

WINE GRAPE INFORMATION FOR PENNSYLVANIA AND THE REGION

From Penn State Cooperative Extension

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Cold Climate Viticulture (attachment)

Stephen and I had the pleasure to visit growers and vintners in the Northeast region of Pennsylvania. It is a particular kind of viticulture up there and one that I do not have a lot of experience. It's cold. Yet, the requirements are not that much different than in the warmer southeast. Pick varieties that have a realistic chance to ripen the fruit and survive the winter then apply the best possible viticulture to them to get optimal performance. It's just that when you get more out on the plank and on the margins of viticultural reality it becomes more difficult to achieve these goals. You actually have to perform a better brand of viticulture than in easier and more accommodating conditions. The growers up here impressed us enormously with their passion and perseverance. They have learned a lot about how to adapt to their conditions on their own and now are wanting to fine tune the wine growing process. It is an exciting region with lots of potential. You can read about our visit in my notes that are attached to this message.

Pruning Workshop

A pruning workshop will be held next week on Tuesday, February 6 from 9-noon at Naylor Wine Cellars (<http://www.naylorwine.com/>) in Stewartstown, PA (southern York County). It will cover all the basics of pruning commercial wine grapes with a presentation and field demonstration. Cost is \$20, includes coffee, donuts and handouts. Please call Marilyn at 717-394-6851 to register. Dress accordingly.

Bugs and Birds: Report from Grape Session at the Mid-Atlantic Fruit and Vegetable Convention in Hershey

We had packed sessions for wine grapes at the Mid-Atlantic Fruit and Vegetable Convention in Hershey. The focus was on insects in vineyards with a slight diversion to birds but it is important to realize, as Dr. Shearer pointed out, that many bugs, most notably fruit flies, yellow jackets and hornets, and multi-color asian lady beetle, are attracted most readily to damaged grapes either from birds or disease. Dr. Doug Pfeiffer from VA Tech covered key vineyard bugs and listed the tools that growers can use to battle them. But it is a lot of the same materials we are used to. The important point is to use classic IPM methods of scouting and evaluating for economic threshold damage before spraying. We had two excellent core credit presentations on the use of backpack

sprayers and protecting your health and safety. I am convinced that these are critical and overlooked topics for most grape growers who did not grow up on a farm and lack the experience and education about these important issues and equipment. I wish more growers would take advantage of these opportunities to learn. Safety and health are the most important issues in farming. The following are some notes from three talks at the wine grape session...

Grape Berry Moth Management: Andy Muza from Penn State Cooperative Extension in Erie suggests a multi-pronged approach to management of GBM combining scouting, insecticide, mating disruption and biological control measures. GBM is one of the most serious insect pests in grapes. It typically has 3-4 generations in the Erie area, up to five in SE PA. It feeds directly on grapes and causes physical damage as well as creating wounds for secondary pathogens like botrytis and acetic acid. It can cause significant economic losses through yield and quality reduction. GBM is an equal opportunity pest affecting natives, hybrids and vinifera but in this ascending order of potential loss. Management options include the standard cultural practices and chemical control and alternative methods such as pheromone mating disruption and biological agents. Management protocol is divided into pre-treatment, treatment and post treatment phases. Pre-treatment includes:

- · Sprayer maintenance and calibration
- · Evaluation of GBM risk by block
- · Understanding the pest (lifecycle, identification, etc.)
- · Scouting of each vineyard block

The Lake Erie GBM risk assessment system can help to reduce application numbers. Risk is assessed based on economics, surround vineyard habitat, GBM history and climate. Risk classification includes:

- Wine varieties, mostly vinifera and hybrids
- Vineyards near wooded areas
- Damage to berries of >6% in July or >2% at harvest is at risk
- Mild winter temperatures and warmer summer temperatures

Low risk is assessed as the opposite of high risk conditions. Severe risk is a vineyard that sustains economic threshold levels of GBM damage despite control measures in place during consecutive years.

