

WINE GRAPE INFORMATION FOR PENNSYLVANIA AND THE REGION

From Penn State Cooperative Extension

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Bordeaux Viticulture

Notes from a visit to Bordeaux in Jul/Aug 06 are posted on the Wine Grape Network web site at <http://winegrape.cas.psu.edu/>. Look in the "What's New" column on the right. Figures are large photo files (beware dial-up users - it takes about a minute to download at 44kbps).

Some comments on Rain and Ripening from Dr. Joe Fiola, extension viticulture specialist at University of Maryland (9/14):

Believe it or not but just three weeks ago I sent out a "Timely Vit" on understanding Drought Stress, Vine Performance, and Grape Quality! Now I am discussing the other extreme - welcome to Eastern US viticulture! The remnants of tropical storm 'Ernesto' are gone but it dumped a considerable amount of rain on the state. Although we really needed the moisture, the timing was not the best for the early varieties which were trying to ripen. Since then we have had (especially in the West) a fairly constant supply of clouds and moisture with little significant breaks.

We harvested some of the early Russian clones at WMREC before the rains and the fruit quality was excellent. The Brix of the unharvested varieties dropped from 1-3.5% since the rains started. Any fruit that had early cluster powdery did not fare well as the late season rot and the insects started taking their toll. The late reds are still far enough off that they have not been impacted greatly and hopefully will have time to come on if/when the weather improves. We still have a lot of time to go before significant risk of frost so try to have patience.

The short term forecast calls for cloudy condition and the chance for light rain for the next day or so. By the weekend things should improve with a few of days of warmer (upper 70s-80s) and drier weather.

Here are some things to consider when evaluating when to harvest the varieties that have weathered the early storm:

- After a significant rainfall, the water enters the berries in 24-36 hours.
- Once in, the water that enters the fruit cause the following:
 - Dilution of sugars – immediate drop in Brix
 - Dilution of flavor components- secondary metabolites
 - Causes or increases the risk of fruit splitting which leads to:

- Decreased yields
 - Increased risk of botrytis and other late fruit rots
 - Increased problems with fruit flies and wasps, bees, etc.
- Delayed harvest means extended risk of fruit predation from birds, deer, raccoons, turkeys, etc.
- Varieties that were closest to being ripe face the greatest risk

What to consider/do:

- Keep an eye on the short and long term weather reports.
- If the weather is dry and warm (70+ days, 50+ nights) the grapes will recover – Brix will increase and flavors will rebound. Whether they will make it all the way back depend on the weather conditions.
 - It is still only mid-September, so the probability of a significant spell of desirable weather is on our side.
- Keep an eye out for berry splitting and degeneration.
- Keep an eye out for Botrytis and protect if necessary.
 - Remember the risk of spraying our important fungicides on existing infections.
 - Use Oxidate and the like on existing infections.
- Monitor disease, bird and bee damage closely and make the harvest call based on those issues.
- Also consider the productive capacity of your existing canopy.
 - If the leaves are still green and if the berries are sound, there can be some benefit to waiting.
 - If canopies are looking ragged and long term “hanging” of the fruit will not result in significant desirable ripening.
- If the forecast permits, it would be best to be patient monitor the forecast and disease, and allow the water to move out of the vine and the fruit to proceed forward again.
- Pray for an extended Indian summer!

Additional comments about harvest from Dr. Tim Martinson, Finger Lakes Grape Specialist, Cornell University (9/15)

Harvest decisions: This brings us to the arena of harvest tradeoffs. While we all hope that the rain will stop and we'll get 3 or 4 weeks of sunshine and heat, this may not happen. At the least, rainfall brings with it the risk of foliar downy mildew, Botrytis and other fruit rots, and increased rainfall that delays sugar accumulation or dilutes soluble solids as berries take up more water. Since we've had ample moisture throughout the season, I don't think we'll see a repeat of last year, where parched vines were suddenly inundated with water and berry size/brix BOTH ballooned. Its more likely that growers and wineries will be faced with tradeoffs between ripeness and disease pressure, should rainfall continue. Tony Wolf and Ashley Myers (Plant Pathologist) of Virginia Tech discussed some of the issues in their August 28 e-mail newsletter, points of which I'll

paraphrase below. Please note, however, that they are further south and grapes are much closer to harvest there than in the Finger Lakes. Some of their points are:

- Sudden deluges followed by more favorable weather, leading to rapid drying of foliage and fruit, may cause only minor crop damage. Obviously, we are having a more protracted wet period, so can expect a more challenging disease environment.
- Canopy condition: Moderate to well-exposed fruit will still fare better than poorly exposed fruit. This will have a potentially major effect on bunch rots. If you can justify additional leaf pulling (and need it), it could greatly reduce incidence and spread of bunch rots in susceptible varieties.
- Wine maker Flexibility: Can your wine maker work with less-than-optimal brix, acid, or flavor development? It may be possible for some products to accept less ripe fruit for certain products (e.g. sparkling Chardonnay or Pinot noir), or more neutral-flavored chardonnay or pinot gris. On the other hand, reds might have more objectionable 'green' flavors. The tradeoff is between a relatively secure (if not optimally ripe) crop, or accepting higher risk for waiting for the grapes to get riper. The reality here in the Finger Lakes is that most varieties are still a few weeks away from the 'early' part of the harvest window.
- Diseases: Foliar Downy mildew and various fruit rots (including botrytis) are possibilities (recall the explosion of foliar Downy following Katrina, and also in 2004). Foliar powdery mildew may also be an issue (typically with less rainfall, but humidity). Various fungicides may be options:

Less than 2 wk before harvest: Downy: Captan (protectant) (0d PHI; 96h REI) or Phosphorus acid products (protectant, post-infection control) (Prophyt/Phostrol) (0d PHI, 4h REI) if less than 2 wk before harvest. Captan may have some activity on fruit rots other than botrytis. Powdery: Oxidate (0d PHI, 0d REI) and Armicarb or Kaligreen (1 d PHI, 4h REI) are options.

More than 2 wk before harvest: Downy and/or Powdery - Pristine (14d PHI, 24h PHI) may provide pre-infection (Downy) but not post-infection control for downy and also pre/post infection control of powdery mildew. Nova or Elite (14d PHI, 12h REI) may also be options for powdery mildew.

Botrytis: Vanguard (7d PHI, 12 h REI) or Elevate (0 D PHI, 4 h REI) may be options, mainly useful as protectants and to limit secondary spread. Pristine (see above) also has some botryticide activity. If you applied one of these less than 14 d ago, you may want to save a final application for later, and/or 'switch' products to avoid resistance development. If you already have a *lot* of botrytis, these products won't be magic bullets.

Communication: Obviously, this is a time for both wine makers and vineyardists to monitor vineyards frequently, and to communicate frequently about the condition of the fruit and harvest decisions. Ultimately the decision whether to harvest to avoid fruit breakdown (at less than optimum maturity) or wait and risk more crop loss or expense in fruit sorting or dropping diseased fruit ahead of the harvester is an economic one. It may alter the 'product mix' and/or processing options (e.g. heat treatment to modify flavors and inactivate botrytis 'laccase' enzymes; acid/pH adjustment; chaptalization or

amelioration).

Bottom line: We are too far from ripeness in many varieties to think about early harvest yet. Keep your fingers crossed and lets hope we get some heat and dry weather to help things along.

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