

LERGP Crop Update

September 9, 2016



Harvest Season is upon us.
Happy and safe harvesting to all of our growers!



The Lake Erie Regional Grape Program



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Business Management

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

Crop Size and Loss

When it comes to yield this year, the Concords and Niagaras appear to be within a stone's throw of average. Though the entire belt will have something resembling an average crop, mixed in the average are a few large crops and a few crops that will likely fall within the crop insurance definition of a disaster.

Minor frost damage, vine renewals, hail and smaller than average berries has had a cumulative effect on some vineyards. With some blocks able to file for claims when yields fall below 6.3 tons per acre, it is no surprise these isolated and relatively minor challenges can result in a claim.

As always, growers get about 20 days to make crop insurance decisions following harvest. Updates on 2017 crop insurance will probably be limited to price and tweaks in SCO coverage recommendations. Once I have that information, which will probably be right in the middle of harvest, I'll get that out to you.

Attached is information you're hopefully already familiar with; the basics of 2016 crop insurance. If you're expecting a claim on this year's crop it will be based on this information.

Raleigh Regional Office — Raleigh, NC

Revised October 2015

Grapes

New York

Crop Insured

Grape varieties grown for wine or juice are insurable if the vines have:

- Reached the fourth growing season after being set out for all native and hybrid varieties, and reached the fifth growing season after being set out for all Vinifera varieties; and
- Produced an average of 2 tons per acre in at least 1 of the 3 most recent crop years.

Counties Available

See the actuarial documents at webapp.rma.usda.gov/apps/actuarialinformationbrowser/ for insurable counties. The crop may be insurable in other counties by written agreement if specific criteria are met. Talk to your crop insurance agent for more details.

Causes of Loss

You are protected against the following:

- Adverse weather conditions, including hail, frost, freeze, wind, drought, and excess precipitation;
- Failure of irrigation water supply if caused by an insured peril during the insurance period;
- Fire caused by an insured peril during the insurance period;
- Insect damage and plant disease except for insufficient or improper application of control measures; or
- Wildlife.

Insurance Period

Coverage begins on November 21 and ends with the earliest occurrence of one of the following:

- Total destruction of the crop;
- Harvest of the crop;
- Final adjustment of a claim;
- Abandonment of the crop; or
- November 20.

Important Dates

Sales Closing Date November 20, 2015
Acreage/Production Report Date January 15, 2016
Premium Billing Date August 15, 2016

Duties in the Event of Damage or Loss

Notice of Loss - If a loss occurs notify your crop insurance agent:

- Within 72 hours of initial discovery of damage;
- If you previously gave notice of crop damage, you must also provide notice at least 15 days before the beginning of harvest to claim an indemnity; or
- At least 3 days before the date harvest should have started if the crop will not be harvested.

Coverage Levels and Premium Subsidies

Coverage level options range from 50 to 85 percent of your average yield (5 percent increments) and are subsidized as shown in the table below.

Item	Percent							
Coverage Level	50	55	60	65	70	75	80	85
Premium Subsidy	67	64	64	59	59	55	48	38
Your Premium Share	33	36	36	41	41	45	52	62

Catastrophic Risk Protection (CAT) coverage is fixed at 50 percent of your average yield and 55 percent of the price election. The cost for CAT coverage is an administrative fee of \$300.

Supplemental Coverage Option (SCO)

SCO is available for grapes in some counties. If elected, SCO provides additional coverage for a portion of your underlying crop insurance policy deductible.

Yield Exclusion (YE)

APH Yield Exclusion is available for grapes in some counties. YE allows you to exclude yields in exceptionally bad years from your production history when calculating yields used to establish crop insurance coverage.

Price Elections

Coverage levels and price election percentages may vary by grape type. The prices shown on page 2 are used to calculate premium and indemnity. The price used to determine your indemnity on unharvested acreage is the price election minus the harvest cost (\$35/ton).



