# Cornell University Cooperative Extension Finger Lakes Grape Program

Finger Lakes Grape Program

# Finger Lakes Vineyard Update

# In the Vineyard

#### Hans Walter-Peterson

There have been a number of reports from growers both here and in western New York that a lot of Concord blocks are carrying crops that are significantly higher than average. While this can be good news in a year with a long growing season (like 2010 or 2012), it can cause headaches when the season just doesn't allow for a large crop to ripen. Despite the heat that we have been having for much of the summer, this year is not shaping up as one where growers can ripen a crop that is much higher than normal.

The process used to estimate and thin a Concord crop has been used many times in western New York, and by some growers here in the Finger Lakes, to reduce crop size down to a level that is appropriate for the current growing season. The basic idea is very simple – clean pick 1/100<sup>th</sup> of one acre (about 48-51 feet in most cases), weigh the fruit from that sample, and based on when you pick the sample (the number of days after bloom), use <u>Terry Bates' simple</u> <u>chart</u> to find out the final crop estimate based on that sample. There is a lot more information on how to do this, and the research behind it, in <u>the most recent issue of the *Vineyard Notes* <u>newsletter</u>, which you can find in the Enrollees section of our website. <u>There is also a YouTube</u> <u>video explaining the process as well</u>.</u>

We held a field meeting this past Monday night to discuss and demonstrate this process for growers. The row that we sampled had a relatively high bud number after pruning this year – somewhere between 150-175 buds per vine. The estimate for this particular sample was somewhere in the neighborhood of 16-17 tons/acre, on a vineyard that averages 8-10 tons/acre. While part of the increased tonnage is certainly due to a higher number of buds, much of it is due to a higher number of clusters per vine and (more significantly) more berries per cluster. Clusters that we sampled in the "hedged" vineyard row had over 80 berries per cluster, compared to a normal number of 35-40 for Concord. The grower also did an estimate in a section where fewer buds were retained (100-120/vine), and still came up with 16 tons/acre in that section.

#### Upcoming Events: more details in Upcoming Events on page 6

- Field Meeting on Soils & Compaction
- 2013 Fruit Field Day
- Vineyard Tailgate Meeting
- CULTIVAR X REGION: An NE 1020 Variety Trial Tasting
- New Grower/New Winery Workshop

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### In The Vineyard (cont. from page 1)

Hans Walter-Peterson

One of the things that we discussed at our Tailgate meeting last night (thanks to Roy and Gordon Taft for hosting us) was that it is difficult even for experienced growers to "eyeball" a crop estimate. I have more than a few experiences with growers who looked at a crop and figured they were hanging a reasonable crop, but when they actually did their estimates, came up with much higher potential yields. The only way to know how much is hanging in the canopy is to actually measure it. Once you have that information, then you can make a decision about how much risk you want to take by leaving the entire crop or thinning some of it down.

A few tips about estimating and thinning if you're thinking about doing some this year (and every Concord grower should be this year):



• Bloom was about 4-5 days ahead of normal this year, which means that you should be able to ripen a ton or two of grapes more than average. If a block averages 6-7 tons/year, you can probably safely target about 8 tons/acre.

• One of the important factors needed when using Terry Bates' estimation chart (attached at the end of this week's Update) is the number of days after bloom when the sample is taken. Right now, we are about 45 days after bloom. Use this column when determining your crop estimate (or shift as necessary based on your timing).

• You can thin your crop up to veraison and still get a ripening response from thinning. There will be less of a vine size response (reducing the crop will help to increase vine size) the closer to veraison that you thin, however.

• Thinning after veraison carries a couple of risks. One is that thinning after the ripening process is underway means there will be less time for the remaining grapes to accumulate sugars, and this during a time when the temperatures are getting cooler, daylength is declining, and leaves are getting older and less active. The other is that fruit can be more easily bruised or broken as it softens, making it easier for late season rots to get established.

If you have questions about this or want some help trying it in the field, please feel free to get in touch with us.

