



## WINE GRAPE INFORMATION FOR PENNSYLVANIA AND THE REGION

From Penn State Cooperative Extension

<http://pawinegrape.com/>

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**Current Situation and Observations:** Harvest is fast approaching and the weather has changed from warm and dry to warm and wet. This presents particular danger for fruit rots (sour, ripe, bitter, botrytis), powdery mildew and especially downy mildew. The alert should be up for all of these and hopefully the necessary measures (canopy, crop and disease and insect management) were taken throughout the year. These conditions remind growers of the necessary up front viticultural investment needed to secure a high quality grape crop in the fall. In the case of downy mildew, I had conversations with Andrew Landers and Han Peterson, both from Cornell University, recently and they highlighted a variety of fungicides that are available for DM control including Revus, Presidio and Ranman, that can be tank-mixed with a phosphorus acid product to give good protection. The NY-PA Pest Management Guidelines end with mid—summer recommendations but there is so much season still to go, so please review Alice Wise’s [Late Season Disease Management](#) suggestions (especially for *vinifera* varieties) from Cornell Cooperative Extension on Long Island. Hopefully the vines have been given one final hedge pass before nets were applied, which tends to bunch and compress leaves, improving the environment for the mildews. The wet conditions cause two main problems for growers – the vines continue to produce new laterals and these are very susceptible, especially new growth on top to DM. On a 6-7’ canopy, these leaves can be very difficult to maintain good spray coverage so calibrate your sprayer to emphasize the best possible coverage of the tops of canopies. Fruit zones also need excellent coverage so sprayers should also be calibrated to wash cluster thoroughly ([see Andrew Landers article](#)). Tower sprayers are favored for late season spray applications, the Cima being one example. I would say that everywhere in the Eastern US that bird control measures should be fully operational now. I haven’t yet heard that birds are a problem, but if damp conditions persist, any damage they cause will exacerbate fruit rots. With Hans we talked a lot about birds and there are widely differing opinions about all the various tactics and equipment that are available other than nets, and even those need spacers ([see Tobias net spacer](#)) to provide adequate protection. PermaNet will provide some yellow jacket control, which can be a big benefit if they become a pest. I just received an announcement about a new book titled [Wasp and Bee Management: A Common Sense Approach](#), written by a New York IPM Cornell extension

associate. I haven't read it yet but it may contain valuable information for growers who are battling yellow jackets. We do not know whether brown marmorated stink bug and-or spotted wing drosophila will be a problem this year. Suffice to say that both are around and, in a conversation with Kathy Demchak, the Penn State small fruits extension specialist, have been a major nuisance in berry crops this year, especially raspberries and blackberries. Note that SWD behaves like grape berry moth and lays eggs in the fruit, so it can cause direct damage to fruit. They are easy to trap and monitor using a wine-vinegar bait. Penn State has an excellent 4-part [fact sheet on SWD](#) which all growers should read. As for BMSB, I have yet to hear a report of direct damage to grape clusters, they mainly get into the wine processing stream and can taint wines, they should be monitored as harvest approaches. The best [fact sheets on BMSB](#) (scroll to *Harvest* section) have been written by Dr. Joe Fiola for his *Timely Viticulture* series at University of Maryland. And, of course, we cannot forget about GBM, which due to the warm weather (degree day accumulation) will almost certainly add an additional flight or two to the season, the latter arriving right at harvest-time. With each successive flight, the emergence peak flattens making it more difficult to monitor and treat later flights. At this time of the year Andy Muza, Penn State horticulture educator in Erie, suggests that high value grapes be protected on a 7-10 day schedule in hot spots around the vineyard. His threshold for treatment is 15% of clusters affected by GBM, but he feels this may be low. In Erie, they are anticipating a fourth generation in early September. There is a lingering stench of sour rot from the Susquehanna basin and east, a reminder that the fruit zone is oh-so vulnerable at this time of year. Anything you can do to open it up for air, sun and spray, loosen clusters and maintain cluster isolation will help to reduce the threat of fruit rots. So we have arrived at crunch time, where the wine quality rubber meets the road (and any other clichés you can think of). Make your last crop adjustment pass now, particular on the less ripe red varieties, focusing on green to pink berries and wings, clusters that are touching/bunching or growing into the wire or leaves or on short shoots. At [Blair Vineyard](#), Rich has taken Bryan Hed's (Penn State grape research pathologist in Erie) work on early leaf removal to heart – over three varieties (Pinot Gris, Pinot Noir and Chardonnay) he did removed the leaf opposite clusters on every other row of a significant portion of his vineyard. He reports seeing the best cluster loosening effect on the Pinot Noir and will monitor fruit rots and make wines in separate lots to check juice/wine quality differences. This is the kind of in-house viticulture research that makes me smile and, in the end, makes better wines. The season is divided into 3 parts – budbreak to bloom, fruit set to veraison and post-veraison, and as a grower I always felt that this was the most important third. It would be so nice to just sit back and enjoy the fruits of the hard work of the past four months but with the rain and all the threats to the crop, it's a maddening time of year.

