

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

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Efficacy of fungicides for control of grape bunch rot, 2003.

Fungicide treatments were arranged in a randomized complete block design in a block of 'White Riesling' planted in 1995 on 7 x 10 ft spacing. Vines were trained to a bilateral cordon with spur pruning. The number of buds was adjusted based on pruning weights at the rate of 30 buds/kg canes. Shoot thinning occurred 30 May to 4 Jun. Each treatment was replicated on 4 sets of 5 vines. Fungicide applications were applied using a hooded boom sprayer at 200 psi. Fungicides were applied at 130 gal water/A and were focused on the fruiting zone. Approximately 4.3 gal of a spray suspension was applied per set of 20 vines. Treatments were applied on 19 Jun (40% bloom), 1-2 Jul (Shatter), 18 Jul (50% bunch closure), 28 Aug (60% veraison), 11 Sep and 3 Oct (preharvest). Leaf removal was performed for one set of vines on 2 Jul. Lime Sulfur (10 gal/A) was applied 16 Apr, and Thiloux 80 DF (2.5 lb/A) was applied on 31 May, and Abound (11 oz/A) plus Procure 50 WP (8 oz/A) was applied on 9 and 17 Jun and 2, 15 and 30 Jul, and 14 Aug for control of powdery mildew. Urea fertilizer was spread within vine rows on 29 Apr at 58 lb/A. Surflan AS (3 qt/A) plus Glyphos X-TRA (3qt/A) were applied 16 Apr to control weeds in the vine row. Nets were placed around vines early Sep to protect fruit from possible bird damage. Incidence of bunch rot was determined on 27 Aug, 25 Sep, 1 Oct, 8 Oct and 13 Oct by examining 50 clusters from the center vines of each set of vines. Severity of bunch rot was determined on 13-14 Oct (15.5° Brix) by harvesting and examining 50 clusters from the center vines of each set of vines (east side). Comparisons among treatments for incidence of bunch rot was evaluated by calculating the area under disease progress curves (AUDPC). AUDPC was calculated by multiplying the mean incidence from two observation dates by the number of days between observations ($\sum [Y_{i+1} + Y_i]/2][X_{i+1}-X_i]$ where Y_i is severity of rot at i th observation and X_i is the day of the i th observations). Values calculated between each pair of observations are added together to obtain a total AUDPC.

Weather conditions during the grape growing season in Western Oregon were considered hot and dry with below normal rainfall. Some raisining or drying of berries in the bunch was observed on the west side of the vines. Bunch rot was first observed in late Aug but did not increase until late Sep. A total of 1.37 in rain fell between the preharvest application and harvest. The amount of bunch rot on vines with just leaf pulling or on vines treated with ABG-3207 or VBC-30017 was not significantly different from nontreated vines. Although the Rovral, Vanguard, Elevate rotation had high bunch rot levels on 13 Oct, the AUDPC for this set of vines was significantly lower than for nontreated vines. Bunch rot levels rose rapidly in these plots during the preharvest period. Best bunch rot control occurred on Elevate treated vines, however, the amount of bunch rot on vines treated with Vanguard, or the lower rate of Pristine were not significantly different. No phytotoxicity was observed on any vines treated with any fungicide.

Treatment and Rate/A	Time of Application**	% Bunch Rot 13 Oct*		AUDPC*
		Incidence	Severity	
Nontreated	None.....	84.5 ab	20.2 ab	6.9 ab
Rovral 50 WP 2 lb then	Bloom			
Vanguard 75 WG 10 oz then	Bunch Close			
Elevate 50 WDG 1 lb ...	V and PH.....	73.5 abcd	11.4 bcde	4.0 de
Pristine 38 WG 1.184 lb.....	FB, BC, V and PH.....	54.0 def	5.5 de	2.7 ef
Pristine 38 WG 0.79 lb.....	FB, BC, V and PH.....	64.0 cde	10.5 cde	4.3 cde
Vanguard 75 WG 10 oz	FB, BC, V and PH.....	50.0 ef	6.5 de	2.6 ef
Elevate 50 WDG 1 lb	FB, BC, V and PH.....	43.5 f	2.2 e	1.5 f
ABG-3207 at 0.87 oz.....	Shatter only .	90.5 a	29.4 a	8.6 a
VBC-30017 at 8.67 oz.....	V and			
	V + 2 weeks...	70.5 bcd	12.1 bcd	5.9 bcd
ABG-3207 at 0.87 oz then	Shatter			
VBC-30017 at 8.67.....	V & V + 2 wks	75.5 abc	16.3 bc	6.2 bc
Leaf Pull Only.....	Shatter.....	73.0 abcd	14.2 bcd	5.6 bcd

* Means followed by same letter do not differ significantly based on Fisher's protected LSD (P=0.05).

**FB = Full Bloom, BC = Bunch Close, V = Veraison, and PH = PreHarvest.