Vineyard Management:
We are in the latter part of the optimum period for shoot thinning. While shoot thinning in some of our research plots in SW Missouri/NW Arkansas this week I noted that shoots from later emerging cultivars such as Norton and Vignoles were still tender enough to be easily and cleanly removed by hand; however, many more developed shoots on earlier-developing cultivars such as Chambourcin were beginning to become more firmly attached to the spur/cordon and did not always break off cleanly. Very soon now shoots will no longer be as easily removed and shoot thinning will become more time consuming. Get it done soon.

Nitrogen fertilizer application can begin now if needed. Roots should be 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 now, 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.

Alerts:

Diseases:
Weather: Forecasts for next week show moderate to good chances for rain every day next week throughout most of the region. 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.
Grape Phomopsis: Potential for phomopsis infection starts by 1 or 2 inches of shoot growth in April. Apply fungicide beginning at 1 inch shoot growth.
**Grape black rot:** Black rot (BR) affects leaves, shoots, and fruit beginning shortly after budburst. Symptoms in early spring may not appear until two weeks after infection has taken place. Begin protecting vines when shoot growth is 3-5 inches long if weather is warm (>50° F) and wet.

**Powdery mildew:** Protection against powdery mildew should be in full force now.

**Downy Mildew:** As mentioned previously, we have already seen symptoms of early infections of downy mildew in some areas of Missouri.

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**Insects:**

**Grape phylloxera:** In Gasconade County, a grower used a 10X magnification hand lens and found eggs in phylloxera stem mother galls on the 1<sup>st</sup> to 3<sup>rd</sup> expanded leaves at the base of grape shoots. **Monitor:** From 7 May (Ste. Genevieve, MO) to 15 May (Columbia, MO), begin checking your phylloxera-susceptible cultivars for yellow crawlers (**Fig. 1 left**) either inside basal leaf galls or on top of expanding terminal leaves that will begin to appear rash-like (**Fig. 1 center**). **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 (Online: [GP Graph](mailto:GPGraph)). Let Donn Johnson know when you see crawlers (479-409-4628).

**Grape berry moth:** **Monitor:** From 7 May (Ste. Genevieve, MO) to 17 May (Columbia, MO), begin checking 300 clusters on perimeter vines adjacent to woodlot for berry moth larval damage (**Fig. 1 right**). **Control:** During the hatch period, spray insecticide to perimeter vines for this first generation (Online: [GBM Graph](mailto:GBMGraph)).

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**Fig. 1.** *Grape phylloxera* on top of terminal leaf in immature gall (**left**), crawler feeding on terminal leaf causing small, rash-like galls to form (**center**), and *grape berry moth* feeding inside berry causing purple discoloration (**right**) (Photos: Donn Johnson, U. of Arkansas)

**Fig. 2.** *Grape scale* on cane (**left**), *scale crawlers* under adult cover of a related cocoa-nut scale species (**center**), and *rose chafer* on grape leaf (**right**). (Photos: Donn Johnson, U. of Arkansas (**left**); J. A. Davidson, U. Maryland (**center**); R. Isaacs, Michigan State U. (**right**))
**Grape scale:** This pest can kill canes and trunks (Fig. 2 left). **Monitor:** In early to mid May, begin weekly inspections of scale-infested canes for yellow crawlers under the grape scale cover (Fig. 2 center). **Control:** Wait until crawlers emerge in May and apply insecticide to infested vines.

**Rose chafer:** Watch for this beetle that may enter vineyards during and after bloom to feed on clusters and then leaves (Fig. 2 right).

**Insects Trap Catch and Degree day Accumulations in Demonstration Vineyards:**

**Grape berry moth:** 400 to 700 degree is the insecticide spray period (Online: [GBM Graph](http://www.uaex.edu/Other_Areas/publications/PDF/MP154/MP154.asp)).

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**Upcoming Events Calendar**

**May 12** – Exploring Winegrape Production Workshop. Velma Houts Fair Building, 201 E. Hwy 136, Rock Port, MO. 6:00-9:00 P.M. For more information or to register, call 660-744-6231.

**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://iccvе.missouri.edu/](http://iccvе.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, Kansas City, MO, Location TBD, 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.

**List of pest management suppliers online:** Click [Suppliers](http://www.uaex.edu/Other_Areas/publications/PDF/MP154/MP154.asp)

Arkansas Guides giving recommended fruit insect and plant disease control products (available online):

   (click [MP154](http://www.uaex.edu/Other_Areas/publications/PDF/MP154/MP154.asp)
   or type in http://www.uaex.edu/Other_Areas/publications/PDF/MP154/MP154.asp)
2) “2010 Arkansas Small Fruit Management Schedule”
   (click [MP467](http://www.uaex.edu/Other_Areas/publications/PDF/MP467.pdf) or type in http://www.uaex.edu/Other_Areas/publications/PDF/MP467.pdf)
3) “Insecticide Recommendations for Arkansas – 2010”
(click MP144; or type in http://www.uaex.edu/Other_Areas/publications/PDF/MP144/MP-144.asp)
Disclaimer: Much of the information in 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.