**Harvest Instructions:** Each year before harvest I refer grape growers to the [Harvest article](#) written by Dr. Ed Hellman at Texas A&M and myself for the production guide *Oregon Viticulture* and further edited over the years. It's a good overview of what is necessary to plan and execute a grape harvest based on my 20 years of experience as a wine grower and Ed's equally significant experience at a viticulture extension agent. I think it's a good review for experienced growers and almost essential reading for novices. I hope it will be helpful.

**Buying Grapes:** Recently I have had a number of wineries ask me for recommendations about who to contact for grapes. It is WAY too late in the season to be sourcing grapes, and in case you had not heard, this was a frost year so the crop was bound to be short. I'm not trying to be sarcastic, but if you care about your wine, both quality AND quantity, wine makers should be locking up the best sources of grapes very early in the year. Now, you are playing the spot market and that's very dicey, for both quality AND quantity. In all cases, wine makers should be on the road, visiting the vineyards they are purchasing grapes from and inspecting crop quality AND quantity, and making last minute adjustments and offering instructions to growers. This can really help wine makers to get the grapes they want and

expect to see later on the crush pad. It's absolutely worth the time and effort. Collaborate with the grower on late-season crop protection measures and how to determine grape maturity, and the very critical when to harvest decision, especially if the conditions, as they did in 2011, turn on a dime and go downhill.

**On the road:** Traveling with Hans Peterson, the Cornell University [Finger Lakes Grape Program](#) viticulture extension educator was an eye-opening experience. It always helps to have another set of eyes, ears, nose and taste on a vineyard, especially at this time of year, which is the very best time to evaluate a vineyard. Stan Sowinski, a veteran grape grower and leader in the Endless Mountains (and also the current chair of my advisory committee) organized a full-day of visits to vineyards and wineries in the region for me and Hans. Also along for the visits were John Esslinger, PSCE horticulture educator in the region, and retired educator Bill Pencek. Even though it happens frequently, I can't help but be amazed to encounter a vineyard like Jim and Kathy Bresnan's in Bradford County in, as Kathy described, "the middle of the middle of nowhere." The four year old vineyard is a textbook example of vineyard design and development, and almost perfect execution of Scott Henry training ([see photos](#)). They are growing grapes for [Grovedale Vineyard and Winery](#) in Wyalusing and the Marquette, Traminette and other varieties were almost perfect. Hans helped us to recognize potato leafhopper damage, which could be easily mistaken for mild magnesium deficiency. Jim has installed a [3-D electrified deer fence](#) around his vineyard that he says has been 100% effective during its first year of operation and it cost only \$1100 to enclose a 7-acre vineyard. This vineyard is testimony to the value and success of the Cornell and Minnesota cold hardy and disease-resistant grape varieties, and a smart grape grower. They survive the winter and we saw only one leaf with PM and another with DM in the entire vineyard. Frost and winter injury continue to be major topics of conversation in all areas of Pennsylvania. My conclusion is that the two most effect methods, overhead irrigation and tower wind machines, are too expensive for most of the vineyards in Pennsylvania, so much like birds and netting, all the other alternatives must be examined and few to none are reliably effective. One device that John Esslinger told us that an orchard grower in the area was using is called a [Frost Dragon](#), a tractor-mounted device that spews hot air and, according to John, must return to any given place in the vineyard or orchard in 8 minutes to maintain its effectiveness. I have not heard of a vineyard application of this machine but it may be worth examining for a 3-4 acre vineyard. We talked a lot about the relative merits of cane vs. cordon pruning, especially in light of uneven mid-cane shoot growth. The general consensus is that if canes are less than 2' long, cane pruning is practical. If they are longer, then some modified cane system is needed or cordon/spur. During my visit to the Finger Lakes and Endless Mountains I saw a lot of excellent Scott Henry training in use, which brought vigorous vines into balance that will result in both better and more fruit from the vineyard. Achieving balance is an art and science that begins with proper site selection and evaluation, vineyard design and management. When it's done properly, it is thing of beauty that will make wine makers very happy. At Sugar Hollow Vineyard, Paul Milnes described the dilemma of hilling up his 8-acres of *vinifera* vines (and some Vidal) each year which complicates and delays his early season vineyard tasks, so he has decided not to hill up. This sort of compromise happens all the time in vineyards and are part of the risk management that every grower faces. His low-profile Shur-Farm frost protection system has been modestly effective at best in a lower location of the vineyard. Besides low yields due to frost and winter injury, vineyards are experiencing crop loss due to diseases during bloom and fruit set (downy mildew, botrytis and phomopsis – it's hard to tell them apart in the aftermath), and bunch stem necrosis, which is probably due to a nutrition imbalance in the vines. Merlot around SE PA was particularly affected this season. Also, we have had complaints of poor bearing or set in Gewurztraminer, which like Viognier in my experience, is very fickle in the amount of crop it will produce in any given year. Besides general fruit ripeness issues and its impact on wine quality, I consider production and yield issues to be a continuing threat to a sustainable wine industry,

