

Subject: New England Grape Notes, August 20, 2010
From: Sonia Schloemann <sgs@umext.umass.edu>
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New England Grape Notes

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**UMass
Extension**



Phenology: vines are post veraison and approaching harvest in some areas. Ripening is ahead of last year by approximately 2 weeks. Growing degree days are nearly 4 weeks ahead of last year.

Meetings:

[UVM Vineyard Open House](#) - August 20, 2010 3:30 - 5:30 pm. Free. See <http://pss.uvm.edu/grape/UVMvineyard/2010OpenHouseFlyer.pdf> for details and directions.

[Massachusetts Farm Winery and Growers Association Twilight Meeting](#) - August 23, 2010 6:00 - 8:30. Alfalfa Farm, 276 Rowley Bridge Rd., Topsfield MA. \$25 includes dinner. 1 pesticide credit. Please call ahead or email Kim LaFleur at leesidemini@gmail.com, or (781) 585-1999

Crop Management:

Crop management and crop maturity

Tony Wolf, Virginia Tech Univ.

It's not too late to reduce crop levels on vines that are carrying a heavy crop. Clusters at 50% veraison weigh about 80% of their harvest weight and fruit at 15 to 17 °Brix will essentially represent final weight, with some variation due to precipitation extremes. If you failed to collect mid-season cluster weight data you can still estimate crops and make downward adjustments to the crop if you feel the crop level is excessive. As I've used in previous communications, a good range of desired crop is about 1.5 to 2.0 pounds of crop per foot of canopy, irrespective of vine density in the vineyard (lower number for reds, higher number for whites). Also consider drought and the impacts of drought on crop maturation (please review my emailed note on Heat stress effects on grapes and grapevines that was issued on 7 July 2010). Extended drought that imposes severe stress on the vine will slow the ripening of grapes. This effect will be greater for heavily-cropped vines than for lightly cropped-vines. If you're seeing drought effects, and don't have irrigation, you might want to drop some crop and aim more towards 1.0 to 1.5 pounds of crop per foot of canopy.

While I just stated that drought can retard grape ripening, slight to moderate drought, coupled with high temperatures can also advance compositional changes in grapes that might necessitate an earlier than normal harvest. In particular, dry conditions may cause berry dehydration (and increased sugar concentration, but not necessarily content), and increased heat can accelerate acid respiration, and potentially increase fruit pH. Increased sugar concentration will typically result in higher alcohol levels. Excessive alcohol can result in imbalanced wines that may be perceived as "hot" on the palate with masked aromatic volatiles. The increased pH can make wines more susceptible to microbial spoilage, affect color stability, and decrease aging potential. Some of these problems occurred in our last hot season, 2007, and Bruce Zoecklein's newsletter of December 2007 (<http://www.fst.vt.edu/extension/enology/dowloads/EnologyNotes137.pdf>) offers a helpful review of how hot, dry harvests can both improve and potentially detract from the quality of the vintage. (*Source: Virginia VitNotes, July-August 2010*)

Crop Estimation and Thinning Table

Dr. Terry Bates, Cornell University

The table at http://lergp.cce.cornell.edu/Bates/Crop_Estimation_Table_071603.pdf is a 'no math' cheat

sheet you can bring with you into the field to help you in crops estimation and thinning. To use the chart, all you need to know is how much fruit you remove from 1/100th of an acre and a close approximation of your % final berry weight (or how many days you are from bloom). The table does the rest of the math for you. Happy estimating!

Insect Management:

Grape Berry Moth

Greg Loeb, Cornell University

Grape Berry Moth Risk Assessment Protocol

Scouting for [grape berry moth](#) (also available as a [234k pdf file](#)) damage should be accomplished for high-risk vineyards at this time. There are no further scouting requirements for vineyards classified as low- or intermediate-risk for grape berry moth. Research has shown that there is no risk of further economic damage from grape berry moth in low- and intermediate-risk vineyards if the risk assessment protocol has been followed to this point in the season. The sampling procedure for Grape Berry Moth Risk Assessment is the same as in the third week in July except that the damage threshold at this scouting is an average of 15 percent damaged clusters. Both the interiors and the edges of vineyards should be scouted. For complete information on grape berry moth scouting, consult New York's Food and Life Sciences [Bulletin 138](#), Risk Assessment of Grape Berry Moth and Guidelines for Management of the Eastern Grape Leafhopper (appendix 2) (907k pdf file).

Disease Management:

[Ed. Note: This article is from Maryland in 2009 but contains some good suggestions and references suitable for New England vineyards]

Preharvest Disease Management

By Anne DeMarsay, Ph.D., Centreville, Virginia, fruitdr@cox.net

Many Maryland vineyards are approaching or already within days of the anticipated harvest date for early wine grape varieties. During this window, growers face the challenge of managing several fungal diseases, including powdery mildew (PM), downy mildew (DM), Botrytis bunch rot, and other late-season bunch rots, without using fungicides that could impair wine quality. Maryland growers may refer to Extension Fact Sheet 848, Guidelines for Developing an Effective Fungicide Spray Program for Wine Grapes in Maryland, 2008, for specific management recommendations.

