Grape Phylloxera FAQ

There has been a lot of information passing back and forth on the WGGA chat room regarding grape phylloxera and so I thought a quick update on frequently asked questions (FAQ) would supply some answers.

What is phylloxera?

- There are two forms of phylloxera based on the life cycle of the pest with one form feeding within root galls and the other feeding within leaf galls.
- In Wisconsin, the leaf gall form of phylloxera predominates, this is likely due to the fact that Vitis species of American heritage are resistant to the root form.

Will phylloxera kill grapevines?

- Heavy infestations that result in a lot of leaf galls will reduce photosynthesis and therefore reduce sugar production that may play an indirect role in winter hardiness especially in young vines.

What is the threshold for phylloxera?

- No thresholds have been established.

Does applying a insecticide after galls first appear reduce further gall formation?

- Phylloxera has multiple generations per year, nymphs or crawlers will exit the galls on the older leaves and move to the shoot tips resulting in more galling. Once crawlers are within galls, most insecticides are ineffective.

Will phylloxera reduce yield?

- Only if severe galling results in more than 70% of the leaves infected. Phylloxera impacts fruit production the greatest if severe galling occurs 2 weeks post-bloom.

Are some French American hybrids more susceptible to phylloxera than others?

- Frontenac has been most severely infested by phylloxera in the vineyards I have scouted the previous 3 years.

When is the best time to manage phylloxera?

- Early season control is critical and insecticides should be applied during bloom.

Where can I get information on insecticides to manage phylloxera?

- See the June 1 IPM Scouting Report at http://www.uwex.edu/ces/cty/door/
What’s lurking in or near the vineyards this week?

Reports of phylloxera have been reported throughout much of Wisconsin. At the moment, disease problems seem to be at bay, likely due to the lowered humidity and cooler temperatures. However, isolated pockets of disease (powdery and downy mildew) are being reported throughout Wisconsin. Southern areas likely will be seeing Japanese beetle populations increasing. For those not using pheromone traps to monitor for grape berry moths, inspect developing grape clusters for telltale silken webs and larval frass.

Phylloxera symptomology as seen on top leaf surface (above) and galls on leaf underside (right photo) on wild grape at PARS.

Leafhoppers are becoming more apparent in Door County.

Syrphid fly—one of the beneficial natural enemies at PARS.
Fruit development on mature grape vines at Peninsular Agricultural Research Station in Sturgeon Bay, Wisconsin.

Foch July 6, 2009  
Flowering complete

La Crosse July 6, 2009  
Flowering nearly complete

Fruit development of mature grape vines in Vernon County, Wisconsin.

Foch July 7, 2009

La Crosse July 7, 2009

Vine development of Foch and La Crosse in the 2nd year at the Spooner Agricultural Research Station.

Foch July 6, 2009

La Crosse July 6, 2009
What stage are the second year grapevines at West Madison Agricultural Research Station?

Foch July 6, 2009
Berries pea size

La Crescent July 6, 2009
Berries pea size

What stage are the second year grapevines at Peninsular Agricultural Research Station?

Foch July 6, 2009
Flowering complete

La Crescent July 6, 2009
Flowering complete

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<th>Growing Degree Days(^1) from April 1 to July 5</th>
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<td>Peninsular ARS</td>
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\(^1\)Modified method

\(^2\)3 year average for West Madison ARS.

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