Crop Insurance News

Commissioner Richard A. Ball

Winter 2015-2016

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Overview of Changes to Crop Insurance Options for 2016

There are several new changes related to crop insurance mandated by the 2014 Farm Bill. This year:

- The Supplemental Coverage Option (SCO) is available in all 27 counties where winter wheat crop insurance is available.
- In addition to corn, SCO is also now an option for those counties where crop insurance is available for soybeans, forage, apples, grapes and peaches.
- Soybean crop insurance is available for the first time in Orange County.
- Winter barley crop insurance is now available in an additional 13 counties, bringing the total to 28 counties where crop insurance is available for the crop.

To find out whether your county has crop insurance for a specific crop, go to www.agriculture.ny.gov/AP/cropins/CropInsAvailabilitybyCounty.pdf.

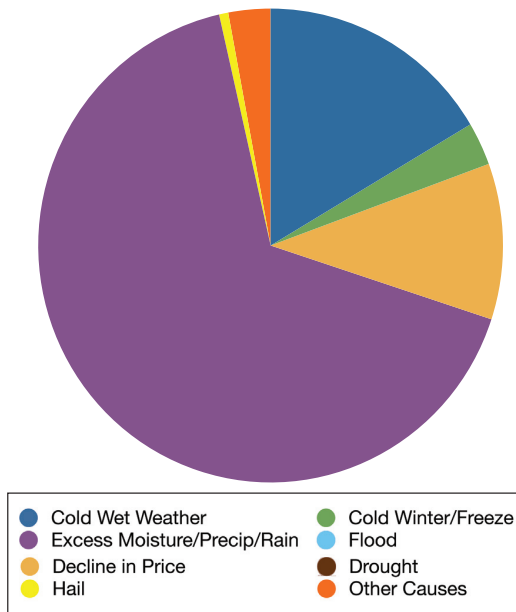
All About Soybeans

Soybean breeding has substantially increased soybean yields for Northeast growers and more producers are growing the crop. In 2015, there were 320,000 acres planted. This is a 38 percent increase from 10 years ago, when only

199,775 acres were planted. The statewide average yield in 2002 was 32 bushels/acre and by 2012 the average yield grew to 42 bushels.

Causes of loss vary from year to year, but being able to collect on crop

2014 Total Soybean Losses Paid \$7,304,239



insurance in case of losses associated with all types of problematic weather conditions can help farmers recoup their costs of production when harvests are lower. In 2012, claims were filed on 104 policies, with 91 percent of indemnities paid due to drought. In 2014, 82 percent of indemnities paid on 355 policies were associated with excess moisture/precipitation/cold/wet weather. That year insured producers received \$7.3 million in payments for soybean losses.

Crop insurance is available for soybeans in 39 counties. In 2015, 1,360 policies were sold, with 1,001



Agriculture and Markets

New York State Department of Agriculture and Markets, 10B Airline Drive, Albany, NY 12235
800-554-4501 www.agriculture.ny.gov/AP/CropInsurance.html

Cultural Practices

Luke Haggerty, Viticulture Extension Associate, Lake Erie Regional Grape Program

Research

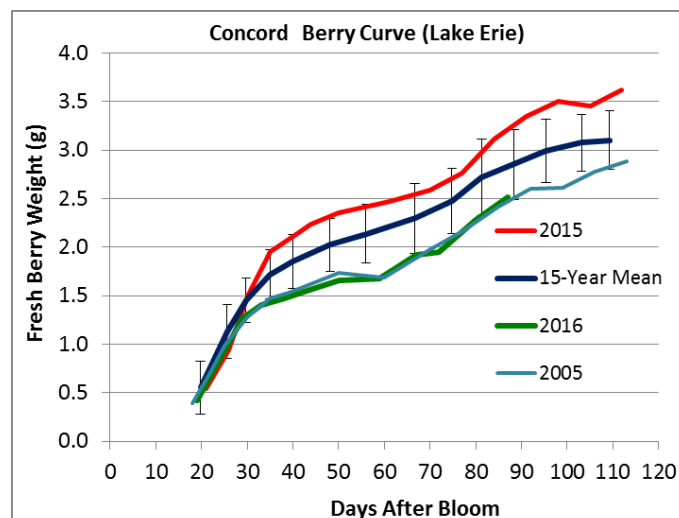
Cain Hickey, Postdoctoral Research Associate, CLEREL

