

WINE GRAPE INFORMATION FOR PENNSYLVANIA AND THE REGION

From Penn State Cooperative Extension

Table of Contents

1. Here we go...2010
2. Mid Atlantic Notes
3. Disease and Bugs
4. Sustainable/Organic Viticulture Workshop: Save the Date

2010: the new vintage begins (early and fast): The new vintage was well underway last week in the research vineyard at the Penn State Fruit Research and Extension Center in Adams County. Pushed by a week of unseasonably warm weather, the shoots on vines and fruit trees alike are out early and worrying vineyard and orchard growers. An early season can bode well for wine quality but it also means longer exposure to frost events. It would appear that one effect of climate change is frost has moved up on the list of annual concerns to grape growers. For most growers in this region there are not a lot active options for frost mitigation and site and weather will largely determine the fate of the vines. Some have fans and they must be used properly. If they are not activated early enough prior to a frost event, their impact may be compromised. Vineyard floor management practices can influence air temperature. Lonnie Hendricks, a UC farm advisory from Merced County published "Effects of Soil Conditions of Frost Protection" (1993), reprinted here from OMAFRA Tender Fruit Grapevine newsletter:

Soil conditions make a great deal of difference in frost protection. Heat is absorbed by the soil during the day and released to warm the blossoms at night and early in the morning. Maximum exposure of the soil to sunshine is necessary to provide optimum frost protection. The following is a table of relative temperature differences as influenced by orchard floor conditions:

Bare, firm, moist ground	warmest
Shredded cover crop, moist ground	½°F colder
Low-growing cover crop	1°-3°F colder
Dry, firm ground.....	2°F colder
Freshly disked, fluffy ground	2°F colder
High cover crop	2°-4°F colder
Where cover crop restricts air drainage	6°-8°F colder

Helicopters are one of the few active frost prevention methods available to grape growers. If you can find one, I have been told that prices range from \$400-500/hr. This sounds like a lot but if you figure the value of your crop or the wine, it suddenly begins to make some sense. If you google "helicopter rides" you will get a list of helicopter services in your area.

A final comment: crop insurance. I wonder why more grape growers do not have any crop insurance. It can help to offset a crop reduction or loss and compensate you for operating expenses until you reach the next profitable vintage. I don't talk about crop insurance at meetings because growers don't want to hear about it. So I urge you to seek information on your

own. For information about USDA Risk Management Agency's crop insurance programs please visit: <http://www.rma.usda.gov/>. Be aware that grapes are still a confusing commodity for most crop insurers. It will take some time to get a policy in place.

More thoughts on things to do and think about as the new vintage begins in "Here We Go Again" (see attachment)

Mid-Atlantic Viticulture Notes: Dr. Tony Wolf was the keynote speaker at the Pennsylvania Winery Association annual meeting. He talked about alternative varieties for the region but I was particularly interested in his ideas about controlling vine vigor in fertile, damp Mid-Atlantic soils. Growers have more viticulture tools than ever but on a tour of vineyards in northern Virginia after new grape grower workshops last week it was more evident than ever that site selection is the best way to control vine vigor and maintain vine health and longevity. In a conversation with Dr. Joe Fiola, the viticulturist at U MD, it was clear that the advantages of a well-drained soil, slopes and sites away from wooded areas can offer huge advantages in just about every aspect of viticulture. Cold injury and crown gall in particular are always exacerbated by poorly drained soils in low sites. Tony emphasized the needs for vineyards to be placed on convex landforms, not concave sites that pool water and cold air. RdV, Linden and Glen Manor are vineyards in N. VA that are on spectacular hillside sites that aggressively shed water and cold air. No matter what hybrid or vinifera varieties are planted on this type of topography, the fruit will benefit from its features. Tony explained that yield and quality do not share a linear relationship so it is up to each grower to find that "sweet spot" on his/her site. He encourages growers to seek balance in their vines, regardless of size. A major goal is to stop vegetative growth at veraison because any additional leaf area contributes more to disease problems than any ripening benefit. Tony and his graduate students have been using cover crops, root pruning and root restriction bags in their research to effectively manage vine vigor. I strongly urge you to follow his research on his web site. His parameters for mature vine balance include: 5-10 lb fruit/lb of pruning weight, 1.2 - 1.5 sq meter of leaf area per kilogram of pruning weight, 0.3 - 0.6 kg pruning weight per meter of row, 1.5 to 2 lb of fruit per foot of row, and 3-4 shoots per foot of row. If you can tweak your mature vines into these boundaries, you have achieved a balanced vine! He also suggested that rootstocks like 420A and Riparia Gloire can help by limiting vine vigor. His take home messages on meeting our viticultural challenges include: appropriate vineyard site selection, matching correct variety (and rootstock) to the site, good viticulture management practices (implicit and essential), use of other methods to limit moisture availability, and finally, harvesting ripe grapes for wine. I have come to increasingly believe that viticulture is the easy excuse the wine industry uses to justify poor site selection. While I understand that not every grape grower has the freedom and-or resources to select the best possible vineyard site, or even the desire to make the best possible wines, a good site that nurtures a balanced and optimally cropped vine can deliver fruit to the targeted wine style/price standards, lower maintenance costs, and will make almost every aspect of vineyard operations easier after the vineyard is planted.

