

New England Grape Notes

May 28, 2009, Vol. 4, No. 5



***** Please Note that the Massachusetts Farm Wineries & Growers Association Marketing Conference scheduled for June 2, 2009 has been cancelled. Please look for announcements for a rescheduled date. *****

General Info - Cool weather has slowed growth and frequent precipitation has generated favorable conditions for disease development. Review previous issues of Grape Notes for information on disease management and be sure to maintain a vigorous defensive strategy through bloom and early cluster development.

An excellent resource for weather forecast information can be found at the National Weather Service website (www.weather.gov). By typing in the zipcode of your location in the upper left of the screen, you will get a detailed forecast page for that location. If you scroll to the bottom and click on the link for the 'hourly weather graph', you will get hourly forecast information that is very useful for making spray decisions. In particular it will give you wind forecast information that helps you avoid 'bad spray days' when the wind is too high and drift risk too great.

Sprayer Information: For new vineyardists, one of the big decisions you make is what type of sprayer to purchase. For good information to help you make this decision, visit Dr. Andrew Landers' website on vineyard spraying at <http://www.nysaes.cornell.edu/ent/faculty/landers/pestapp/grape.htm>.

Phenology: Grapes are in various stages of pre-bloom and the first steps in canopy management are important now. Below is a good review of the rationale behind and steps for carrying out shoot thinning. Additional information about canopy management can be found at: <http://ohioline.osu.edu/b919/0009.html> and <http://viticulture.hort.iastate.edu/info/pdf/prunecanopy.pdf>.

Canopy Management – Shoot Thinning and Positioning

Joe Fiola, University of Maryland

Many vigorous varieties and variety/rootstock combinations quickly begin to increase shoot length at this time. This is a critical time to do some basic canopy management chores, shoot thinning and positioning especially in vertical shoot positioned (VSP) trellises with movable or static catch wires. Critical timing of positioning canes for Smart Dyson and Scott Henry is also close depending on the variety and location.

- Some sites (e.g., heavy, fertile soils) and varieties (e.g. Cabernet Sauvignon) are prone to high vegetative vigor and the risk of overcrowded canopies.
- Overcrowded/dense canopies are more prone to disease due to lack of air movement, resulting in high humidity and increased canopy drying time in the morning or after precipitation, as well as poor pesticide penetration.
- Overcrowded/dense canopies are more prone to shaded cluster which may result in decreased varietal character and delayed ripening.
- To maintain good vegetative/reproductive balance in the vineyard, you are typically pruning for a baseline of about four to six shoots per linear foot of trellis for VSP.
- This is also a good time to thin out weak and unwanted primary and secondary shoots to get to your final density. These can typically still be snapped off by hand without needing pruning shears or causing damage to the spur or cane.
- Position the shoots within the catch wire before the tendrils start to attach as this will make the job much more difficult and greatly increases the possibility of breaking the shoots while moving.
- Timing of positioning the shoots downward for Smart-Dyson and Scott-Henry usually occurs within a short window for individual varieties – before the shoots may break off – after the shoots may not move. You need to work with each variety/location combination to get the timing correct.
- Delaying until later to conduct these operations will greatly increase the time that will be necessary to achieve the same result.



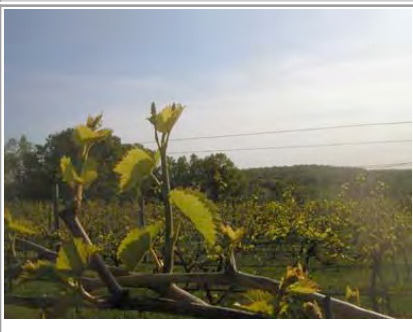

There have been some questions regarding the importance or necessity to shoot thin. Some are concerned that they might not have large enough crop if they thin down to the suggested level of shoots. **I cannot over-emphasize the importance of shoot thinning down to the recommended four to six shoots per linear foot of trellis for VSP for both pest management and fruit quality reasons.**

- Leaving more than the recommended range will result in overcrowded, very dense canopies.
 - Crowded canopies are more prone to disease because they do not dry out as quickly in the morning or after precipitation due to lack of air movement.
 - Crowded canopies maintain high humidity in the canopy micro-climate that exacerbates disease problems.
 - Crowded canopies limit pesticide penetration that will reduce efficiency and exacerbate disease problems.
 - You will see much high incidence of downy and powdery mildew in crowded canopies.
 - Botrytis and other late season fruit rots will also be more difficult to control.

