Scouting For The Major Pest Problems

Dean Volenberg

Warm dry conditions continue to prevail throughout most of the state but don’t become complacent about disease management. Keep the following in mind as grapes progress from berry closure to veraison.

**Grape Berry Moth**

- Cluster sample areas along borders and especially borders near wooded areas.
- When examining clusters look for berries webbed together or berrie(s) coloring (veraison). Early veraison of berries within a cluster is a symptom of larvae feeding within the berry.
- Both Altacar and Intrepid both have a long residual to protect the crop over the extended egg laying period of grape berry moth. Focus treatments on problem areas in the vineyard (border rows) to reduce application costs.
- Mid-July through harvest is the time period to keep an eye out for GBM

**Powdery mildew**

- Scout clusters especially shaded clusters. Berries develop resistance to powdery mildew once they reach 8 brix. Berries may become resistant much earlier to powdery mildew but be aware that foliage shoots, and rachises remain susceptible to powdery mildew throughout the growing season.
- Young leaves are more susceptible to powdery mildew than mature fully expanded leaves.
- Powdery mildew is more likely to be found on tissue that is shaded since ultra-violet light destroys the conidia.
- Moisture in the form of a heavy dew or rain is detrimental to powdery mildew spores. Powdery mildew only requires a small amount of moisture (0.1 inch) and temperatures above 50° F in the early part of the growing season to release infectious spores (ascospores). Powdery mildew needs no moisture for infection.
**Powdery mildew-continued**

- Although moisture in the form of heavy dew or rainfall is detrimental to powdery mildew, powdery mildew will spread and infect at a faster rate during periods of high relative humidity. Optimum relative humidity for growth of powdery mildew is 85%.
- Temperatures at or above 90° F results in no powdery mildew disease development.

The sterol inhibitors and strobilurins can cure early infections but have no efficacy on established colonies. If you have established powdery mildew colonies then consider using potassium bicarbonate fungicides (Kaligreen, Armicarb 100 etc.) to reduce the colonies. Be aware these potassium-type fungicides have no protectant qualities and have no activity against other grape fungal pathogens.

**Downy mildew**

- Examine clusters, especially shaded clusters. Berries become resistant to downy mildew 2 to 3 weeks after bloom. All green tissue remains susceptible to downy mildew infection.
- Unlike powdery mildew, downy mildew needs free water for infection. Hot dry weather is detrimental to sporangia and zoospores.
- To reduce the potential for infection increase air circulation by summer pruning, leaf pulling, and maintaining good weed control under the vines. Also avoid evening irrigation that increases relative humidity within the vine canopy.

Although strobilurin fungicides have some post infection activity against downy mildew, consider their application as more preventative. If you have active colonies, then Ridomil Gold (MZ or Copper) would be the most efficacious. Other options for active infections are the phosphorous acid fungicides (Phostrol, ProPhyt etc.). The phosphorous acid fungicides have no activity against other grape diseases.

**Black rot**

- This is where field notes from previous years come in handy and also remembering if you removed mummy berries from your vineyard this spring or last fall. Your first clue to a berry infection is likely going to come to late for you to do much about the problem. Therefore you want to be scouting leaves looking for the small round leaf spots. A high number of black rot leaf spots indicate that black rot pressure is high.
- Whereas berries become resistant to powdery and downy mildew 4 to 5 weeks after bloom, berries remain susceptible to black rot for about 8 weeks after bloom.

Management of black rot is best accomplished by the two immediate post bloom fungicide applications. The sterol inhibitors (Rally and Elite) provide excellent control of black rot. According to Annemiek Schilder at Michigan State University if using these products in vineyards with black rot infections, use the highest rates since control of black rot is dose-dependent especially if you are looking for some extended kickback activity against black rot. The strobilurin fungicides provide excellent control of black rot but have limited kickback activity compared to the sterol inhibitors.
Development of wine grapes in the grape variety trials at the Peninsular Agricultural Research Station (PARS) Sturgeon Bay, WI and West Madison Agricultural Research Station (WMARS), Madison, WI

Brianna at PARS 7.9.2012

Brianna at WMARS 7.9.2012

Foch at PARS 7.9.2012

Foch at WMARS 7.9.2012

Frontenac at PARS 7.9.2012

Frontenac at WMARS 7.9.2012
Development of wine grapes in the grape variety trials at the Peninsular Agricultural Research Station (PARS) Sturgeon Bay, WI and West Madison Agricultural Research Station (WMARS), Madison, WI

La Crescent at WMARS 7.9.2012

La Crosse at PARS 7.9.2012

Marquette at PARS 7.9.2012

La Crescent at PARS 7.9.2012

La Crosse at WMARS 7.9.2012

Marquette at WMARS 7.9.2012
Development of wine grapes in the grape variety trials at the Peninsular Agricultural Research Station (PARS) Sturgeon Bay, WI.
The grape variety Baltica at WMARS on 7.9.2012 is starting veraison. At PARS over the past two seasons, Baltica typically was ready for harvest at the end of August. In cold climates with limited growing degree days, Baltica may be the answer. In trials in Wisconsin, Baltica has had excellent cold-hardiness and early ripening. Now its up to the enologist to put the variety to the test.

Brianna at Spooner Agricultural Research Station on 7.9.2012.

Marquette at Spooner Agricultural Research Station on 7.9.2012.

