

## Vinews Viticulture Information News, Week of 6 August 2018 Columbia, MO



### **Drought and Animal Damage**

Limited rainfall throughout many areas of Missouri during the growing season have resulted in some vineyards experiencing animal damage. As the landscape experiences drought many food sources that wild animals rely on become limiting. This results in animals searching for new food and water sources. One of those new food sources is often grapes. Over the last few weeks, I have seen more Deer in vineyards. Additionally, others report crop damage from raccoons and turkeys. Also during drought periods damage from birds usually increases.

Although there are deterrents to animal damage. For example; vineyard perimeter fencing for deer, low and high electrical fencing for raccoons and deer, and netting for birds many of these systems should be installed prior to damage. It becomes difficult to change an animals feeding behavior once they have located a food supply.

Grape clusters damaged by animal feeding can provide an opportunity for secondary problems. Berries that are damaged from bird pecks or from other animal feeding are prone to sour rot. As the harvest of Vignoles is approaching be vigilant in your scouting. Focus scouting on wooded border edges. Also, focus on were drip irrigation water may pool as during a drought these water pools attract thirsty animals.

### **Extended Morning Wetting Periods and Disease**

Although rainfall has been limiting, heavy morning dews have resulted in extended wetting periods. I took my first notice of this on Thursday morning at 10:00 am. Canopies on the west side of the trellis were still dripping wet whereas canopies on the east side were dry. The biggest concern at this time of the season is with downy mildew infections. Temperatures in the mid-70's to 80 degrees and wet leaf tissue can result in some hasty infections. Other grape pathogens that need free-water tissue moisture for infection include; phomopsis, anthracnose, and Black rot. At this time in the growing season Phomopsis spores should be very limited, Black rot can still be a threat, especially if an earlier primary infection occurred, anthracnose can also be a potential threat.

Dry humid weather drives powdery mildew. Focus scouting on inspecting the rachises and peduncle, especially on highly susceptible cultivars like Chambourcin. Late season infections of powdery mildew often start where a humid micro-environment exists and these areas include internal leaf canopy areas, especially near shaded border rows and green tissue of the peduncle and rachis.

## Fungicides and Fermentations

As harvest nears it is important to keep the crop free of pathogens and use fungicides that will not interfere with fermentation or wine quality. There are three main fungicides of concern; captan, copper products, and sulfur that can negatively impact fermentations and or wine quality. Captan residues may delay fermentation whereas sulfur and copper residues may impart off-tastes in wine. A number of alternative fungicide products are available to manage late season fungal infections. As harvest day approaches be aware of the REI and PHI of the fungicide products being applied. See page 97 of the 2018 Fruit Pest Management Guide for REI and PHI of specific fungicide materials or consult the label.

Powdery mildew fungicide alternatives include Quintec, Endura, Pristine or potassium salts as well as others.

Downy mildew fungicide alternatives include phosphorous acid products or strobilurin fungicides (If you have applied strobilurin fungicides two times already during the season, rotate to another fungicide that is not Frac Code 11).

## Sour rot

Sour rot is a complex disease that involves microbes and fruit flies. Previous research by my colleague Dr. Megan Hall, Viticulture Research Leader showed that the best control of Sour rot is attained by controlling both the microbes and the fruit flies. Her research demonstrated that Sour rot is best managed by applying Oxidate plus an insecticide at the onset of Sour rot symptoms.

If you are growing tight-clustered grape cultivars that are susceptible to Sour rot, then consider monitoring the following:

- Monitor the soluble solids (° Brix) and when 15 ° Brix is obtained this is often when Sour rot will begin to make an appearance. Pay attention and monitor clusters closely for Sour rot symptoms when 13 ° brix is attained.
- Monitor the weather especially as 15 ° Brix is approaching. If wet rainy periods occur this is often the time that Sour rot will start in the vineyard.
- Monitor fruit fly populations in the vineyard. Currently it appears that the common fruit fly, *Drosophila melanogaster* is the major player and not spotted wing drosophila. Fruit flies can be monitored using commercial traps.

The best control of Sour rot is the application of an antimicrobial plus an insecticide starting at 15 °Brix. However if costs preclude this application, then consider controlling fruit flies with Mustang Max.

There still are a lot of questions to be addressed in managing Sour rot. Sour rot is a complex disease composed of bacteria, yeast, and fruit flies. Wet conditions also play a role. As well as damaged fruit. Implementing management practices that maintain berry integrity (bird netting) and speed cluster dry-down (leaf removal) will also reduce the incidence of Sour rot.

## Cumulative Growing Degree Days for the Seven Grape Growing Regions of Missouri from April 1 to 6 August, 2018.

Region	Location by County	Growing Degree Days <sup>1</sup>		
		2018	2017	30 Year Average
Augusta	St. Charles	2646	2470	2376
Hermann	Gasconade	2471	2353	2246
Ozark Highland	Phelps	2681	2559	2412
Ozark Mountain	Lawrence	2665	2574	2410
Southeast	Ste. Genevieve	2540	2494	2400
Central	Boone	2593	2426	2320
Western	Ray	2486	2321	2235

<sup>1</sup>Growing degree days at base 50 from April 1 to August 6, 2018. 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. [Use 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](mailto:volenbergd@missouri.edu)