- As for crop volume (yield), the recommended shoot density has been shown to give yield within the recommended range. Most of the shoots have multiple clusters and the vine has the potential to compensate when shoots are removed.
 - In almost all cases you will still have to drop additional clusters later to get down to the level of crop level that you can fully ripen. You can estimate and adjust your crop later in the season.
- As for fruit quality, again I cannot over-emphasize the importance of shoot thinning to allow adequate sunlight into the canopy and especially the clusters.
 - There is lots of evidence that shows that an open canopy with good light penetration to clusters results in more uniformly ripened fruit with higher levels of secondary products and varietal character.
- NOW is the best time to get this done, as the longer you wait:
 - the more difficult it is to physically get into the canopy
 - the more time it will take to decide which shoots to cut
 - the more difficult it is to make the cuts (young shoot easily snap off with your hand - older shoot need to be cut with pruning shears to avoid damage to the cordon)
 - the tendrils will attach and make it difficult to remove the shots.
 - the tendrils will attach and make it more difficult to move the catch wires.
 - disease will get established in the canopy making it more difficult if not impossible to control later.

If your goal is ripe, disease free, high quality, fruit, this is a critical management practice that needs to be accomplished very soon.

(Source: Maryland Timely Viticulture, June 2006)

	<p>Niagara, May 21, Shrewsbury MA</p>		<p>Marque</p>
<p>Jewell Towne May 20</p>			
	<p>Vignoles May 20, Bolton MA</p>		<p>St. Croix</p>

Disease Management:

Disease Management Update from Connecticut - Arthur Tuttle, UConn

Vines have progressed into the 1-5 inch shoot stage and many are even in the 8-12 inch stage. This means it's time to monitor and control Phomopsis cane and leaf spot, downy mildew, powdery mildew, and black rot.

Powdery mildew: Bark and leaves that were heavily infested with powdery mildew in 2008 have been stored outdoors at several sites in CT, MA, and RI. Each week since May 1, samples have been tested for maturity of the fungal inoculum. As of May 20, none of the spores were mature, but this may change fast. The weather has been conducive for heavy powdery mildew ascospore infection for half the days of May at almost every southern New England vineyard (to see the weather

data and model outputs, check-out the next issue of New England Grape Notes or go to the CT Agricultural Experiment Station website, <http://www.ct.gov/caes/> and look for Remote Weather Data). As soon as the spores are mature, they will be released during rains. Subsequent infections are favored by high humidity and temperatures between 68 and 81 o F. Last year, the ascospores reached maturity during the last weekend of May. This year we would expect maturity a little sooner.

Other diseases: Looking over the other disease model predictions for Phomopsis cane and leaf spot, black rot, and downy mildew, it is striking to see how uniform the results are among sites. There was risk of infection for black rot for most of the days in the first and third weeks of May for all sites. The same periods had weather conducive to downy and powdery mildew infection, although it was a bit early for those at that time. When we got to warm dry weather on 5/18, all the disease risk fell way off. The Phomopsis model projects the estimated lesions per leaf of this disease. Infectivity was moderate to high in CT for much of early and mid-May. More northern sites, like Deerfield, MA had fewer days of high infectivity.

As soon as the weather turns wet again, all of these diseases could take-off. It makes sense to follow a standard fungicide program. You may have made one or two applications already, based on the info in New England Grape Notes or other sources. A logical choice at this time would be to apply a mancozeb spray with either rubigan or sovran or nova. The mancozeb will cover Phomopsis, black rot and downy mildew while the rubigan or sovran or nova will cover powdery mildew. I would follow up in 7-10 days depending on the weather. It is best to time the spray for before a wetting period if you can. (**Source:** *CT Grape Grower Alert, May 22, 2009*)

Insect Management:

Insect Management Update from Vermont - Lorraine Berkett, UVM

I just wanted to quickly point out that the article I had mentioned in the last Update -- [An Initial Integrated Pest Management \(IPM\) Strategy for New Cold Climate Winegrape Growers](#) also has some information on insect management.

Key insects to monitor and manage include the **grape berry moth**, **leafhoppers**, and the **leaf form of Phylloxera**. These are not the only insect pests that you may encounter but they are the more likely ones.

