Grape IPM program

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Questions to isaacsr@msu.edu
Grape Insect Pests Over The Season

Bud Swell

Bloom

Post-Bloom

Grape Flea Beetle

Rose Chafers

Grape Berry Moth

Climbing Cutworms
Grape Insect Pests Over The Season

Mid-Season
- Leafhoppers
- Japanese Beetles

Veraison
- Grape Berry Moth

Pre-Harvest
- Multi-colored Asian Ladybeetle
- Grape Berry Moth
Weekly scouting report to cooperating growers

GBM Trap Information

GBM Infested Clusters

Leafhopper Information

JB Information

Disease Information
**Weekly Vineyard IPM Scouting Summary**

Report for the week of August 3, 2006

<table>
<thead>
<tr>
<th>Site</th>
<th>Average Number of GSB in Traps</th>
<th>Percent Clusters Infected with GSB</th>
<th>Avg. # JSs Per Vine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allegan</td>
<td>0</td>
<td>0</td>
<td>Allegan 0.0</td>
</tr>
<tr>
<td>Berrien</td>
<td>1</td>
<td>0.1</td>
<td>Berrien 1.1</td>
</tr>
<tr>
<td>Berrien</td>
<td>4</td>
<td>0.1</td>
<td>Berrien 4.4</td>
</tr>
<tr>
<td>Van Buren</td>
<td>11</td>
<td>0.6</td>
<td>Van Buren 2.1</td>
</tr>
</tbody>
</table>

**Grape Berry Molt Notes:**

**Grape berry moth appears to be on the upswing again based on both trap catches and infested clusters.** Three of the four sites saw increases in infested clusters with the highest pressure site, Van Buren, showing a 7 percent increase. Take a close look at your vineyards to see how much pressure you have and whether a spray is necessary. If you would like to see what GSB infested berries look like in different varieties click here.

**Leafhopper Notes:**

**Leafhoppers were low at all sites, including the Berrien 2 site which applied an insecticide spray to control grape leafhoppers.** Make sure you know where leafhoppers are at in your own vineyards.

**Disease Level Rankings:**

- None
- Trace
- Low
- Moderate
- High
- Very High

**Concord-Berrien Clusters:**

- None
- Low
- Moderate
- High
- Very High

**Chardonnay-Allegan Clusters:**

- None
- Low
- Moderate
- High
- Very High

**Current Growth Stages:**

- Concord-Berrien: None
- Chardonnay-Allegan: None

**Growing Degree Days (Base 50):**

<table>
<thead>
<tr>
<th>Site</th>
<th>Starting March 1</th>
<th>Starting April 1</th>
<th>Previous Year GDDs on August 6 (March 1 Start)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lapeer</td>
<td>1534 1726</td>
<td>1506 1698</td>
<td>1854 1520 1497 1718 1745 1648</td>
</tr>
<tr>
<td>Lansing</td>
<td>1534 1726</td>
<td>1506 1698</td>
<td>1854 1520 1497 1718 1745 1648</td>
</tr>
<tr>
<td>Newaygo</td>
<td>1534 1726</td>
<td>1506 1698</td>
<td>1854 1520 1497 1718 1745 1648</td>
</tr>
<tr>
<td>Muskegon</td>
<td>1534 1726</td>
<td>1506 1698</td>
<td>1854 1520 1497 1718 1745 1648</td>
</tr>
<tr>
<td>St. Joseph</td>
<td>1534 1726</td>
<td>1506 1698</td>
<td>1854 1520 1497 1718 1745 1648</td>
</tr>
<tr>
<td>Waterford</td>
<td>1534 1726</td>
<td>1506 1698</td>
<td>1854 1520 1497 1718 1745 1648</td>
</tr>
</tbody>
</table>

This report is a summary of weekly scouting from vinegrape and juicegrape vineyards in southwest Michigan. It should be used only as a general guide, because pests vary greatly in their abundance from site to site. Scouting your own vineyards is the best way to know whether pest problems are developing in your farm.

For more information on this project, contact Steve at (517) 242 1282

More information on Vineyard IPM is available online at: www.grapes.msu.edu

All photos: Steven Van Tiemmen
Multi-year demonstration of berry moth control

Degree day model + selective insecticides

Percent of clusters infested with grape berry moth:
- Reduced-Risk
- Conventional

Project objectives, 2016

Demonstrate performance of scouting and reduced-risk management in commercial vineyards.

Deliver information on IPM and cultural controls to the Michigan grape industry.

