer you need should be on the first page.

North East PA Update

Byran Hed
Research Technologist
Lake Erie Grape Research
and Extension Center

Weather: At our site, we have recorded 1.34" rainfall so far in June. We accumulated about 125 frowing degree days (gdds) for the month, with the first week of June being warmer than average. Now we have shifted into a much cooler weather pattern with temperatures well below normal and grapevine development slowing down for a few days as we approach bloom. According to Accuweather, thunderstorms and warmer temperatures are in store for Saturday.

Phenology: Here by the lake, we have racked up about 420 gdds since April 1. At our location, Concord grape flowers first start to open after an average of about 520 gdds, which pushes the beginning of bloom for us into next week.

Diseases: The return of precipitation during the first week of June generated infection periods for all major diseases (powdery and downy mildew, black rot, and Phomopsis cane and leaf spot). If you had lots of downy mildew leaf infections last year (many vineyards did) you will need to be especially vigilant about scouting for this disease this year and keeping it well under control; 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 three powdery mildew primary infection periods so far this month, but cool temperatures will keep this disease progressing slowly at present.

Plan carefully for that immediate pre-bloom spray: use your best materials, spray for all four major diseases, use full rates, focus on good coverage (every row!), and don't allow more than 14 days to transpire between the immediate pre and post bloom sprays. These two sprays are the most important disease management sprays all year; don't cheat on these two sprays.

In the Vineyard – Andy Muza

Rose Chafer

They're back. On Monday I was contacted by 2 growers in North East, PA that a few rose chafers were observed in their vineyards this past weekend. One grower was applying a spray due to a rapid increase in numbers. Last evening I only found a few beetles in a PA vineyard (north of Route 5) which has an annual problem with this pest.

Every year at this time (about a week before bloom) large numbers of beetles emerge from the soil and begin mating and feeding extensively on tender flower clusters and also on leaves (Figure 1). Feeding will continue to occur in vineyards over a 2-3 week period.

Adult beetles are about ½ inch long, have a light brown body coloration and long, spiny legs. Females prefer laying eggs in grassy areas with sandy soils (Figure 2).

Figure 1:Rose Chafer on Concord Flower Cluster

Figure 2: Grass Headland with Sandy Soil (North of Route 5)

Eggs hatch into larvae and these white grubs feed on roots of grasses, weeds and other plants during the summer.

Vineyards with a history of this pest or blocks with sandy soils should begin scouting daily and continue for a 2 week period. A fact sheet on Rose Chafer from Ohio State (http://www.oardc.ohio-state.edu/grapeipm/rose_chafer.htm) recommends an insecticide application 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.

Although rose chafer is not a widespread pest in the Lake Erie Region these beetles can cause significant crop loss in vineyard blocks where they occur. Vineyard blocks in PA with sandy soils (particularly sandy sites from the lake front to north of Route 20) have the most persistent problem with this pest (Figure 3).

Figure 3: Vineyard Block with Sandy Soil (south of Route 5)

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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)**	

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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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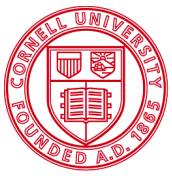

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