



Vine news Viticulture Information News, Week of 12 October 2015 Columbia, MO



Young Vines and Vine Health

A few people have contacted me about disease problems occurring after harvest. The bottom line: keep the leaves on the vines as long as possible. Especially for vines that were just established this spring/summer.

Young vines need protection from pests throughout the growing season. During vine establishment weeds and disease are the two biggest threats. Many of the newly planted vineyards this year were planted late because of the wet soil conditions that prevailed this spring and early summer. Keeping these vines healthy throughout this shorter than normal growing season is all the more important. Young vines should be maintained free of disease, especially from diseases that can cause premature defoliation. In the fall the main diseases of concern are powdery and downy mildew. If young vines are defoliated early there is greater potential for winter cold injury. Maintaining your vines at this time of the year requires that you look at future weather frost forecasts, the level of disease that is in the vineyard, current and future weather conditions that may hasten or limit the spread of the disease, and the grape cultivar(s) resistance or susceptibility to downy and powdery mildew.

Note: use fungicides that are not prone to selecting for fungicide resistance. With some scattered frost predicted for this weekend place a lot of consideration on vineyard location and historical frost dates before deciding to apply any treatment.



Newly established vines should be kept healthy throughout the growing season.

Bunch Rots: Thoughts on Sanitation

As fall descends soon the grape petioles will abscise from the shoots and grape leaves will litter the ground. Looking out over the vineyard during this time, it appears void, but I always wonder what is left behind. Among those canes, cordons, pedicels, and mummified fruit are the overwintering bunch rots.



Black rot (*Guignardia bidwelli*) on Seyval blanc August 26, 2015. Photo credit: D. Volenberg

Among the bunch rots are bitter rot (*Greeneria uvicola*), Phomopsis rot (*Phomopsis viticola*), ripe rot (*Colletotrichum* spp.), macrophoma rot (*Botryosphaeria dothidea*), Black rot (*Guignardia bidwelli*), and bird's-eye rot (*Elsinoe ampelina*). Taking steps to remove the overwintering bunch rots will help reduce the potential for infections next season. First, however you have to know where bunch rots are overwintering.

Bitter rot: dead wood of cordons, old pedicles, and mummified fruit

Ripe rot: dead wood of cordons, old pedicles, mummified fruit on the vine

Macrophoma rot: dead wood of cordons, old pedicles, mummified grapes

Phomopsis rot: infected canes and rachises

Black rot: infected canes and spurs and mummified berries within the vine or on the ground. Forget about the mummy berries on the ground as they contribute minimally to the spore load compared to mummified grapes still hanging in the vine. Mummified berries on the vine will release spores all through the period of berry susceptibility which is from cap fall until 4 to 5 weeks later. Berries become fully resistant 6 to 7 weeks after cap fall.

Bird's – eye rot: infected shoots retained as spurs or canes

Looking over this list above it becomes very apparent that the removal of old pedicles and mummified grapes during dormant pruning can help reduce much of the spore load that could infect the crop next season. Removing infected canes/cordons, old pedicles and mummified fruit reduces the potential for a primary infection. In essence, sanitation will not eliminate rots, but it surely will reduce primary infections. Sanitation is only one step in the management process of controlling the complex of fruit rots. Canopy management coupled with a disease management program must also be part of the bunch rot management scenario.

Going a bit further in the management of bunch rots is to consider the removal of dead wood or potentially even consider cordon renewal. As vines age, there is a tendency for blind wood to develop along the cordon that is no longer is fruitful. Over time the cordon has reduced productivity. Also cordons become a reservoir for diseases. Some past research work of Turner Sutton showed that vines with cordons that were 10 years old or greater had a significantly more diseased fruit per cluster compared to cordons that were 1-, 2-, or 3-years old (Figure 1).

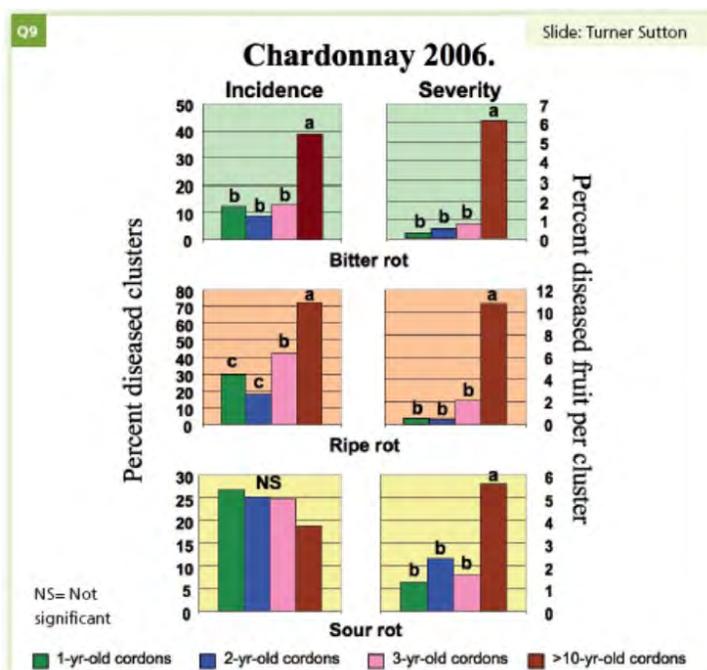


Figure 1. The incidence and severity of selected bunch rots from cordons of different age classes. Image credit: Turner Sutton

The research evaluated bitter rot, ripe rot, and sour rot in the cultivar Chardonnay. Obviously, cordon renewal also will result in decreased production during the renewal process. Therefore, to maintain productivity the renewal process can be done over a period of time.

Often in colder climates the semi-permanent trunks and cordons are replaced after a devastating cold weather event. A prime example, would have been the Easter freeze of 2007. This cold-weather event resulted in many vineyards being reestablished from the ground up. Most of these renewed vines have trunks and cordons that are approaching 10 years old.

Certainly, the economics have to play a role in your decision making process when considering cordon renewal. Certainly there is some anecdotal reports that bunch rots are lessened in cane pruned vineyards. This provides more evidence that future research should explore cordon renewal as a potential method in lessening bunch rots in cultivars prone to bunch rot diseases.

References

Hartman, J. R. and C. A. Kaiser. 2008. [Fruit Rots of Grape](#). Kentucky Cooperative Extension Service.

Schilder, A. [Managment of Bunch Rot Diseases in Grapes](#). Michigan State University.

Sutton, T. B. 2009. Non-botrytis bunch rots in the southeastern US and their management. Hunter Valley Wine Association Vineyard Health Workshop. See [Non-Botrytis Bunch Rot Questions and Answers](#). 2010. Grape and Wine Research and Development Corporation.

Cumulative Growing Degree Days for the Seven Grape Growing Regions of Missouri from April 1 to October 12, 2015.

Region	Location by County	Growing Degree Days ¹		
		2015	2014	30 Year Average
Augusta	St. Charles	3767	3581	3625
Hermann	Gasconade	3593	3361	3466
Ozark Highland	Phelps	3922	3747	3718
Ozark Mountain	Lawrence	3851	3705	3707
Southeast	Ste. Genevieve	3871	3680	3716
Central	Boone	3681	3415	3577
Western	Ray	3545	3443	3479

¹Growing degree days at base 50 from April 1 to October 12, 2015. 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