For more information of the potential interaction between late disease management and fermentation, a helpful presentation by Dr. Tony Wolf from Virginia Tech, entitled "Late-season disease control options to manage diseases, but minimize fermentation problems and wine defects," is available at:

<http://www.vaes.org.vt.edu/AHSMITHJAREC/WolfWeb/Pre-harvest%20disease%20management.pdf>.

General Guidelines

- Avoid applying fungicides containing sulfur, copper, and captan within 30–45 days of your anticipated harvest date. Sulfur and copper residues impart off-tastes to wine, and captan residues may delay fermentation.
- In managing PM and DM, your objective should be to maintain a functional canopy for long enough to fully ripen your grapes.
 - On white varieties, you may be able to stop spraying for PM and DM before harvest and tolerate some foliar mildew without harming fruit.
 - On red varieties that need to hang on the vine to mature, you may need to apply fungicides until quite late in the season to preserve the canopy.
- Be vigilant in scouting for late-season bunch rots, which often appear suddenly and close to fruit maturity, weeks after black rot and Phomopsis fruit rot.

Powdery Mildew

- Protect fruit until they reach 8° Brix, when they become immune to PM infection. Thereafter, protect the canopy as long as needed for ripening fruit.
- Late PM fungicides that will not affect wine quality include Quintec, Endura or Pristine (boscalid component), stylet oil, and the potassium salts (Armicarb, Kaligreen, Nutrol). The sterol-inhibiting (SI) fungicides (Nova/Rally, Elite, Procure) may still be useful where PM has not lost sensitivity to SIs.
 - If you have active PM, use only stylet oil or a potassium salt product. Use stylet oil once, and only on severe infections. Do not apply oil within 14 days of either sulfur or captan.

Downy Mildew

- For late DM, use a phosphorous acid product (phosphite) such as Phostrol, ProPhyt, Topaz, etc. Because of strobilurin-resistant DM strains, Pristine alone may no longer be effective on DM in Maryland vineyards.

Botrytis Bunch Rot

- Preharvest can be a critical time for Botrytis control on bunch rot-prone varieties, especially in wet seasons. Latent infections that occurred at bloom become active again, and berries become increasingly susceptible to infection after veraison. (See Joe Fiola's Timely Viticulture on Botrytis).
- Effective fungicides include Vanguard/Scala, Elevate, Pristine (at the 18.5–23 oz/ac rate) and Endura (at the 8 oz/ac rate).

Late-Season Bunch Rots

- Watch for late-season rots as fruit ripen, especially if there has been hail, bird damage, insect feeding, or PM on fruit. The fungi that cause ripe rot, bitter rot, and Macrophoma rot, can enter intact berries, however.
 - Be careful not to injure ripening fruit while spraying or mowing.
 - Control insects that feed on fruit as part of an IPM program.
- If ripe rot, bitter rot, or Macrophoma rot appear during the preharvest window, protect healthy fruit with a strobilurin fungicide (Pristine or Abound).
- Sour rot is caused by a complex of fungi, bacteria, and insects that can gain entry only to wounded fruit. Because of the bacterial component, fungicides are not effective against sour rot.

(Source: Maryland Timely Viticulture Late August 2009)

Weather data: (Source: [UMass Landscape IPM Message #18, July 9, 2010](#))

Region/Location	2010 Growing Degree Days (base 50° from March 1, 2010)		
	1-week gain	total accumulation for 2010	total accumulation on this date in 2009
Cape Cod	321	2,221	1,580
Southeast MA	329	2,227	1,531
East MA	342	2,404	1,702
Metro West MA	336	2,245	1,613
Central MA	--	--	--
Pioneer Valley MA	319	2,209	1,556

Berkshires MA	305	2,044	1,591
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Additional Weather Data is available form the following sites:

- UMass Cold Spring Orchard (Belchertown MA), Tougas Family Farm (Northboro MA), and Clarkdale Fruit Farm (Deerfield MA) at <http://www.umass.edu/fruitadvisor/hrcweather/index.html>
- University of Vermont Weather Data from several sites around the state at <http://pss.uvm.edu/grape/2010DDAccumulationGrape.html>
- New Hampshire Growing Degree Days at <http://extension.unh.edu/Agric/GDDays/GDDays.htm>
- Connecticut Disease Risk Model Results at <http://www.hort.uconn.edu/ipm/>

In addition, we are working on integrating new base stations into the Network for Environment and Weather Applications program run by the Cornell IPM team at <http://newa.cornell.edu/>. This will include the ability to run disease and insect development models for a wider area. Stay tuned.

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 "Ag 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 and students from the University of Massachusetts
and Frank Ferandino 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](#), [NE-SARE](#) & [NE-IPM Center](#)



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