Quick Note on Petiole Sample Results

Dean Volenberg

Many grape growers had taken petiole samples around veraison and are now having questions about the results. Many of the questions have centered around what to do if results show that petioles are low in a nutrient. The first thing I can say is don’t panic and feel you must do something immediately. Remember the petiole sample results are just a snapshot in time of when you collected those samples. You need to relate the results to the context of your vineyard. In some cases, if you have sampled individual grape varieties then relate the results to the variety. What do I mean by relate the results to the vineyard?

First, what type of vine growth did you have when the samples were taken? If rapid vine growth was occurring at sampling, then some nutrients will be diluted. Also consider other factors such as last season’s and current season’s growth, weather conditions, fertilizer inputs, irrigation, and soil conditions. This year most of the state has experienced periods of extreme drought. Some nutrients, especially potassium have limited uptake under drought conditions. Also remember that grape berries are sinks for potassium and low potassium results in a petiole sample could be that clusters are drawing on potassium from the leaves. You will need to monitor vines and see if leaves begin to show symptoms of potassium deficiency.

So before looking for an immediate correction and applying nutrients through a foliar feed, put some thought into the results. Most foliar feeds are used to correct micronutrient problems and not macronutrient problems (N, P, K). These micronutrient corrections are often done based on petiole sampling results taken at bloom. Petiole sampling at bloom gives you the chance to correct micronutrient deficiencies whereas petiole sampling at veraison will not.

If petiole sample results at veraison show macronutrient deficiencies you need to start working on your fertility program. That means pulling out your most recent soil sample results. Also looking at what nutrients were applied this growing season. Then consider taking soil samples this fall so that you can get your nutrient program on the right track.

I can not stress enough that nutrient management is not just lab results. You need to consider what was done in the vineyard the previous season and the current season in regards to crop load, canopy management, fertility program, pest problems, and irrigation as all these will have an impact on laboratory results.

A good article to read is “Monitoring Grapevine Nutrition” at: http://www.extension.org/pages/31517/monitoring-grapevine-nutrition
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
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 8.6.2012

La Crosse at PARS 8.6.2012

Marquette at PARS 8.6.2012

La Crescent at WMARS 8.6.2012

La Crosse at WMARS 8.6.2012

Marquette at WMARS 8.6.2012
Development of wine grapes in the grape variety trials at the Peninsular Agricultural Research Station (PARS) Sturgeon Bay, WI.

NY 76 at PARS 8.6.2012
Vignoles at PARS 8.6.2012
Petite Pearl at PARS 8.6.2012
Two year old vines
Noiret at PARS 8.6.2012
Leon Millot at PARS 8.6.2012
Wild grapes at PARS 8.6.2012
Cold Hardy Seedless Table Grape Progression at West Madison Agricultural Research Station

Thanks to Brian Emerson for submitting the pictures.
Degree Day\textsuperscript{1} (base 50) Accumulation from April 1 to August 5, 2012 at Peninsular Agricultural Research Station in Sturgeon Bay, WI

<table>
<thead>
<tr>
<th>Date</th>
<th>2012</th>
<th>2011</th>
<th>5 Year Average\textsuperscript{2}</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/1 to 8/5</td>
<td>1628</td>
<td>1435</td>
<td>1440</td>
</tr>
</tbody>
</table>

\textsuperscript{1}Modified method.  
\textsuperscript{2}Average from 2007 to 2011.

Degree Day\textsuperscript{1} (base 50) Accumulation from April 1 to August 5, 2012 at West Madison

<table>
<thead>
<tr>
<th>Date</th>
<th>2012</th>
<th>2011</th>
<th>5 Year Average\textsuperscript{2}</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/1 to 8/5</td>
<td>2097</td>
<td>1980</td>
<td>1786</td>
</tr>
</tbody>
</table>

\textsuperscript{1}Modified method.  
\textsuperscript{2}Average from 2007 to 2011.

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Madison WI</th>
<th>Sturgeon Bay WI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GDD (base 50, ceiling 86)</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>252\textsuperscript{2}</td>
<td>106</td>
</tr>
<tr>
<td>2011</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>2010</td>
<td>72</td>
<td>38</td>
</tr>
<tr>
<td>2009</td>
<td>51</td>
<td>12</td>
</tr>
<tr>
<td>2008</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2007</td>
<td>90</td>
<td>41</td>
</tr>
<tr>
<td>2006</td>
<td>22</td>
<td>7</td>
</tr>
<tr>
<td>2005</td>
<td>40</td>
<td>9</td>
</tr>
<tr>
<td>2004</td>
<td>49</td>
<td>11</td>
</tr>
<tr>
<td>2003</td>
<td>49</td>
<td>15</td>
</tr>
</tbody>
</table>

\textsuperscript{1}Modified method.  
\textsuperscript{2}Data from 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.

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

Northwest Wisconsin-Completed
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-Completed
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 questions, email dean.volenberg@ces.uwex.edu 920-746-2260

Southwest Wisconsin-Completed
Saturday, August 4 Viriditas Vineyard, E8101 Green Acres Rd., Viroqua, WI 4:00 – 8:00 p.m. Jeff and Mary Adelman 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.rehbein@ces.uwex.edu 608-637-5276
UW-Madison Table and Wine Grape Field Day

Thursday, August 23rd, 2012, 10:00am-3:00pm  
Where: West Madison Agricultural Research Station  
8502 Mineral Point Rd, Verona, WI 53593

To register contact Therasa Christen, tachrist@wisc.edu or PH (608) 262-2257 by Aug. 20th

Cost: $10 (lunch included)

10:00-12:00 – Table Grapes  
12:00-1:00 – lunch  
1:00-3:00 – Wine Grapes

Speakers:  
Rebecca Harbut, Fruit Specialist UW-Madison  
Patty McManus, Fruit Pathologist, UW-Madison  
Judy Reith-Rozelle, Grape Consultant

Topics covered:  
Crop load management, canopy management, disease management, tasting