#### In other news...

Crops also look to be "healthy" in most other varieties that I have been seeing as well. Unfortunately, we don't have as much detailed information about doing estimates in hybrids and vinifera as we do in Concord. Some growers collect samples around 1200 growing degree days (which we are well past by now), weigh them and double that result, based on the idea that berries are at approximately 50% of their final weight at that point in the season. This technique works better in some years than others, and better in some varieties than others. Another option is to use data on average cluster weights and number of clusters per vine to calculate an estimate. The downside to this option is that it will underestimate yields when fruit set or berry weight is high (like this year), and overestimate when fruit set or berry weight is low, without some kind of "fudge" factor to account for those.

1	Time of Season														
		20DAB		25D/	AB	3	30DAB	4	IODAB 5	50DAB	١	Veraison		I	Harvest
	% of Final Berry Weight														
Pounds of Fruit															
Removed in 1/100th of					↓										
an Acre	20	25	30	35	40	45	50	55	60	65	70	75	80	90	100
10	2.5	2.0	1.7	1.4	1.3	1.1	1.0	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5
20	5.0	4.0	3.3	2.9	2.5	2.2	2.0	1.8	1.7	1.5	1.4	1.3	1.3	1.1	1.0
30	7.5	6.0	5.0	4.3	3.8	3.3	3.0	2.7	2.5	2.3	2.1	2.0	1.9	1.7	1.5
40	10.0	8.0	6.7	5.7	5.0	4.4	4.0	3.6	3.3	3.1	2.9	2.7	2.5	2.2	2.0
50	12.5	10.0	8.3	7.1	6.3	5.6	5.0	4.5	4.2	3.8	3.6	3.3	3.1	2.8	2.5
60	15.0	12.0	10.0	8.6	7.5	6.7	6.0	5.5	5.0	4.6	4.3	4.0	3.8	3.3	3.0
70	17.5	14.0	11.7	100	8.8	7.8	7.0	6.4	5.8	5.4	5.0	4.7	4.4	3.9	3.5
80	20.0	16.0	13.3	11.4	10.00	8.9	8.0	7.3	0.7	6.2	D./	0.3	5.0	4.4	4.0
90	22.0	18.0	10.0	14.2	11.3	10.0	9.0	8.2	7.0	6.9	5.4	6.0	0.6	5.0	4.5
100	23.0	20.0	10.7	14.5	12.0	12.2	11.0	9.1	0.3	1.1	7.1	0.7	0.3	0.6	5.0
130	27.5	22.0	20.0	17.1	15.0	12.2	12.0	10.0	9.2	0.0	7.9	7.3	0.9	6.1	0.0
120	30.0	24.0	20.0	19.6	16.2	14.4	12.0	11.0	10.0	10.0	0.0	0.0	0.1	7.2	0.0
140	35.0	20.0	21.7	20.0	17.5	15.6	14.0	12.7	11.7	10.0	10.0	9.7	8.8	7.2	7.0
150	37.5	30.0	25.0	20.0	18.8	16.7	15.0	13.6	12.5	11.5	10.0	10.0	9.0	8.3	7.0
160	40.0	32.0	26.7	22.9	20.0	17.8	16.0	14.5	13.3	12.3	11.4	10.0	10.0	8.9	8.0
170	42.5	34.0	28.3	24.3	21.3	18.9	17.0	15.5	14.2	13.1	12.1	11.3	10.6	9.4	8.5
180	45.0	36.0	30.0	25.7	22.5	20.0	18.0	16.4	15.0	13.8	12.9	12.0	11.3	10.0	9.0
190	47.5	38.0	31.7	27.1	23.8	21.1	19.0	17.3	15.8	14.6	13.6	12.7	11.9	10.6	9.5
200	50.0	40.0	33.3	28.6	25.0	22.2	20.0	18.2	16.7	15.4	14.3	13.3	12.5	11.1	10.0
Row Spacing determines length of 1/100th of an acre 10.0 feet row spacing = 43.5 feet = 1/100th of an acre 9.5 feet = 45.9 feet = 1/100th of an acre 9.0 feet = 48.4 feet = 1/100th of an acre 8.5 feet = 51.2 feet = 1/100th of an acre 8.0 feet = 54.45 feet = 1/100th of an acre 7.5 feet = 58.1 feet = 1/100th of an acre <u>Calculation</u> 43, 560 square feet per acre Divide by row spacing and then divide by 100 to get 1/100th of an acre				Example: A grower has 9 foot row spacing and clean picks 48.4 feet at 25 days after bloom. The fruit weighs 80 pounds and the grower estimates that the berries are between 35% and 40% of final berry weight. According to the table, the crop estimate is between 10.0 and 11.4 tons per acre. Disclaimer: This table gives the relationship between time of season and % final berry weight on an average year. Year to year variability in weather related berry growth adds error to this table. Information on current year berry growth can be obtained from the Fredonia Vineyard Lab (or) it is strongly suggested that individual growers start collecting berry weight information from their own individual vineyard blocks.								to			