If you have a problem with **Phylloxera-leaf form** on certain cultivars, an effective time to manage this insect would be when galls are first noticed (**around Immediate Prebloom**) and at the time of **First Post Bloom spray**. If **grape berry moth and leafhoppers** are above threshold levels or your vineyard is considered at high risk for damage, these insects can be managed by using an effective insecticide(s) in the **1st Post-Bloom spray** and in the **summer**.

Since the **Immediate Prebloom** period will be upon us in the relatively near future, if you have had a problem with **the leaf form of Phylloxera** in the past and want to manage it this year, you may want to consider an application of Assail when first galls are forming (usually at Immediate Prebloom). This material also has activity against **Rose Chafer** at this time. Assail is considered by EPA as a 'reduced-risk' insecticide (see [EPA's Approach to Reducing Pesticide Risk](#)) Please see the [New York and Pennsylvania Pest Management Guidelines](#) for details on rates and other information.

Unfortunately, there are no standard damage thresholds to guide the decision on the necessity to apply an insecticide for Phylloxera and many varieties can withstand extensive damage. However, there is a scouting procedure to determine the need for chemical intervention for the Rose Chafer. An [Ohio State fact sheet](#) states the following: "Chemical control methods should be utilized when beetle pressure exceeds an average of two beetles per vine. To determine the number of beetles per vine one should randomly survey 25 vines at all four corners of the vineyard and 25 in the center of the vineyard. This will give you the total number of beetles present on 125 vines surveyed. Divide the number of vines (125) by the number of beetles present to obtain the average number of beetles per 125 vines. If this average is above 2 beetles per vine, then treatment is recommended. It should be noted that, with this survey method, one can determine if the chafer infestation is present throughout the vineyard or just located in a specific area. If the area is localized, spot treatment of the infestation may be all that's required."

Detailed information about **Phylloxera** can be found at: <http://ohioline.osu.edu/hyq-fact/2000/2600.html>

Information about the **Rose Chafer** can be found at: http://www.oardc.ohio-state.edu/grapeipm/rose_chafer.htm
(**Source:** *Grape IPM Update, May 26, 2009*)

Weed Management:

Weather data: compiled from various sources for 5/25/09

Region/Location	2009 Growing Degree Days		Precipitation 1-week gain
	1-week gain	total accumulation for 2009	
Cape Cod	95	323	0.10"
Southeast MA	97	361	--
East MA	118	409	0.90"
Metro West (Waltham) MA	114	387	0.10"
Metro West (Hopkinton) MA	127	440	0.05"
Central MA	107	353	0.00"
Pioneer Valley MA	107	399	0.09"
Belchertown MA	105	222	0.44
Berkshires MA	108	39	0.18"
South Hampton, NH	95	337	0.10"

Vermont Weather Data can be found at: <http://pss.uvm.edu/grape/2009DDAccumulationGrape.html>.
Connecticut Weather Data can be found at: <https://www.hobolink.com/s/do696313715dd96f86b25f3552cc1f47>

FYI - check out the newly formed [Massachusetts Farm Winery and Growers Association](#) and [New Hampshire Winery Association](#) and the [Vermont Grape and Wine Council](#). These associations are of, by and for you! Join today!!

For Massachusetts residents, check out the new [Massachusetts "Aq Tag" license](#) plate. Each purchase can yield \$15 for the Massachusetts Farm Winery and Grower's Association through a check-off plus pooled funds available for various programs or competitive grants. Get yours today!

*This message is compiled by Sonia Schloemann from information collected by:
Arthur Tuttle, Dan Cooley, Hilary Sandler, Bill Coli and students from the University of Massachusetts
and Richard Kiyomoto from the University of Connecticut. We are very grateful for the collaboration with UConn.*

We also acknowledge the excellent resources of [Michigan State University](#), Cornell Cooperative Extension of Suffolk County, and the [University of Vermont Cold Climate Viticulture Program](#). See the links below for additional seasonal reports:

[University of Vermont's Cold Climate Grape Growers' Newsletter](#)
[UConn Grape IPM Scouting Report](#)

Support for this work comes from [UMass Extension](#), the [UMass Agricultural Experiment Station](#), [University of Connecticut Cooperative Extension](#), [USDA-CSREES](#).