Missouri / Arkansas Vineyard and Pest Management News

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Vineyard Management:
Shoot thinning and trunk suckering should be finished by now; if not, then it needs to be finished quickly as we will be entering the bloom period very soon. For those growing Vitis vinifera cultivars, bloom is the preferred time for taking petiole samples for nutrient analysis. Be certain whether the lab you use for petiole analysis uses bloomtime nutrient level standards for analysis or veraison-based standards as nutrient levels in the vine change over the course of the growing season.

Fertilization reminders from last issue: Nitrogen fertilizer application can be done now if needed. Roots are active and uptake of nutrients from the soil will be increasing from now until fruit set. If you had a petiole analysis done last season and it indicated that your vines were low in either boron or zinc, the time to apply these important micronutrients to improve fruit set for this season is before bloom begins. Both of these micronutrients can be applied as a foliar spray for quick effect on developing flower clusters. Applications made after bloom/fruit set will have no beneficial effect on fruit set for this year’s crop.

Shoot positioning should be done as soon as the shoots get long enough to remain in place as they are positioned, whether they are being combed down on high-cordon trellises or positioned between foliage catch wires on low cordon trellis systems.

For those with newly planted or second-year vines or vines still too weak to carry a crop, remove flower clusters as they appear so that the vines’ growth potential is diverted into trying to develop flowers and fruit. For fruiting vines, we prefer not to do flower cluster thinning but to wait until after fruit set and thin fruit clusters (on cultivars that require it) based on shoot length. The reason for this is that factors such as weather, vine nutrient status or disease during bloom can affect fruit set.

Alerts:

Diseases:

Weather: Forecasts for next week show dry, sunny and warm weather throughout most of the region over the weekend with moderate chances for rain during the middle of the week. Temperatures will remain warm during the week. As stated in the previous issue, flower clusters are very susceptible to infection by all of the common fungal diseases at this stage and it is not a time to be lax regarding protection against them.

Sprays: As we go into bloom, this is a good time to use the strobilurin materials (Abound, Sovran, Flint, Pristine). These materials have good to very good activity against the major fungal pathogens that infect grapes and the bloom to fruit set period is a great time to insert them in the spray material rotation. Mancozeb is very good against phomopsis, black rot and downy mildew and can still be used at this time, but remember that for early-ripening cultivars it will soon be time to stop using mancozeb due to the 66-day pre-harvest interval.
**Insects:**

![Grape tumid gallmaker and grape scale images](image)

**Fig. 1.** **Grape tumid gallmaker** on grape stem and leaves (left) and **grape scale** on grape cane (right) (Photos: A. Allen, U. of MO; D. Johnson, U. of Arkansas)

**Grape tumid gallmaker:** Reports are beginning to come in of reddish, fleshy galls on grapevine tissues. These are caused by the grape tumid gallmaker, a small midge that lays eggs on opening buds. The eggs hatch and larvae enter the vine tissues, which forms galls around the larvae. The tumid galls are pale red to bright red in color and are also often referred to as grape tomato galls because they can resemble small tomatoes on leaves, petioles, stems and clusters (**Fig. 1 left**). Their occurrence is usually very sporadic and in our area they appear in mid- to late May. The damage is unsightly but is not usually of economic importance; therefore there are no pesticide recommendations for control.

**Grape berry moth:** **Monitor:** begin checking 300 clusters on perimeter vines adjacent to woodlot for presence of grape berry moth larvae. **Control:** During the hatch period after berry set to pea size berries, spray insecticide to perimeter vines (Click: [GBM Graph](#); or [May 7 Newsletter](#)).

**Grape scale:** Andy Allen has reported finding dead vines infested with grape scale in Ste. Genevieve and Rocheport, MO and Donn Johnson found vines infested in Hindsville and Springdale, AR (**Fig. 1 right**; Click: [May 7 Newsletter](#)).

**Grape phylloxera:** Most of the crawlers have emerged in Missouri vineyards south of St. James. However, in vineyards along and north of the Missouri River (New Haven, Rocheport, Waverly) we are finding crawlers in galls on the 1st to 3rd expanded leaves at shoot base and seeing immature galls forming on expanding terminal leaves. **Control:** Start crawler insecticide spray when crawlers appear from 550 to 800 DD (base 43.5 F). May require second spray 10 days later if crawlers are still present (Click: [GP Graph](#); or [May 7 Newsletter](#)).

**Rose chafer:** Watch for this beetle that may enter vineyards during and after bloom to feed on clusters and then leaves (Click: [May 7 Newsletter](#)).
Insects Trap Catch and Degree day Accumulations in Demonstration Vineyards:

Grape berry moth: the insecticide spray period occurs from 400 to 700 degree days or start from berry set to pea size (Click: GBM Graph)

<table>
<thead>
<tr>
<th>GBM Date</th>
<th>GBM*</th>
<th>DD*</th>
<th>Purdy, MO</th>
<th>SH**</th>
<th>BB</th>
<th>LB</th>
<th>SJ</th>
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<td>0.3</td>
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* DD = cumulative degree-days; GBM = grape berry moth per trap
** BB = Baltimore Bend; LB = Les Bourgeois; SJ = St. James; SH = Stone Hill; SG = Crown Valley

List of pest management suppliers: Click Suppliers

Guides giving recommended grape insect and plant disease control products (available online):
1) “Midwest Small Fruit & Grape Spray Guide 2010”
   (Click Grape Guide; or type in http://www.ag.purdue.edu/hla/Hort/Pages/sfg_sprayguide.aspx)
2) “2010 Arkansas Small Fruit Management Schedule”
   (Click MP467; or type in http://www.uaex.edu/Other_Areas/publications/PDF/MP467.pdf)

Disclaimer: Much of the information is this newsletter was gathered by the authors. All monitoring and control recommendations are given to aid growers in managing insects and diseases whereas chemical information is given with the understanding that no endorsement of named products is intended nor is criticism implied of similar products that are not mentioned. Before purchasing or using any pesticide, always read and carefully follow the directions on the container label.

Upcoming Events Calendar

June 8 - The Missouri Grape Growers Association, in conjunction with the ICCVE, will hold their annual Viticulture Field Day on June 8 at Hermannhof Winery in Hermann, MO. The featured speaker will be Dr. Terry Bates, viticulturist and director of Cornell University’s Lake Erie Research and Extension laboratory. Dr. Bates will be speaking on Site Specific Viticulture. Also on the program are Dr. Satisha Jogaiah of the ICCVE speaking on the effect of cluster exposure on Norton grape composition and Jason and Colleen Gerke of Jowler Creek Winery on the use of baby doll sheep for vineyard weed management. The meeting program and registration form are available on the ICCVE website at http://iccve.missouri.edu/.
June 14-18 – MO/AR Vineyard Tailgate Meetings. Guest speaker will be Dr. Turner Sutton, Plant Pathologist with North Carolina State University. Meeting locations, dates and times are as follows:

- Monday, June 14, Crown Valley Winery, Ste. Genevieve, MO, 1:00 to 4:00 p.m.
- Tuesday, June 15, Lynn Gay Farm, Hindsville, AR, 1:00 to 4:00 p.m.
- Wednesday, June 16, Pirtle Vineyard, Camden Point, MO, 1:00 to 4:00
- Thursday, June 17, Les Bourgeois Winery, Rocheport, MO, 1:00 to 4:00 p.m.
- Friday, June 18, Stone Hill Winery Rauch Farm, Hermann, MO, 10:00 a.m. to 1:00 p.m.

The meeting locations and directions are available on the ICCVE website at http://iccve.missouri.edu/.