#### Dr. Terry Bates: Crop Estimation and Thinning Table: 7/16/2003

### IPM

Hans Walter-Peterson

#### Diseases

Canopies and fruit are still staying pretty clean overall. We see relatively small areas with powdery mildew infections on berries, but have not found anything significant so far. Black rot lesions have been appearing on leaves a little bit more over the past week or two, but again, nothing much is showing up on fruit at this point.

By this point in the season, berries have developed resistance to new infections by powdery and downy mildew in all varieties. Black rot resistance takes a little longer to develop – about 5-8 weeks after bloom, with native varieties generally taking less time to develop resistance than hybrids and vinifera varieties. This means that Concord, Catawba and the like are resistant to new black rot infections by this point, but later hybrids and vinifera varieties are not quite fully resistant yet.

At this point, the focus shifts to protecting leaves from further infection (except for botrytis, obviously), which is much more important in years like this where we are trying to ripen large crops. Under these conditions, every leaf is needed to help produce the sugars and other compounds that we want in the fruit. Young leaves that have recently emerged and will be over the next few weeks are the ones that will be doing more of the work of ripening the fruit. They also happen to be more vulnerable to infection to both powdery and downy mildew infections than older leaves. In many years, powdery mildew infections on younger leaves in the canopy (especially in native varieties) are not considered to be significant enough to spray for. Under these heavy crop conditions this year, however, growers may want to keep open the option for a late season PM spray.

### **IPM** (cont. from page 3)

#### Hans Walter-Peterson

The big unknown at this point when it comes to disease management is just how much botrytis pressure will we be facing this fall given the amount of infection that we were seeing around bloom. If the weather cooperates and we have dry conditions, these early infections may not amount to much. However, we know that September is our wettest month on average, so the chances are decent that we'll be seeing more of it as we get closer to harvest.

#### Insects

We are between generations of grape berry moth right now, so unless scouting trips through high-risk blocks show an increase in activity lately, spraying should not be necessary for GBM over the next several days. According to the model, we are at 1319 GDDs since wild grape bloom. Scouting for GBM activity should start up again as we approach 1500 GDDs. The next target for making an insecticide application (if necessary) is at 1620 GDDs, which is still several days from now.

We have not seen any increase in damage from potato leafhoppers recently, but noticed some higher presence of grape leafhoppers this week. While grape leafhoppers can often just be a nuisance (like when they fly up your nose), the same concern about maintaining functional leaf area in years with heavy crops is reasonable. Greg Loeb suggests using a threshold of 5 nymphs per leaf or 10% of leaves with at least moderate stippling to determine the need for considering a spray. In vineyards with heavier crops, it might be worth considering a lower threshold for action.

Grape Forecast Models											
Select a disease or insect: Grape Berry Moth ÷	Map Results	More inf	fo								
Weather Station:	G	Grape Be	rry Moti	1 Results	for Dres	den (FL	GP/FL	LCC)			
Date of Interest: 7/24/2013	Wild Grape Bloom: 5/29/2013   Wild Grape Bloom date above is estimated based on degree day accumulations or user input. Enter the actual date for blocks of interest and the model will calculate the results more accurately.   Accumulated degree days (base 47.14°F) wild grape bloom through 7/24/2013: 1310 (1 days missing)										
	Daily Degree Days for Dresden (FLGP/FLCC)										
	Base Temp	Past	Past	Current	5-	5-Day Forecast		Forecast Details	s		
	Duse remp	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 2	7 Jul 28	Jul 29		
	47.14F - GBM	24	27	18	18	22	24	23	20		
	Accumulation 1274 1301 1319 1337		1359	1383	3 1406	1426					
	NA - not available Download Time: 7/24/2013 12:00										
	Pest	Status		Pest Management							
	Second generation protected within b completing their d	The most effective time for treatment of second generation grape berry moth is over. Prepare to scout all vineyard blocks for grape berry moth damage when DD accumulation reaches 1470-1620 DD. During scouting, determine if the number of damaged clusters from previous generation exceeds the treatment threshold of 15%. If above threshold, control measures should be applied starting at 1620 DD.									