Ripening, Berry Curve, Soils, GDD and Precipitations Levels

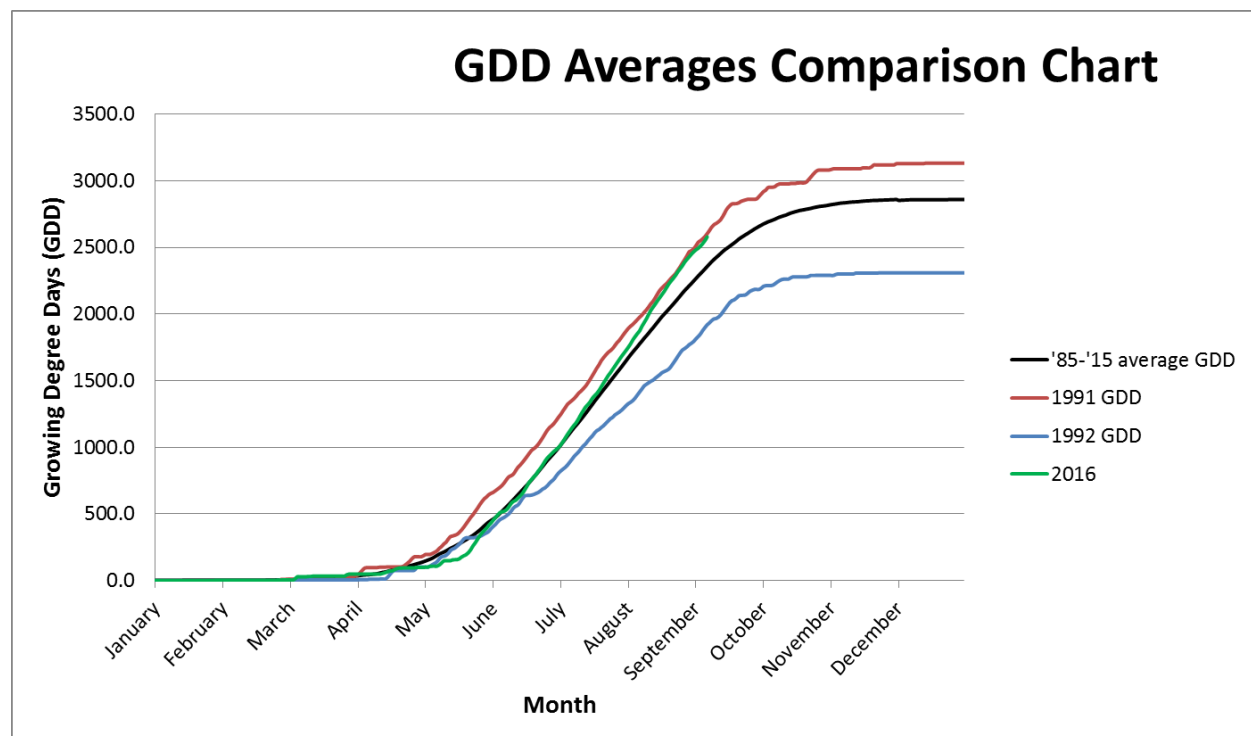
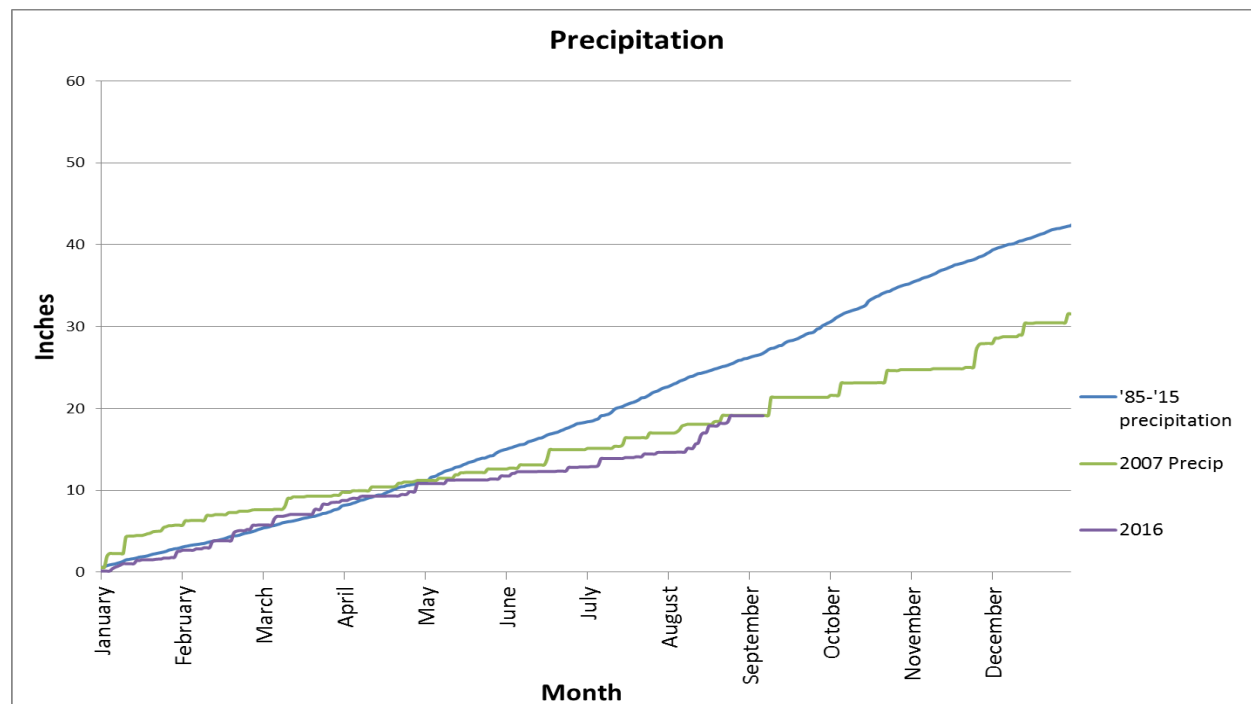
Ripening (Cain Hickey): As I reported two weeks ago, the CLEREL research team has been out taking weekly fruit maturity samples from vineyards that have been scanned with NDVI-canopy and soil sensors throughout the growing season. The eventual goal is to evaluate if and why fruit maturation may be different between sensor-derived management zones so that, in the future, we can implement variable rate treatment plans in the different management zones within a vineyard. An example of variable rate management is crop thinning. For example, a grower may wish to crop thin areas of the vineyard (i.e. a management zone) containing small, potentially over cropped vines in aim of increasing fruit maturation rate and limiting carbohydrate stress on those vines. I will not go into any more detail on what we have found in the small, variable rate crop thinning trial we have undertaken this season than to say that there is currently little difference in soluble solids ($^{\circ}$ Brix) levels between the thinned and un-thinned research plots we have sampled from. As I stated two weeks ago, the weather patterns we have experienced, and continue to experience, throughout this growing season can attenuate treatment effect on fruit quality and maturity that may otherwise be beneficial in growing seasons characterized by marginal weather. Maybe we should be studying how to predict weather patterns instead of viticulture? At any rate, our Concord berry samples (from Sheridan to Harborcreek) from this week ranged **12.1 to 17.9 $^{\circ}$ Brix**. It is likely a combination of several factors, broadly encompassed by site and management practice, that resulted in a range of 5.8 $^{\circ}$ Brix between all the measured samples. Next week I will look to report a bit more specifically on standard deviation of soluble solids within a given sub-region, or vineyard/vineyard block. Although since harvest is right around the corner for Concords, readers may be few and far between. Good luck out there! See everyone soon – Cain.