GBM begins its emergence in mid-May in the Lake Erie area. They are weak flyers and most active at dusk. Eggs are laid singly on berries. The life cycle is very temperature dependent as we learned from Dr. Saunders last year. There are 5 larval stages during this time they bore into berries to feed.

Scouting is a critical management practice. Around bloom look for webbing in the cluster. As berries enlarge they will create a “sting” mark on the berry where they bore

into it. Traps can be used to determine beginning, peak and end of flight periods and estimated population levels. Change pheromone cap every 3-4 weeks. Develop a historical record of trap counts. Traps should be checked once a week. Pay close attention to hot spots from mid-July to harvest. Scout 2 interior and 2 exterior sites in the field. Outside rows near trees may be most prone to damage and need treatment.

Treatments include insecticides and resistance issues should always be considered. Mix up classes of chemical between years and within a year. Avoid resistance! Other considerations are pH adjustment of water and the need for a spray adjuvant. Timing, rate, coverage are all critically important to the proper and effective use of insecticides. Follow the label instructions! In Erie treatment in intermediate and high risk sites begins ten days post bloom. Spray every row in a treated area. Make sure wind speed is low and direct sprays at clusters. Slow down! If edge effect spray only outside rows.

Broad spectrum fungicides include:

- Sevin
- Danitol
- Imidan
- Baythroid
- Capture
- Lannate

Resistance is an issue with all of these. Even more the potential damage to the beneficial insect population and non-target organisms like bees. Be care and minimize their use. Target the area of the vine to be treated and the specific part of the vineyard.

Specific targeted insecticides include Intrepid and Bt (*Bacillus thuringiensis*).

After treatment continue to scout and count and look at the effectiveness of treatments. The biggest reason for poor GBM control is inadequate spray coverage.

Cultural practices include good canopy management (leaf removal, shoot positioning, hedging), weed free vine row and controlling wild grapes in the perimeter areas. Do not overuse N and/or water.

Insecticides alone may not offer effective control in some high and severe risk sites. Alternatives can help. Isomate – GBM Plus is a mating disruption pheromone that is hand applied (1 tie every 3rd vine) and has a full season release. They are expensive (\$45/ac) and may not hold up under pressure.

Biological control includes *Trichogramma ostrinae*, a small wasp that parasitizes GBM eggs.

Netting Options for Vineyards: The netting discussion was a bit distressing mainly because birds are clearly getting smarter and more aggressive in their feeding habits.

More and better resources are going to have to be thrown at protecting grapes which will, of course, cost more money. But there is too much at risk for high value hybrid and vinifera grapes not to do it. Libby Tarleton and Alice Wise are in the third year of a netting trial on Long Island where the birds are almost Hitchcockian in their devious behavior. The trials have yielded interesting and helpful results about the relative effectiveness of different brands and types of netting materials. All tests were done on standard VSP trellis that is used by commercial vineyards on LI. Types of nets evaluated:

- Standard net (SN) extruded black plastic, ¾" mesh
- Gintec ProGuard (G) developed as shade cloth (11%), 4x7mm mesh
- Vineside (V) mesh, 15x14 mm knitted
- Ulstrawind (U), 3x3 mm, 23% shade
- Windbreak Plus (W), 3x3 mm, 33% shade
- Multivine (M), 16x16 mm, diamond mesh overhead

In 2005 SN incidence of bird damage was 10.1% compared to 2.6% for M. Overhead has practical problems such as lack of equipment access to vineyard. Lipco sprayers, the standard on LI, are impeded by support structures. Sides of nets were torn by wildlife. Initial cost is high but competitive when prorated over long term.

Special net spacers helped to push net away from clusters and feeding. They fit in lower position by fruit wire and use bottom catch wire to spread nets.

In 2005, Cabernet Franc – incidence of damage on SN is 24.3%, SN w/spacers 19.7%, U (6/27) 0.2% and U (8/25) 0.0%. Fruit parameters at harvest had no differences between treatments.

2005/Merlot – SN 5.2%, SN w/spacer 2.9%, Gintec (6/29) 1.0, Gintec (8/27) 0.1%, V 1.9%.

