



Vinews Viticulture Information News, Week of 2 May 2016 Columbia, MO



Potential New Disease Problem – Scouting Alert

Diagnosing disease symptomology from only pictures is a difficult task. This task is compounded if the symptoms are not easily classified to be among the major grape diseases. Complicating factors further is that symptoms change over time and symptoms are different on different grape cultivars. This is why it is important to submit tissue to me or Patti Hosack in the Plant Diagnostic Clinic. In the clinic the sample is incubated and then the disease can be identified based on a number of factors including the shape, size and color of the reproductive stage. I wish I had all that to help identify the problem in the pictures that were sent to me this morning. As you all know time is at the essence in treating a problem in the vineyard. So in this instance I am willing to provide an alert to other growers, especially growers that are seeing these symptoms on their vines.

The pictures show interveinal reddening/browning of the leaf tissue and this discoloration is contained within the major leaf vein borders (Figure 1). The major leaf veins also show reddening/browning.

At this time without diagnosing tissue to accurately identify the causal agent is only a best guess estimate. However, the best guess is based on gleanings from the scientific literature. The symptoms suggest that the leaves are infected with the fungus *Pseudopezizicola tetrespora* or Angular leaf scorch. Angular leaf scorch was first described in 1985. The disease manifests on new leaves in the spring following wet periods. Although April had less precipitation than normal, many long dew periods occurred throughout the month. Typically the disease has only one cycle of infection during the spring of the year. Secondary infections can occur if extended wet rainy conditions prevail.

There is a lot of grape cultivar variability in susceptibility to Angular leaf scorch. *Vitis lambrusca* cultivars are only slightly susceptible-Catawba, Concord, Delaware, Dutchess, Foch, Fredonia, Ives, and Niagara. Moderately susceptible-Elvira, Missouri Riesling, and Steuben. Inter-specific hybrid cultivars that are slightly susceptible-Himrod, Remainly seedless, and Vidal blanc; moderately susceptible-Baco noir, Canadice, Cayuga white, Rosette, Seyval, and Vinoles; and extremely susceptible-Aurore, Chancellor, Chelois, DeChaunac, and Rougeon.



Figure 1. Chambourcin leaf showing symptoms of suspected Angular leaf scorch. Notice reddening/browning of interveinal leaf tissue and reddening/browning of major leaf veins.

In general *V. lambrusca* cultivars and *V. vinifera* cultivars are less susceptible than interspecific hybrids to Angular leaf scorch. Native North American grape species also show variability in susceptibility to Angular leaf scorch. Both *V. aestivalis* and *V. lambrusca* are relatively resistant to Angular leaf scorch, whereas *V. riparia* is highly susceptible.

The pictures submitted were from Chambourcin an interspecific hybrid. In a follow-up communication with the vineyard owner I determined that Seyval in this same vineyard block was also showing similar symptoms, but the Concord had no symptoms. This fits the cultivar susceptibility of Angular leaf scorch.

Angular leaf scorch is managed using products containing mancozeb. This particular vineyard block had not received a cover spray until very recently. Mancozeb was applied for the first time this week, but symptoms of Angular leaf scorch were already present. This would suggest the vines were not protected early enough to protect from infection. However, what is a bit confusing is that another set of pictures was sent to me last week with similar symptoms (Figure 2). In this case Manzate (3lb/acre) and Rally (2 oz/acre) were applied at 1- to 2-inch-shoots of Vignoles. In this case, the vines should have been protected from Angular leaf scorch.

If you are seeing symptoms that are similar to the symptoms in the pictures in this article please contact me and send leaf samples. Leaf samples should be sent on Monday's to assure arrival during the business week. Collect leaves with petioles attached and wrap petioles in moist paper toweling. Wrap paper towel with plastic wrap and put leaf samples in a small box. Please send next day-delivery. Please include the grape cultivar name and your contact information.

Samples can be sent to
Dean Volenberg
214 Waters Hall
Columbia, MO 65211

References

Pearson, R. C. 1992. [Angular leaf scorch of grape](#). Disease identification Sheet No. 8. Cornell Cooperative Extension.

Pearson, R. C., F. D. Smith, and B. Dubos. 1988. [Angular Leaf Scorch, A new disease of grapevines in North America caused by *Pseudopezicula tetraspora*](#). Plant Disease 72:796-800.



Upper leaf surface



Lower leaf surface

Figure 2. Vignoles leaf with suspected symptoms of Angular leaf scorch.

Cumulative Growing Degree Days for the Seven Grape Growing Regions of Missouri from April 1 to May 2, 2016.

Region	Location by County	Growing Degree Days ¹		
		2016	2015	30 Year Average
Augusta	St. Charles	316	321	305
Hermann	Gasconade	315	307	295
Ozark Highland	Phelps	353	342	304
Ozark Mountain	Lawrence	435	392	385
Southeast	Ste. Genevieve	344	326	312
Central	Boone	304	296	274
Western	Ray	278	275	260

¹Growing degree days at base 50 from April 1 to May 2, 2016. Data compiled from Useful and Useable at <https://mygeohub.org/groups/u2u/tools>. Click on link below to determine growing degree days in your area.

To determine the number of growing degree days accumulated in your area since April 1, click this link [Search for GDD at your location using this tool](#).

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 573-882-0476 or volenbergd@missouri.edu