Berry Curve: The berry curve had another big jump this last week. However, berry size is still 20% below average. We are still seeing a large variation in berry size. At this point, the berry curve is still tracking very close to 2005 where the growing season was also hot and dry followed by rain after veraison.

Precipitation and GDD: The past two weeks have been dry and the vines are starting to show symptoms of water



stress again. Here at CLEREL we are now 7.5 inches below average (last week we were 6.8 inches below). With the dry weather we have also had one of the warmest growing seasons in the past 30 years. From 1985 to present, 1991 was the hottest season and the Growing Degree Day graph shows we have reached the accumulated GDDs of 1991 as of 8/25/16. According to our data this was the warmest August on record.



Soils Tests: If you have to stop and think about when the last time your vineyard was tested then it's time to bring a sample to the lab (5 years is a long time between tests). We have sent out samples almost every day this week and since there are so many samples coming in I thought it would be good to send out the procedure for taking samples.

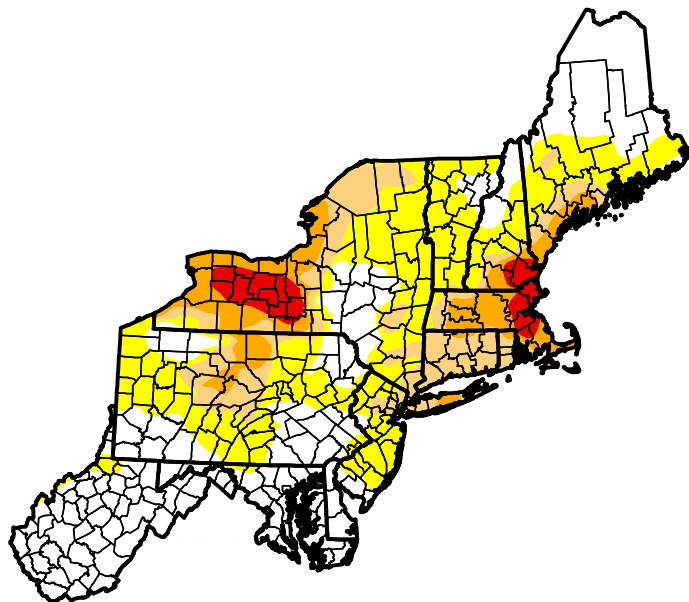
Turnaround time has been less than 10 days and I usually complete recommendations a couple days after the results come in. Soil tests help determine what nutrients are available in your soils and guide decisions on which and how much nutrients you need to apply back to your soils. The procedure for submitting soil samples is as follows.

- Check a soil survey map to get an idea of how many samples are needed for good representation of your vineyard blocks.
 - If needed, Rhiann or Kim our GIS specialists can print soil survey maps of your property here at the extension lab.
- For surface samples dig a hole 8 inches deep and collect ~**1.5 cups of soil**.
- For sub-surface samples dig a hole from 8 to 24 inches deep and collect ~**1.5 cups of soil**.
- Let soil samples dry and place them in labeled plastic or paper bag.
 - Label should include location and soil type for example, Rout 5 vineyard block 3; Chenango Gravely Loam (we have this information at the lab if you need assistance).
- Bring soil samples to CLEREL at 6592 West Main Road Portland, NY 14769.