Disease and bugs are upon us already and growers need to be ready for them. If any disease was an issue for you last year you need to be particularly vigilant this year, especially between

first leaves and fruit set. A tight, smart spray program and good canopy management will help to keep diseases at bay. I saw clean vineyards in 2009. That means growers can manage diseases and pests under the harshest conditions. We keep vines protected with prophylactic sprays but insects need to be scouted and controlled. Grape flea beetle, climbing cutworm and grape cane borer are early insect threats. They usually do not do economic levels of damage to vineyards but any one or all can be severe in a given season. Use the internet and standard IPM resources to access a vast resource of photo ID, biology and control measures.

While in Virginia last week I met the new grape pathologist, Dr. Mizuho (pronounced ME-zoo-hoe) Nita, based at the Virginia Tech research station in Winchester. Dr. Nita received his PhD in plant pathology from Ohio State University and while he is newly arrived, he has hit the ground running and has impressed me enormously with his knowledge and enthusiasm for helping the wine industry in Virginia. Most of his observations and recommendations will have relevance for Pennsylvania wine grape growers. In fact, it can be argued that his spray recommendations may be more applicable for grape growers in the southern counties than the Erie-based recommendations in the NY-PA guide. I would use both as a resource. Dr. Nita has a terrific blog which I urge PA growers to follow. It's not a dead blog, he updates it very often. He also has two significant publications available about disease control in vineyards.

- 2010 Wine Grape Fungicide Spray Guidelines
- 2010 Virginia Tech Grape Diseases and Insects in Vineyards (Insect section by Dr. Doug Pfeiffer, Virginia Tech entomology)

I suggest that all grape growers, new and experienced alike, read both of these documents cover to cover. They have a lot of useful information. You can find the documents and Dr. Nita's blog page at: <http://www.avec.vaes.vt.edu/alson-h-smith/grapes/pathology/index.html>.

If you do not have a copy of the *2010 New York and Pennsylvania Pest Management Guidelines for Grapes*, you can order it at 607-255-7282. It costs \$21 + S&H.

SAVE the DATE: A sustainable-organic viticulture workshop will be held in Lancaster on Thursday, May 27th. It will feature Dr. Glen McGourty, the University of California viticulture farm advisor in Mendocino County. Dr. McGourty has been working closely with wine growers in the north coast counties on practical organic and biodynamic viticulture practices and will share his experience and ideas with us. Yes, we are not California. But I will argue that many of the concepts and principles can find an application in Eastern viticulture, certainly in drier years like 2007. It helps to create an awareness of the total vineyard ecosystem and methods of farming that have a reduced impact on the environment and human health. Read more about Glenn and his work at http://cemendocino.ucdavis.edu/Custom_Program/. Other invited speakers will include Eastern wine growing practitioners and extension educators. More information is forthcoming.