# **Upcoming Events**

Don't forget to check out the calendar on our website (<u>http://flgp.cce.cornell.edu/events.php</u>) for more information about these and other events relevant to the Finger Lakes grape industry.

#### Field Meeting on Soils & Compaction

Tuesday, July 30 4:00 – 6:00 PM

Doyle Vineyard Management - Dresden Farm

1255 Ridge Road, Penn Yan NY

This field meeting will be focused on soil management, including a demonstration of several different pieces of equipment that could be used to deal with compaction in vineyard soils. Our guest speaker will be Dr. Ian Merwin from Cornell University, who will talk about how some different aspects of soil management can influence production in perennial crop systems like vineyards.

There is no cost for those who have subscribed to the FLGP in 2013, and a \$10 fee for those who are not enrolled. To register, please contact Karen in our office at kag255@cornell.eduor 315-536-5134

#### 2013 Fruit Field Day

Thursday, August 1, 2013 8:00 am - 5:00 pm

New York State Agricultural Experiment Station, Research Farm South

#### 1097 County Road 4, Geneva NY

Register now to learn about Cornell's latest research and extension efforts in tree fruits, grapes, hops, and small fruits at the Fruit Field Day, August 1<sup>st</sup>, from 8:00 a.m. to 5:00 p.m. at the New York State Agricultural Experiment Station in Geneva, NY. Attendees will travel by bus to the research plots to hear presentations by researchers; for a complete list of talks, <u>click here</u>. The cost of registration is \$30 per person (\$40 for walk-ins). Lunch will be provided. Pre-registration is required for the \$30 rate; register on-line at: <u>http://is.gd/ffd2013</u>. The event will be held at the Fruit and Vegetable Research Farm South, 1097 County Road No. 4, one mile west of Pre-emption Road in Geneva, NY. Signs will be posted.

Vineyard Tailgate Meetings

Tuesday, August 6, 2013 5:00 – 6:30 PM

Hermann J. Wiemer Winery

#### 3962 State Route 14, Dundee NY (<u>click here for map</u>)

These are a series of informal meetings held with growers in different locations around the Finger Lakes during the growing season. Meetings are held every other Tuesday afternoon, starting at 5:00 PM and usually ending around 6:30 PM. During the day of each meeting, Mike and I visit a few growers and vineyards near the meeting location to get a sense of what has been happening in the area, and give us some ideas about some potential topics for the meeting later that day. There will also be ample time to discuss any questions or issues that others want to bring up as well. There is no need to register ahead of time – just show up when you can, and leave when you have to.

There will be 0.75 pesticide recertification credits available for each meeting. As with other events where credits are available, you need to be present at the beginning of the meeting to sign the meeting roster – make sure to have your card with you - and stay until the end to receive your certificate.

# Upcoming Events (cont. from page 5)

Here is the schedule for the rest of our Tailgate meetings this season:

Date	Address
August 20	Goose Watch Winery, 5480 Route 89, Romulus NY 14541

#### CULTIVAR X REGION: An NE 1020 Variety Trial Tasting

Thursday, August 15 2013 8:30 AM - 5:00 PM

Ramada Geneva Lakefront, 41 Lakefront Drive (http://www.genevaramada.com/)

A small block of rooms has been reserved at a discounted rate under the name "Cornell." Reservations must be made by August 1<sup>st</sup>.

Curious about new cultivars? Interested in the effects of terroir on varietal character? Then join us for a cross-regional tasting of varietal trial wines!

