

WINE GRAPE INFORMATION FOR PENNSYLVANIA AND THE REGION

From Penn State Cooperative Extension

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New Grape Grower Workshop in Gettysburg, PA

A workshop for new and intermediate grape growers and those considering planting a commercial wine vineyard in the region is being offered by Mark Chien (Penn State), Dr. Joe Fiola (U Md), and Dr. Tony Wolf (VA Tech) on Wednesday, November 12 from 8 a.m. to 5:30 p.m. at Adams County Cooperative Extension in Gettysburg, PA.

<http://adams.extension.psu.edu/> The workshop is an intensive one-day overview of what is needed to start a commercial wine vineyard. You will not be an expert grower at the end but you will have a clear sense of what is involved and how to access resources to continue your education and project development. It is mostly lecture but a portion of the program will be spent in the research vineyard at FREC. The cost is \$125 and must be paid in advance. Space is limited so please register early. Information and registration is attached to this message (see PA new grower workshop reg-info)

Musings about the Vintage: The harvest is winding down with late reds and late harvest whites still hanging and enjoying the benefits of clear, dry, if not cool days. It is amazing that we have not yet had a hard frost in SE PA. While sugars tend not to move under these conditions, I believe that flavors do and so the reds will benefit from the "hang time", which is a very different phenomenon from the controversial practice in California where grapes are left to shrivel on the vine in search of flavors and phenolics. We can achieve better balance in our wines in these conditions, where the alcohol level remains under control. The secret is to keep the fruit clean and viable. Physiological deterioration, often a problem in thin skinned varieties like Pinot Noir and Riesling, are always a threat. Shrewd judgment supported by constant, critical monitoring of fruit quality is so important as we get deeper and later into the vintage. Fortunately, I have not heard horror stories of ravenous birds or destructive bees but disease has been an issue once again and it should not. We have the tools and knowledge to control even the vast array of fungal threats in the vineyard. In a moderate pressure year like this one, I feel strongly that disease should not be the reason for harvesting grapes. These comments are predicated on the goal of making a ripe and tasty wine. Other styles are more flexible in their vineyard management styles and tolerances. The 3-4 day soaker on September 27 was the little nudge that pushed disease over the edge for many growers. In cases, it was the difference between picking fully mature Merlot, or Pinot Noir or

whatever, or not. In my mind, there are two solutions to a mid-season storm that may compromise a vintage. First, protect the integrity of your fruit so vigorously in the mid-season that it is good enough condition to take weather in the harvest season. The other strategy is less proven but is widely used in other wine regions - lower the yields per vine on higher density vine spacings using site characteristics and rootstocks to shorten the vegetative cycle of the vine and get the fruit to ripen earlier, allowing the grapes to be harvested 3 or 5 or 7 or 10 days before the big rain, or frost or whatever the next threat to fruit quality may be. There are plenty of other tools available to the wine grower such as disease resistant and early hybrid varieties, all of these should be considered. The one avoidable truth about good wine is it takes ripe grapes to make it.

These are just my observations and they are pretty much limited to SE PA, where I can look out of the window and see the weather. August was very dry across most of the region which set us up well for the harvest but then Hanna blew through the area and while she could have been much worse, most places took enough rain to set back ripening. Since Hanna, the weather has not been stable but we have had streaks of dry and warm, which is what we need to make wine. My main concern is the amount of disease in vineyards, especially downy mildew and to a lesser extent, powdery mildew, botrytis and sour rots. Despite great improvements and constant efforts to educate growers and improve technologies and methods, we still have a lot of picking decisions that are being pushed by disease conditions on fruit and leaves. We can't let this continue to happen to us. These concerns especially extend to the red varieties like Chambourcin and the Bordeaux reds which need more time on the vine. Every leaf counts at this stage of the game and if you are defoliating due to DM or PM, your fruit is going to suffer. Those leaves are needed also to help the vine to prepare for winter with carb storage. The problem probably extends back into June/July when we had some very harsh conditions for disease. That's why it is so critical to keep your vines clean in the mid-season. For one grower, the solution is as simple as tightening up spray intervals during the high pressure period with particular attention paid to pesticide resistance, coverage, rates and timing of sprays at the most efficacious time of vine phenology. The pay off for those efforts is now and not having to go in to spray your red varieties so close to harvest. Dry (and warm) weather is the best thing we can hope for as far as disease and ripening are concerned.