The University of Wisconsin College of Agriculture and Life Sciences, Agricultural Research Stations, and UW-Extension have established replicated grape variety trials at three agricultural research station locations—Peninsular (Sturgeon Bay, WI), Spooner (Spooner, WI), and West Madison (Madison, WI). The Spooner location was selected to test the grape varieties for cold-hardiness. The Spooner Agricultural Research Station is located near Courderay, WI which has the coldest recorded winter temperature of -55° F in 1996.
**Degree Day\(^1\) (base 50) Accumulation from April 1 to July 8, 2012 at Peninsula Agricultural Research Station in Sturgeon Bay, WI**

<table>
<thead>
<tr>
<th>Date</th>
<th>2012</th>
<th>2011</th>
<th>5 Year Average(^2)</th>
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<tr>
<td>4/1 to 7/8</td>
<td>1016</td>
<td>790</td>
<td>878</td>
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\(^1\)Modified method.  
\(^2\)Average from 2007 to 2011.

**Degree Day\(^1\) (base 50) Accumulation from April 1 to July 8, 2012 at West Madison**

<table>
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<tr>
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\(^1\)Modified method.  
\(^2\)Average from 2007 to 2011.

**Accumulated degree days\(^1\) (base 50) for the month of March in Sturgeon Bay and Madison, WI.**

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<th>Year</th>
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<th>Sturgeon Bay WI</th>
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<tr>
<td></td>
<td>GDD (base 50, ceiling 86)</td>
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<td>2012</td>
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\(^1\)Modified method.  
\(^2\)Data from [http://www.doa.state.wi.us/degreedays/](http://www.doa.state.wi.us/degreedays/)

Please scout your vineyards on a regularly scheduled basis in an effort to manage problem pests. This report contains information on scouting reports from specific locations and may not reflect pest problems in your vineyard. If you would like more information on IPM in grapes, please contact Dean Volenberg at (920)746-2260 or dean.volenberg@ces.uwex.edu
Regional Vineyard Walks
The UW-Extension Fruit Team will be hosting 4 regional summer vineyard walks for 2012, according to Rebecca Harbut, the UW-Extension Fruit Specialist. With the continued growing interest in commercial wine and table grape production in Wisconsin, the Fruit Team decided to host the vineyard walks regionally to reach more growers and those interested in becoming a commercial grower.

Each regional vineyard walk will be hosted by a grape grower with vines in production. The vineyard walk leader will evaluate the vines and answer questions that participants may have about commercial production practices. With the vineyard walks scheduled for 4 different dates, growers can attend the closest walk or attend any of the four if desired. The vineyard walks are held rain or shine so come prepared. Participants are also asked to bring lawn chairs for the grower socializing following the walk.

Northwest Wisconsin
Sunday, July 15, Spirit Creek Vineyard, 3555 Blom Lake Dr., Frederick, WI 1:00-3:00 p.m.
Mike and Sue Jahnke and their family started planting Frontenac and Marquette grapes in 2007. They have added La Crescent, Petite Pearl, Brianne and Summerset. Vineyard walk leader is UW-Extension Fruit Specialist Rebecca Harbut. Registration fee is $5 payable at the vineyard walk. Please email the number attending to kevin.schoessow@ces.uwex.edu or call the Spooner Area UW-Extension Office at 715-635-3506. Attendees may bring a wine to share.

Northeast Wisconsin
Saturday, July 21 Himmelgarten Vineyard, 10131 Newton Road, Newton, WI 4:00 – 8:00 p.m.
Randy and Faye Riester planted their first Baco Noir grapes three years ago so this fall will be their first harvest. Vines are trained on a VSP system with unique in-line posts. Vineyard walk leader is UW-Extension Ag Agent Dean Volenberg. Registration is $20 which will include a catered meal. Attendees may bring a wine to share. Please send payment one week in advance to the Door County UW-Extension Office, Attn. Vineyard Walk, 421 Nebraska St., Sturgeon Bay, WI 54235. If you have question, email dean.volenberg@ces.uwex.edu 920-746-2260

Southwest Wisconsin
Saturday, August 4 Viriditas Vineyard, E8101 Green Acres Rd., Viroqua, WI 4:00 – 8:00 p.m.
Jeff and Mary Aderman planted their first Frontenac and Frontenac Gris vines in 2005. Since then they have added La Crescent, Marquette and Brianna. One of the biggest challenges that the vineyard had to experience a couple of years ago was the grape ripe rot infestation. Vineyard walk leader is Mark Hart, a private grape vine breeder from Bayfield, Wisconsin. Registration is $20 which will include a catered meal. Attendees may bring a wine to share. Please send payment one week in advance to the Vernon County UW-Extension Office, Attn. Vineyard Walk, Suite 392, 318Fairlane Dr., Viroqua, WI 54665. If you have questions, email timothy.rehein@ces.uwex.edu 608-637-5276

Southeast Wisconsin
Sunday, August 12, Staller Estate Vineyard and Winery, W8896 County Rd. A, Delavan, WI 10:30 a.m. – 2:00 p.m. Joe and Wendy Staller planted their first Frontenac, Foch and La Crescent vines in 2008. They planted with the plans to open a winery of which they did also in 2008. Vineyard walk leader is UW-Extension Fruit Specialist Rebecca Harbut. Registration fee is $30 which will include a catered wine – food pairing meal. The winery is a state licensed facility so attendees are asked not to bring any wine to share. Wine from the Staller Winery will be supplied. Registration is limited to 40 people. Please send payment one week in advance to the Walworth County UW-Extension Office, Attn. Vineyard Walk, PO Box 1001, 100 W. Walworth St., Elkhorn, WI 53121 If you have questions, email peg.reedy@ces.uwex.edu 262-741-4951