The cost of a soil sample is \$17 per sample, and \$15 if you are submitting 5 or more samples. We have been getting results back within seven to ten days after submission. Upon receiving results we **provide a consult and detailed nutrient recommendations** over the phone, email, at your location, or here at the extension lab. If you have questions about taking a soil sample please get ahold of me. Call me at (716) 792-2800 Ext. 204 or email me at llh85@cornell.edu

U.S. Drought Monitor Northeast

September 6, 2016
(Released Thursday, Sep. 8, 2016)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	40.48	59.52	27.78	13.70	3.86	0.00
Last Week 8/30/2016	41.51	58.49	27.29	12.82	2.52	0.00
3 Months Ago 6/7/2016	56.82	43.18	2.17	0.00	0.00	0.00
Start of Calendar Year 12/29/2015	62.10	37.90	6.60	0.00	0.00	0.00
Start of Water Year 9/29/2015	42.41	57.59	9.00	0.00	0.00	0.00
One Year Ago 9/8/2015	51.55	48.45	4.39	0.00	0.00	0.00

Intensity:

D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought
D2 Severe Drought	

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

Author:
David Simeral
Western Regional Climate Center



<http://droughtmonitor.unl.edu/>

LAKE ERIE GRAPE PROGRAM HOSTS “COVER CROPPING IN CONCORD VINEYARDS”

Alex Koeberle



Cover crops may offer a range of benefits to grape growers, and a new project led by the [Lake Erie Regional Grape Program](#) (LERGP) aims to investigate these benefits in area Concord vineyards.

On September 1st, the program hosted a workshop and field day at the Cornell Lake Erie Research and Extension Laboratory in Portland to educate over 70 participants on improving soil health and introduce ideas for planting cover crops in Concord vineyards. Early results from cover crop use, which is widespread in vegetable crops, are promising for improving soil health and increasing vine health and productivity in area Concord vineyards.

“We are investigating the capabilities and benefits of cover crops such as reducing soil compaction, retaining moisture, weed suppression, and improving soil and vine health,” said [Luke Haggerty](#), viticulture extension specialist and workshop organizer.

The morning session featured research presentations from experts with Cornell, Penn State, and USDA-NRCS to educate growers on soil quality, cover crop selection and management, and the economics of cover crop use.

The afternoon began with a roundtable discussion from local growers who utilize different cover crop mixes. Local growers agreed on common benefits including run-off and erosion control, and especially in this drought year, moisture retention in soils.

Afterwards, participants toured the CLEREL field facilities and vineyards for a soil pit demonstration by [Dr. Terry Bates](#), a tour of planted cover crop plots from Luke Haggerty, as well as live field equipment demonstrations from regional vendors.

The conference and research project is supported by a [New York Farm Viability Institute](#) grant.

Scenes from Cover Crop Workshop:(from top left) : Luke Haggerty explains the cover crop composition to a grower; Crimper roller, used to mow over row-middle cover crops and form mulch; Vendor showcases a no-till seeder for row middles. Below: Luke (left) & Dr. Paul Salon of USDA-NRCS (right, back to camera) demonstrate different cover crop mixes in research plots; Terry Bates, LERGP, discusses soil and vine health in this soil pit demonstration of Concord grape root systems.

Photos by Alex Koeberle



Grape Berry Moth – A fourth generation?

The saying goes that the average adult learner needs to hear something 7 times before it “clicks”. So, here is basically a repeat of last week’s Crop Update. The basic theme is if you have vineyards that are at very high or severe risk of grape berry moth you should continue to check out the GBM model info for the NEWA station(s) near you. If you did not read last week’s Crop Update, or would like a refresher, please read the following.

The phenology-based degree day model for grape berry moth management shows we are well past the timing for treatment of the third generation. But what about a fourth generation?

The current reports from the model are;

Pest Status: Reduced egg-laying after this time, most pupae enter diapause (overwintering stage) after 1700 DD.

Pest Management: With the exception of extremely warm years no further action is required.