Some of the heavier shade clothes like the Ulstrawind appeared to increase incidence of botrytis.

Birds were able to cause significant damage to the mesh pattern of the Gintec, pulling it apart so they could feed through it. Windbreak also sustained some damage.

Standard net is okay for low pressure areas and may be suitable for early ripening varieties. It is still the cheapest netting option. Gintec works in low to medium pressure. Side nets are preferred over draped nets since they are easier to apply and can be stored on the trellis which saves on labor. Vineside was better than standard but quite as good as Gintec. Ulstrawind and Windbreak Plus both provide good protection but have some disease concerns. They are more expensive than the others.

Bird control is most effective 2-3 hours after dawn and 2-3 hours before dusk. Biggest problem birds on LI are starlings, robins and grackles. Deer and raccoons are also a big problem. Bird control measures must be in place BEFORE the birds arrive. While birds

have indicated a strong preference for red grapes (or even blush), they will feed on white varieties. There is a preference for side netting for ease of use.

Japanese Beetles and Yellow Jackets: It doesn't appear that there is anything new to help growers with JB's. In fact, Dr. Peter Shearer from Rutgers explained that the past 2 bombshell JB seasons are more normal. That does not bode well for vine foliage. The usual chemicals are available, very similar to GBM. New insecticides in the neonicotinoid category (Provado, Assail, Venom), botanical/neem (neemix, azadirachtin) and botanicals/pyrethroids (evergreen, pyganic, etc) may offer less harmful control solutions. The same rules apply about scouting and usage. Know the level of damage to foliage before economic losses are at risk. Spray at the target with all the correct pesticide use considerations.

Yellow Jackets are beneficial predators and scavengers during most of the year. It is when conditions are dry and protein is scarce that they move toward sugar sources like grapes. Traps are still the preferred, if not only, control method. Better attractants are making traps much more effective. Many types of damage to berries are blamed on YJ but it is mostly caused by birds, then the YJs move in as well as disease. Destroying nests can also be effective but Peter suggests only at night. If you encounter a nest during the day stand still, YJs detect and respond to motion (is that the same advice if you spook a bear?).

Sevin, Imidan and Danitol have the best overall control of both JB's and YJs but none are labeled for YJs.

I'd like to thank all of our speakers and those who helped organize this grape section.

Upcoming meetings:

The Maryland Grape Growers Association annual meeting tomorrow, SATURDAY, FEB 3 at the Turf Valley Resort in Ellicott City, MD. You can find the program and directions at <http://www.marylandwine.com/mgga/events/am-2007.html>.

The Virginia Vineyard Association annual meeting is at the Omni Hotel in Charlottesville from February 8-10 with a special workshop on Petit Manseng on Thursday. Complete information at <http://www.virginiavineyardsassociation.com/events.htm>.

In Pennsylvania there will be a NEW GROWER workshop on Wednesday, March 21 at the Farm and Home Center in Lancaster led by Dr. Joe Fiola and Mark Chien. A VINEYARD DEVELOPMENT workshop will be held at Waltz Vineyard in Manheim, PA on Tuesday, April 3rd. Jan and Kim Waltz are our hosts and speakers include Nelson Stewart from Karamoor Vineyard and Michael Schmidt from Spec Trellising. More information and registration will be sent out soon.

There's a nice article by Eric Asimov in The New York Times about wines from "all over America" including Pennsylvania! You can read it at <http://www.nytimes.com/2007/01/31/dining/31pour.html?ref=dining>. Hurrah and yippee for geographical and varietal diversity (and wine writers who recognize it).

Attachments

[Endless MountainsNotes Jan07.doc](#)

Mark L. Chien, Wine Grape Agent
Penn State University Cooperative Extension
College of Agricultural Sciences
Lancaster County
1383 Arcadia Road, Room 1
Lancaster, PA 17601-3184

Phone: 717 394-6851
Fax: 717 394-3962
Email: mlc12@psu.edu
Web <http://winegrape.cas.psu.edu>
