

GRAPE (*Vitis vinifera* 'White Riesling')  
Botrytis Bunch Rot; *Botrytis cinerea*

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### **Efficacy of fungicides for management of grape bunch rot, 2017**

Fungicide treatments were arranged in a randomized complete block design in a vineyard of 'White Riesling' planted in 1995 on a 7x10 ft spacing. Vines were trained to a bilateral cordon with spur pruning. Vines were pruned from 21 to 24 Feb. Sucker removal and shoot thinning by hand occurred 15 to 20 May. Canes were cut above the top wire on 28 to 29 Jun and maintained at this height throughout the growing season. Each treatment was replicated on 4 sets of 5 vines. Fungicides were applied using a hooded boom sprayer at 200 psi resulting in 88 gal water/A. Approximately 2.9 gal of a spray suspension were applied per set of 20 vines. Botector was applied using a Stihl-20 backpack sprayer only used for biological materials. All materials were applied focused on the fruiting zone. Leaves were removed from the fruiting zone on the east side of all vines on 17 to 19 Jul. Treatments were applied on 23 Jun (pre-bloom, BBCH 57), 27 Jun (full bloom, BBCH 65), 26 Jul (bunch close, BBCH 78), 6 Sep (Veraison, BBCH 85), 28 Sep (preharvest). Powdery mildew management was attempted with applications of Thiolutax (6 lb/A) on 9 Jun, Quintec (4 fl oz/A) on 27 May, 19 and 30 Jun, and 14 Jul then Stylet Oil (1 gal/100 gal) on 21 Jul and Torino (6.8 fl oz/A) on 4 Aug. Fungicide applications for powdery mildew control were applied using a hooded boom sprayer at 200 psi. Rows were side dressed with a 16-16-16 fertilizer at 100 lb/A on 4 May. No herbicides or insecticides were applied this during the trial. Nets were placed over rows on 9 Oct to prevent bird damage. Incidence and severity of bunch rot was determined on 16 to 17 Oct by harvesting and examining 50 clusters (average 20.0° Brix) from the center of each set of vines.

Spring weather conditions for 2017 were considered cool and wet but with more normal plant growth relative to time of year. Symptoms of powdery mildew were first found on 31 May but incidence and severity of powdery mildew was much higher than expected by mid Jul. (We highly suspect this was due to fungicide resistance.) High powdery mildew pressure along with poor control and low vine vigor resulted in smaller berries and clusters. Loose, poorly filled and open clusters are not conducive to bunch rot development. Bunch rot symptoms were first observed sporadically throughout the vineyard on 25 Sep. Incidence and severity of bunch rot was not significantly different between any treatments including non-treated vines. Incidence was high but severity had not increased to a point where differences might have been determined. Few conclusions can be gleaned from this trial. No phytotoxicity was observed on any vines treated with any material.

Acknowledgements - We wish to thank Stephanie Heckert for helping with data collection.

Treatment & Rate/A or /100 gal as indicated below	Time of application*	% Bunch Rot**	
		Incidence (16 Oct)	Severity (16 Oct)
Non-treated but leaves were pulled.....	None.....	65.0	5.7
Miravis Prime at 11.4 fl oz plus Induce at 16 fl oz/100 gal ...	B, C, D, E...	33.5	0.8
Elevate 50 WG at 1 lb plus Induce at 16 fl oz/100 gal ...	B, C, D, E...	39.0	0.7
Gavel 75 DF at 2.5 lb plus Induce at 16 fl oz/100 gal ...	B, C, D, E...	38.0	1.5
Gavel 75 DF at 2.5 lb plus Elevate 50 WG at 1 lb plus Induce at 16 fl oz/100 gal ...	B, C, D, E...	53.5	1.7
GWN-9790 at 12.8 fl oz plus Induce at 16 fl oz/100 gal ...	B, C, D, E...	52.0	1.8
GWN-9790 at 12.8 fl oz plus Elevate 50 WG at 1 lb plus Induce at 16 fl oz/100 gal ...	B, C, D, E...	34.0	0.7
GWN-10320 at 2 pt plus Nu-Film-P at 16 fl oz/100 gal .....	All.....	56.0	7.8
GWN-10320 at 3 pt plus Nu-Film-P at 16 fl oz/100 gal .....	B, C, D, E...	41.0	2.2
GWN-10320 at 2 pt plus Nu-Film-P at 16 fl oz/100 gal alternate Elevate 50 WG at 1 lb plus Induce at 16 fl oz/100 gal ...	B, D  C, E.....	41.5	1.2
Botector at 10 oz .....	All.....	51.5	1.4

\* Treatments were applied on A = 23 Jun (pre-bloom, BBCH 57), B = 27 Jun (full bloom, BBCH 65), C = 26 Jul (bunch close, BBCH 78), D = 6 Sep (Veraison, BBCH 85), E = 28 Sep (preharvest).

\*\* Means without letters do not differ significantly based on Fisher's protected LSD ( $P=0.05$ ).