So what is an extremely warm year? Looking at the GDD chart found in Luke’s article this week you can see that as of September 7, 2016 we have accumulated a couple of hundred extra growing degree days over the 30-year average. Although we started the growing season on the cool side, once we started to accumulate DD for the GBM model (wild grape bloom) the weather rebounded with warmer than average temperatures to provide what would be considered to be an extremely warm year.

The grape berry moth model on NEWA is based on the fact that it takes 810 DD (Base temp 47.14 F) for the GBM to complete a single life cycle from egg to egg-laying female) So, for a fourth generation to occur according to the model a station would need to record 2430 DD.

What does this mean for your management strategy?

Look at your scouting records over the year. While we found GBM damage in severe risk vineyards, it was harder to find significant damage in low, intermediate and even some high risk vineyards this year. One of the suggestions for this was the hot, dry growing season that we experienced. The first instar larvae of grape berry moth typically have a short amount of time to feed their way into a grape berry. The hot, dry conditions of this summer made the microclimate outside the egg much less friendly for these larvae and may have stopped a number of them from successfully entering the berry before they died. So while we say scouting is important every year, this year it will definitely pay to know what type of damage you have going into a potential fourth generation.

To spray or not to spray...

The Pest Status for the model states that there is reduced egg-laying after this time and most pupae enter diapause (overwintering stage) after 1700 DD so why do we worry about a fourth generation? The key word here is *most*. If there is a lot of grape berry moth in a vineyard at 1700 DD and most pupae enter into diapause, there are still at least *some* that will continue on to complete their lifecycle and potentially lay more eggs – creating a fourth generation. So again, scouting is critical to know if most pupae entering diapause leaves the potential for a small or large fourth generation.

At this point in the season canopies are at their maximum density and make getting an insecticide into the fruiting zone very difficult. If you own vineyards with a history of grape berry moth damage, develop a harvest strategy that will allow you to get those grape off as early in the season as possible.

If you would like assistance in developing an IPM strategy for grape berry moth in your vineyard operation please do not hesitate to contact either myself thw4@cornell.edu or Andy Muza at ajm4@psu.edu.

In the Vineyards, PA

Andy Muza, County Extension Educator, Penn State, LERGP

In the Vineyard

Insects

Grape Berry Moth – This morning I checked 2 High Risk and 2 Severe Risk sites. No eggs were found at the High Risk sites and GBM cluster injury levels were lower than expected for this point in the season. However, GBM eggs (Figure 1) were found at both Severe Risk sites with one of the sites having 20% (5/25) of the clusters with eggs. The majority of clusters in border rows at these sites had 1 or more berries/cluster with GBM injury from the third generation.



Figure 1. GBM egg on Concord berry

The GBM Degree Day Model in NEWA (<http://newa.cornell.edu/index.php?page=berry-moth>) indicates that the majority of sites from Erie County, PA – Niagara County, NY have reached or surpassed 2430 degree days (when egg laying is estimated to occur for a fourth generation).

So, should you apply an insecticide for GBM at this time?

I would suggest that you scout **today** any High and Severe Risk sites to determine cluster injury levels from the third generation. If injury levels are high then chances are that enough additional egg laying will take place at these sites to warrant an insecticide application (Refer also to Tim Weigle's article in today's Crop Update).

If you decide to apply an insecticide, check the pre-harvest interval before spraying.



Figure 2. Downy mildew lesions on Delaware leaves



Figure 3. Downy mildew symptoms on upper surface of Concord

Diseases

Downy Mildew – It took all season but DM leaf infections were finally found on suckers in a Delaware block (Figure 2) and on a few leaves in a Concord block (Figures 3 & 4). The lack of DM infections due to the hot, dry weather translates into low inoculum levels for next season.



Figure 4. Downy mildew spoulation on underside of concord



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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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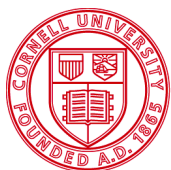
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