particularly one that is regularly subjected to frost and winter events. In my next newsletter, I'll write about our tour through vineyards in southeast Pennsylvania, including a twilight meeting at The Vineyard at Grandview.

**Thoughts about Wine:** The picture appears even more rosy on the wine side. [Denise Gardner](#) is already having an impact on wine quality in Pennsylvania. I had an interesting experience recently getting to taste 100 wines from around the world in the \$20 or under category as part of a product development process. While the whites were quite interesting and sometimes distinct, the reds were almost uniformly bland and boring, most from sunny areas that simply bury a wine in tannin and oak, with hardly a smidgen of nuance, terroir or even detectable fruit. They were not bad wines, just dull. We don't want to go there, not with our wonderful diversity of terroir and grape varieties. [Joe Roberts](#) commented (and Denise will expound on this in much great detail), that among the 60 or so wines he tasted, that the red wines lacked fruit and, instead, had more of an emphasis on the herbal, or more specifically, dried herbs in the wine. There are probably a lot of reasons for this but both Denise and I think that a focus of our efforts in the vineyard and cellar should be to accentuate the fruit qualities of our wines, which is what consumers prefer and also helps to better delineate terroir differences (read my observations of the [first tasting day](#)). At [Nimble Hill Vineyard](#) in Tunkhannock (Endless Mountains) we tasted lovely white and rose wines from local vineyards, which are beginning to bear fruit and showing what a fine wine area it is. There is no doubt in my mind that one of the most important contributors to quality is Kevin Durland, NHV's wine maker. I don't know if I have ever met anyone with as great a passion for wine as Kevin: heaven help you if you get stuck on a long drive with him. But his talent, enthusiasm and skill show every bit in the wines. 2011 was not an easy vintage, and NHV is located right in the uppercut of the storm systems. Yet the wines are distinctive and fine. When the right ingredients are in the pot: professionals, passion, the right tools, terroir, leadership and the necessary capital, and some luck, they all combine to make very fine wines.

**PQA Workshop Summary:** Denise has written an excellent [summary of the wine aroma lecture](#) given by Professor (and wine grower) Alain Razungles at the Pennsylvania Quality Assurance summer workshop in July. This first part explains wine aroma compounds, their origins and how they are manipulated in grapes, juice and wines. In Part 2 (coming later) she will explain practical applications to improve wine aromas in the vineyard and cellar.

**2 Spray Workshops:** I attended two very interesting and practical vineyard spraying workshops recently. [Dr. Andrew Landers](#) demonstrated the use of fluorescent dye to indicate spray coverage in a vineyard. Marty Keen had developed an inexpensive [spray patternator](#) that can indicate the quality of spray coverage in a vineyard. Go the [PA Wine Grape Network](#) under the Spotlight section to read both workshop summaries (LANDERS and KEEN).

**News from Penn State:** Dr. Bruce McPherson, the dean of the college of agricultural sciences at Penn State has recently announced that he will leave to become vice president for agricultural administration at Ohio State University starting on November 1. Bruce has been a good friend and ally to the wine industry, helping it to hire Denise Gardner and implement the Crouch Fellowships, and he likes wine! We will miss him and hope that his replacement will also engage the wine industry in a positive and productive manner. Click [HERE](#) for a full story.

Please visit the [BUY-SELL page](#) of the Pennsylvania Wine Grape Network for grapes wanted and for sale and vineyard and winery equipment, etc.