

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

J. W. Pscheidt and Gordon Kenyon  
Dept. of Botany and Plant Pathology  
Oregon State University and USDA-ARS-HRCL  
Corvallis, OR 97331-2903

EFFICACY OF FUNGICIDES FOR CONTROL OF GRAPE BUNCH ROT, 2001: 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 29-31 May. Each treatment was replicated on 4 sets of 5 vines. Fungicide applications were applied using a hooded boom sprayer at 200 psi. The first fungicide application was applied at a rate of 163 gal/A over the entire canopy. Subsequent applications were applied at 127 gal water/A and were focused on the fruiting zone. Approximately 4-5 gal of a spray suspension was applied per set of 20 vines. Treatments were applied on 29-30 Jun (90% bloom), 20 Jul (bunch closure), 5 Sep (veraison) and 27 Sep (preharvest, 16° Brix). No leaf removal was performed. Microthiol Disperss 80 WG (10 lb/A) was applied on 1 Jun, and Rally 40 W (2.5-8 oz/A) was applied on 8 and 20 Jun, 6 and 19 Jul, 3 and 24 Aug for control of powdery mildew. Urea fertilizer was spread within vine rows on 10 May at 127 lb/A. Roundup Ultra (3 qt/A) was applied 7 Mar to manage weeds which had already emerged in the vine row. Cassaron 4G (150 lb/A) was applied 23 Mar to provide residual weed control. Nets were placed around vines on 19-21 Sep to protect fruit from possible bird damage. Incidence of bunch rot was determined on 26 Sep (16.0° Brix) and 2 Oct (16.6° Brix) by examining 50 clusters from the center vines of each set of vines. Incidence and severity of bunch rot was determined on 10-11 Oct (17.0° Brix) by harvesting and examining 50 clusters from the center vines of each set of vines.

Weather conditions in Western Oregon were considered dry with 50% below normal rainfall. Bunch rot was observed in late Sep but increased rapidly after 0.47 in rainfall on 25-26 Sep. All fungicide treated vines had significantly less bunch rot on 26 Sep than nontreated vines except vines treated with the low rate of QRD 131 and QRD 132. All fungicide treated vines had significantly less bunch rot on 2 Oct than nontreated vines. All fungicide treated vines had significantly less bunch rot incidence on 10-11 Oct than nontreated vines except vines treated with any QRD formulation or Abound tank mixed with Vanguard. Best control of bunch rot incidence on 10-11 Oct was with Elevate alone, however, the incidence on vines treated with the higher rate of Vanguard alone or Switch was not significantly different. All fungicide treated vines had significantly less bunch rot severity than nontreated vines except vines treated with the low rate of QRD 131. Best control of bunch rot severity was with Elevate alone, however, the incidence on vines treated with Vanguard alone, Vanguard alternated with Abound, Switch or BAS 516 was not significantly different. All of the QRD materials foamed to some extent when mixed with water. The QRD 132 and QRD 137 materials were excessively foamy, to the point that significant material would have been suspended in the foam, and not go into solution without extensive rinsing of spray solution through the foam. No phytotoxicity was observed on any vines treated with any fungicide.

Treatment and Rate/A	Time of Application**	% Incidence of Bunch Rot*			% Severity of Bunch Rot (10-11 Oct)*
		26 Sep	2 Oct	10-11 Oct	
Nontreated .....	None	15.0 a	28.0 a	94.0 a	16.2 a
Elevate 50 WDG 1 lb.....	All	0.3 b	3.5 d	34.0 f	0.9 e
Vanguard 75 WG 5 oz.....	FB and BC only	5.8 b	11.3 bcd	69.5 bc	6.1 cde
Vanguard 75 WG 10 oz.....	FB and BC only	1.5 b	4.8 d	38.0 ef	1.6 de
Abound 11.1 fl oz alternate.....	FB and V				
Vanguard 75 WG 10 oz.....	BC and PH	3.5 b	11.8 bcd	66.0 bcd	5.6 cde
Vanguard 75 WG 10 oz alternate	FB and V				
Abound 11.1 fl oz.....	BC and PH	2.0 b	7.3 cd	54.5 cde	3.0 de
Abound 6.2 fl oz plus					
Vanguard 75 WG 5 oz.....	FB and BC only	6.3 b	10.8 bcd	77.5 ab	8.9 bc
Switch 62.5 WG 10 oz.....	FB and BC only	1.8 b	3.5 d	49.0 ef	2.3 de
Switch 62.5 WG 14 oz.....	FB and BC only	0.8 b	4.0 d	42.5 ef	1.2 e
QRD 131 AS 1 gal.....	All	15.8 a	18.0 b	78.0 ab	12.6 ab
QRD 131 AS 2 gal.....	All	5.8 b	14.8 bc	82.5 ab	7.1 bcd
QRD 132 WP 6 lb.....	All	13.3 a	18.8 b	78.5 ab	10.2 bc
QRD 137 WP 6 lb .....	All	4.3 b	11.8 bcd	80.5 ab	7.1 bcd
BAS 516 (38 WG) 1.18 lb.....	All	2.3 b	8.3 cd	52.5 de	5.0 cde
BAS 516 (38 WG) 1.45 lb.....	All	4.5 b	6.0 cd	45.0 ef	2.7 de

\* 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.