Deliver training programs on harvest-time pest concerns in 2016.
Weekly vineyard scouting

Checking berry moth trap at Berrien farm

Scouting at Van Buren farm
Lower berry moth pressure in IPM vineyards, 2016

% damaged clusters (out of 50)

- **Standard Border**
- **IPM Border**
- **Standard Interior**
- **IPM Interior**

Dates:
- 27-May
- 10-Jun
- 24-Jun
- 8-Jul
- 22-Jul
- 5-Aug
- 19-Aug
- 2-Sep
- 16-Sep
Similar disease in IPM and standard vineyards, 2016

**Downy mildew**

- Infected leaves out of 200
- Standard
- IPM

**Black rot**

- Infected leaves or clusters out of 200
- Standard Leaves
- Standard Clusters
- IPM Leaves
- IPM Clusters

Data points for each disease are plotted over time from 5/20 to 9/9, showing the comparison between standard and IPM methods.
Downy Mildew Control with ProPhyt
Berrien Concord Vineyard

ProPhyt Applied

3.6% of Leaf Surface With Downy Mildew

ProPhyt Applied on August 16 at 3 pints/acre

No ProPhyt Applied

14.1% of Leaf Surface With Downy Mildew
Implementing Scouting In Your Vineyard

• Options for growers
  - independent scout

  - distributor representative

  - do it yourself
    * not hard to learn
    * learn as you go
    * increase knowledge of your own vineyard

• MSU Extension can help you get started
Delivering I.P.M. programs

SW Hort Days
Great Lakes Expo
NW Vineyard Show
First Fridays
Summer IPM meetings
Viticulture Field Day
Annual Northwest Michigan Orchard and Vineyard Show will be Jan. 17-18, 2017
December 15, 2016 | Nikki Rothwell | Growers are encouraged to attend this two-day, premier educational program to discuss important issues for Michigan fruit industry and much more.

Managing spotted wing Drosophila in organic small fruit
December 13, 2016 | Heather Leach | Michigan State University releases new resource on useful information for managing spotted wing Drosophila in organic small fruit production.

Combing through Michigan’s pollinator planning efforts
November 21, 2016 | Meghan Milbrath | Why are so many Michigan pollinator planning efforts being developed? Let’s take a closer look at three programs and plans currently forming.

Pollination Forum will shine a spotlight on issues facing pollinators
November 11, 2016 | Meghan Milbrath | Join us Nov. 28, 2016, for the latest information on issues facing bees and the solutions being developed to support crop pollination.
Southwest Michigan grape scouting report – June 28, 2016

Grape berries are beginning to size, disease incidence remains relatively low and treatment date for grape berry moth approaches.

Posted on June 28, 2016 by Brad Baughman, Michigan State University Extension, and Keith Mason, MSU Department of Entomology

Weather and development

Concord and Niagara berries in Berrien County are sizing rapidly, and are above 1 centimeter in diameter. Bloom has ended in vinifera wine grapes.

Growing degree-day base 50 accumulations for 2016

<table>
<thead>
<tr>
<th>Location</th>
<th>June 27</th>
<th>July 3 (projected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berrien Springs</td>
<td>1,084</td>
<td>1,174</td>
</tr>
<tr>
<td>Lawton</td>
<td>1,182</td>
<td>1,294</td>
</tr>
</tbody>
</table>

Diseases

Low incidence of fungal diseases has continued. Low percentages of Phomopsis on shoot lesions and leaf lesions and black rot on leaves are present in many vineyards. The first black rot infections have begun to appear on clusters. Recent rains resulted in infection periods for numerous diseases, but we still have not observed downy mildew or powdery mildew infections in commercial vineyards.

Though we are two weeks post-bloom in juice grapes, primary inoculum for black rot are likely still being produced from overwintering sites – dry weather often delays release of primary inoculum. In wine grapes, fruit are still in the most vulnerable period of disease infection. Wine grape clusters should remain covered in protectant materials for all major diseases at this time.
MSU Grape Update subscribers:
1,133 in 2015 to 1,875 in 2016.

During 2016, articles containing “grapes” received 30,500+ views of which 26,700+ were unique pageviews.

Grape navigational pages (e.g., “Viticulture,” “Education,”) had 58,000 views.

Tom Zabadal videos on pruning and tying vines have been viewed over 277,000 times, an increase of 27,000 over last year.
Thanks to....

The grower cooperators and vineyard managers for their vineyards and time to help with this research

Michigan Grape and Wine Industry Council for the financial support.