The multistate NE 1020 project was designed to test the performance of interesting grape cultivars, both new and existing, at various sites across the US. Over the past two years, collaborative work between Cornell, Penn State, and the Connecticut Agricultural Experiment Station have resulted in a collection of wines produced from NE 1020 sites spanning the region. Join us for a guided sensory evaluation of these wines, which represent a range of cool-climate varieties, both hybrid and *V. vinifera*. Your participation and feedback will help guide future variety trial activities, and provide you with first-hand experience of varietal and regional expression in these cultivars. This day-long program is free, and will include short presentations by project scientists, a tour of Cornell's vineyard blocks, and lunch.

#### THIS EVENT IS FREE, BUT SPACE IS LIMITED AND REGISTRATION IS REQUIRED!

To reserve your seat, please contact Sarah Lincoln at sil38@cornell.edu or 315.787.2255 and provide the following information:

Name:

Affiliation:

Address:

Phone number:

E-mail address:

#### New Grower/New Winery Workshop

August 22-23, 2013

NY State Agricultural Experiment Station

630 W North Street, Geneva NY

This workshop is an opportunity to learn about key aspects grape growing and winemaking for those interested in starting a new vineyard or winery business. Attendees will learn about the decisions that need to be made in preparation for planning or starting a winery, and also once production has begun. The workshops will include a tour of a vineyard and winery.

The first day will focus on developing a new vineyard. Hans Walter-Peterson and Mike Colizzi of the Finger Lakes Grape Program will cover topics including site selection and preparation, appropriate varieties for this region, essential equipment for new vineyards, and pest and weed management. The winery workshop on the second day will look at winemaking, analysis, equipment and more. Anna Katharine Mansfield and Chris Gerling of Cornell's extension enology lab will be joined by enology lecturer

# Upcoming Events (cont. from page 6)

July 24, 2013

**Patricia Howe** to cover the wine topics. **Sam Filler** from the Empire State Development agency's "one stop shop" for wine beer and spirits will also be giving a presentation and answering questions related to licensing and other legal aspects of starting a winery.

Registration for either day is \$150, or \$250 for both days, and includes all materials and lunch. Registration for the workshop is available online. Please direct any questions to Gemma Osborne, gro2@cornell.edu or 315-787-2248.

## 2013 GDD Accumulation

We are tracking growing degree day (GDD) and precipitation accumulation again this year, but we will be reporting data from <u>our</u> <u>weather station located at the teaching & demonstration vineyard in Dresden</u>, at Anthony Road Wine Company, instead of using the station at Geneva. We will continue to monitor GDD accumulation at Geneva in order to see how our new location compares with it, and to provide context of where we are with regard to heat accumulation compared to our long-term average.

FL Teaching & Demonstration Vineyard – Dresden, NY										
Date	Hi Temp (F)	Lo Temp (F)	Rain (inches)	Daily GDDs	Total GDDs					
7/17/13	93.0	69.0	0.00	31.0	1406.2					
7/18/13	91.0	74.0	0.01	32.5	1438.7					
7/19/13	92.0	71.0	0.11	31.5	1470.2					
7/20/13	80.0	68.0	0.06	24.0	1494.2					
7/21/13	78.0	64.0	0.00	21.0	1515.2					
7/22/13	81.0	62.0	0.12	21.5	1536.7					
7/23/13	84.0	68.0	0.42	26.0	1562.7					
July 2013 Total			2.25"	596.3						
Monthly Avg -			3.29"	635.6						
Season Total			12.80″	1562.7						

Average GDD on July 23: 1276.4 (currently 14 days ahead of average) Average Rain on July 23: 11.79"

# **Additional Information**

Got some grapes to sell? Looking to buy some equipment or bulk wine? List your ad on the <u>NY Grape & Wine Classifieds website</u> today!

Become a fan of the Finger Lakes Grape Program on Facebook, or follow us on Twitter (@cceflgp). Also check out our website, "The Grape Lakes – Viticulture in the Finger Lakes" at <u>http://flg.cce.cornell.edu</u>.

Cornell University Cooperative Extension provides equal program and employment opportunities. CCE does not endorse or recommend any specific product or service. This program is solely intended to educate consumers about their choices. Contact CCE if you have any special needs such as visual, hearing or mobility impairments.



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