The past two weeks have been amazing and just what the red wine doctor ordered for the vintage. The streak of warm, dry Indian summer weather has turned to cool and dry weather now. This game wine growers play with the weather in continental climate wine regions like the Eastern U.S., Bordeaux, Burgundy, Germany, Tuscany, Piedmont, etc. is a bit like roulette. It mainly applies to late red varieties, in our case, mostly the Bordeaux reds and Chambourcin. It is necessary to have an experienced palate, good instincts and nerves of steel. Almost always there is something to be gained by leaving the fruit on the vine, even if the weather is cold. In my humble opinion, the biggest problem with our reds (from Ontario to N Carolina) is too much acid and greenness in finished wine resulting in the "eastern twang" that I hope will not be considered characteristic of our wines. This probably means we a) have the wrong varieties planted in a particular region b) need to improve our site selection, c) need to improve our viticulture (stop

overcropping vines), and d) we are picking too early. Waiting for the right moment for the wine, not your nerves, is something that comes with experience. But if you own an independent vineyard, you are in the risk assessment business and only you can know how far the grapes can be pushed. If you don't know what the thresholds are, find someone who does and learn the process of critically evaluating fruit maturity and reading the weather tarot cards.

Even with the cooler temperatures the fruit will continue to ripen in the sense of flavor and phenolic maturation. I don't have scientific evidence of this phenomenon but I know from experience with Pinot Noir in Oregon and through other growers that even when nothing seems to be happening in the berry, usually something is. Sugars will probably hit a wall but alcohol is the least of your worries. A good wine maker can skillfully chapitalize a wine and bring it into balance. The whole suite of harvest parameters need to be evaluated under a microscope to assess the maturity of the fruit and if you can eek out another day on the vines.

I know you are sick of hearing me say this but sorting in a vintage like this is really the only way to get a consistently high quality wine. It might not be necessary for low to mid range native and hybrid varieties but if you are trying to make high end hybrids and vinifera it makes sense to get the bad and unripe noogies out of the fermenter/press. Sort any way you can - on the vine, in the picking bin, before and/or after the destemmer. It can only help the quality of your wines.

If you are trying to make good, sound wines in the mid-range of price then the goal is to harvest clean, mature fruit, maybe not pushing them to the max but getting the basic varietal character necessary with acid and alcohol in balance. In a vintage like this one it should not be very difficult to achieve these goals.

Autumn Vineyard Practices: Harvest is almost over and everyone is pretty tired. But it's not done until the last vineyard chores are finished. If you still have the energy, I have attached some suggestions for closing out the season. For more about the use of cover crops as a vine management tool, please see Jim Law's excellent article "Capitalizing on Cover Crops" in the October, 2008 Wine East section of Wines and Vines. See attachment: Post-Harvest Check List

Capitalizing on Cover Crops -

<http://winesandvines.com/template.cfm?section=features&content=59040>

Viruses in the Vineyard: An article in the recent Practical Winery and Vineyard magazine highlights the problem of viruses in California vineyards. Probably the most important thing to know about viruses is that they have a negative impact on fruit/wine yield and quality and also on vine health/longevity. Viruses are a very unpleasant reality, especially in vinifera vineyards. As far as I can tell, we have two major viruses affecting wine vineyards in Pennsylvania - the grapevine leafroll associated viruses (GLRaVs) and

tomato ringspot virus (ToRSV). Grapevine yellows, a phytoplasma is similar to a virus and has similar injurious effects on vines. They affect important wine varieties in our region and are often brought into the vineyard through infected nursery stock but can be moved vine to vine within the vineyard by insect and nematode vectors. This is an ideal time to look for virus-affected vines in the vineyard and flag them for testing, identification and possible removal. A survey was conducted recently in the Finger Lakes region to identify the types of leaf roll virus and potential vectors. The results are troubling and not just for growers in that region. There is cause for concern because virus spread is a grave concern in California. All grape growers need to be aware of viruses and be able to identify affected vines and know what to do about it. Viruses can be very tricky to identify and can be confused with nutrient deficiencies and other plant maladies. So great care needs to be taken at all levels of vineyard development and management to avoid the introduction of viruses materials and the possible spread. Drs. Tim Martinson, Marc Fuchs and Harvey Hoch from Cornell have written a fine summary of the leaf roll situation in the Finger Lakes (Attachment: Grapevine Leafroll Cornell)

Clean Vines: How can industry address the problem of viruses and other chronic vine pathogens in vines? It starts by planting clean and healthy vines. This is always high on any list of viticulture priorities anywhere grapes are grown. There are a host of plant diseases, viruses and other maladies that invade a vineyard, new or old, from infected nursery materials. Here in Pennsylvania, Dr. Elwin Stewart in Penn State plant pathology has been working hard to survey the cause and extent of vine decline problems and has developed sophisticated assay techniques to detect trunk pathogens such as the "black goo" organisms, botryosphaeria and others. He has also developed tissue culture skills that have allowed his lab to "clean up" some key varieties used in the region such as Vidal and Chambourcin. But, ultimately, what is needed for all wine grape vineyards is a source of clean, certified vine materials that can be planted with a high degree of assurance that they are free from the trunk diseases and viruses. Penn State, Univ of Md., VA Tech and state departments of agriculture have been meeting for four years to discuss building a regional clean vine program to serve the needs of Eastern grape growers. In 2005, a small group of growers went to Washington DC to lobby for funds to support a foundation plant service but left empty handed. But patience and persistence have paid off. With the help of the National Grape and Wine Initiative, local efforts and a partnership with tree fruits, \$20M over four years was written into the 2008 Farm Bill. This is the seed money needed to get a program started and eventually, to provide wine growers in Pennsylvania and the region, with certified vine materials. A collaboration between Pennsylvania, New York, Maryland, Virginia, Michigan, Missouri and Texas will work with USDA agencies, Agricultural Research Services, Animal and Plant Health and Inspection Service, and Cooperative States Research and Extension Education Service to implement a clean vine program. It will take a while to get this program up and running and it will require the cooperation and support of the grape and wine industries, commercial nurseries, departments of agriculture, land grant institutions and USDA agencies, so it is a high cooperative and complex program. But it is absolutely necessary for the continued health and sustainability of the wine industry. For more information on the National Clean Plant Network go to:

<http://www.practicalwinery.com/janfeb06/janfeb06p115.htm>

Crown Gall: a continuing saga: We discussed a lot of important topics at the NCPN meeting in Geneva but none so passionately as the problem of Crown Gall in vineyards. Probably most of you reading this are familiar with this ugly and economically debilitating vine malady. As the costs and economic stakes in new vineyards have increased, so has the awareness of crown gall as a serious problem in new vineyards. *Agrobacterium vitis* is a very big problem in vineyards in colder regions. From Eastern Washington to N. Virginia this disease afflicts grapevines of all ages and varieties. At the NCPN meeting in Geneva, one of the foremost experts on crown gall gave an update on the science of this complicated organism that is ubiquitous in our soils and can cause significant economic and quality loss in vineyards. Dr. Tom Burr explained that ELISA and PCR testing methods can detect A.v. in grapevine materials but it is often difficult to find in a randomly selected portion of cane or green tissue samples, thus making testing less than 100% reliable. However, with shoot tip meristem propagation, it can be "cleaned up" with great reliability. So we can have clean vines in a foundation block but not have the testing reliability that we desire making a systematic and fully-testable process of delivering crown gall free vines to grape growers an uncertain process. The answer, for now, is to rely on researchers to improve the testing methods for A.v. and raise the level of reliability. Dr. Burr and his lab will continue working towards this goal. Even though A.v. is omnipresent in soils, especially those previously planted with grapevines, I feel confident that new vines from the nursery have a better chance of getting established and living a healthy and productive life if they are certified to be tested for the presence of A.v.

Grape Crown Gall Biology and Strategies for Control (2004). Dr. Thomas Burr - <http://groups.ucanr.org/iv/files/26827.pdf>

In the meantime, the debate goes on about the problem of crown gall affected nursery materials. After a long and animated conversation with a veteran nurseryman, I have come to the conclusion that the only fair response to a crown gall problem in new vines that likely came in with nursery materials is to say that "it happens" and that sometimes it happens in vineyards of the most well-intentioned, careful and meticulous growers and nurseries. Since there is no current commercial source for crown gall tested materials available to nurseries, the best they can do is collect bud wood from reliable growers with no guarantees that the material is clean. The problem is not the nurseries but the lack of a certification program for crown gall. NCPN and the activism of a few enlightened growers is pushing us toward a long-term solution. Until then, negotiate calmly and reasonably with your nurseryman but do not blame him. It is prudent for nurseries to seek the cleanest wood they can possibly find from reliable sources and for growers to find nurseries that are extremely careful about their sources and have good reputations.

There is a message in all of this story of viticulture woe and intrigue: support viticulture research! It holds the answers to many problems growers face every single day. It can

make a difference in the quality of the grapes and wine you make and the bottom line of your business. It is not abstract.

Cold Climate Grape Varieties: an exhaustive listing by Lisa Smiley: This is truly a project for the ages by Lisa Smiley, probably the nicest person in the whole wide wine industry. For her master's thesis, Lisa compiled information about 77 cold hardy grape varieties. If you are wondering about the parentage and viticultural characteristics of Baltica, Kay Gray, King of the North, Petite Amie, Skujinsh, Veeblanc or Zilga then this is the guide for you. Lisa's advisor and viticulturist at Iowa State University, Dr. Paul Domoto, has kindly put her work on their web site. This is a wonderful new resource for growers with these varieties who want to know more about them and folks who are planning vineyards in cold regions and would like to understand more about their cultivar choices. For even more information about grape cultivars you can go to the National Grapevine Registry which is maintained by the Foundation Plant Service at UC-Davis.

<http://viticulture.hort.iastate.edu/cultivars/cultivars.html>

<http://www.ngr.ucdavis.edu/>

Attachments:

[Grapevine Leafroll Cornell Report.pdf](#)

[PA New grower workshop reg info.doc](#)

[Post Harvest Check List.doc](#)

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