

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

J. W. Pscheidt and J. P. Bassinette
Dept. of Botany and Plant Pathology
Oregon State University
Corvallis, OR 97331-2903

Efficacy of fungicides for management of grape bunch rot, 2015

Fungicide treatments were arranged in a randomized complete block design in a block 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 12 to 24 Mar and thinned to approximately 60 spurs/vine from 4 to 14 May. Each treatment was replicated on 4 sets of 5 vines. Most fungicide applications were applied using a hooded boom sprayer at 150 psi resulting in 88 gal water/A. Approximately 2.9 gal of a spray suspension were applied per set of 20 vines. All applications of Botector (stored in a refrigerator) occurred with a Stihl Backpack sprayer (never used for chemicals) using 3 gal of a spray suspension per set of 20 vines. All materials were applied focused on the fruiting zone. Leaves were removed from the fruiting zone on the east side of all vines on 7 Jul. Treatments were applied on 12 Jun (full bloom, BBCH 64), 10 Jul (bunch close, BBCH 78), 27 Aug (past Veraison, BBCH 85), and 14 Sep (preharvest). Verasion occurred on 5 Aug but the third application was delayed until 27 Aug when a threat of rain was forecasted. Powdery mildew was managed starting with applications of Kumulus (6 lb/A) on 15 and 28 May then Quintec (4 fl oz/A) plus Induce (15 fl oz/100 gal water) on 11 and 24 Jun, 8 and 22 Jul and 5 Aug. Fungicide applications for powdery mildew control were applied using a hooded boom sprayer at 150psi. No insecticides were used for management of mites. Plots were fertilized on 22 Apr with a balanced fertilizer of 16-16-16 at approximately 43 lb/A (based on in the tree row area). Makaze (2 qt/A) was applied on 19 Feb and GoalTender (15 oz/A) plus Reckon (2 qt/A) was applied on 30 Mar for management of weeds. Suckers and weeds were sprayed with Aim (3.5 fl oz/A) plus Forefit (3 qt/A) on 4 Jun. Nets were placed over rows on 29 Aug to prevent bird damage. Incidence of bunch rot was determined on 13, 22 and 28 Sep by examining 50 clusters from the center of each set of vines. Severity of bunch rot was also determined on 28 Sep by harvesting and examining 50 clusters (average 19.7° Brix) from the center of each set of vines.

Spring and summer growing conditions were considered warm and dry resulting in accelerated vine development. Subtle bunch rot symptoms were first observed sporadically throughout the vineyard on 3 Sep. Incidence of bunch rot was not significant different between any treatments on 13 or 22 Sep. Highest incidence of bunch rot on 28 Sep was found on vines treated with Serenade but bunch rot found on nontreated vines or vines treated with Luna Experience alone were not significantly different. Lowest incidence of bunch rot on 28 Sep was found on vines treated with the middle rate of GWN 10411 but bunch rot found on vines treated with any rate of GWN 10411, Luna Tranquility alone or Botector were not significantly different. Highest severity of bunch rot was found on nontreated vines but bunch rot found on vines treated with Luna Experience alone or Serenade were not significantly different. Lowest severity of bunch rot was found on vines treated with the middle rate of GWN 10411 but bunch rot found on vines treated with any rate of GWN 10411, Luna Tranquility alone or Botector were not significantly different. No phytotoxicity was observed on any vines treated with any material.

Treatment & Rate/A or /100 gal as indicated below	Time of application*	% Bunch Rot**			
		Incidence (13 Sep)	Incidence (22 Sep)	Incidence (28 Sep)	Severity (28 Sep)
Nontreated but leaves were pulled.....	None.....	10.5	17.0	55.5 a	6.7 a
Luna Experience SC at 8.6 fl oz plus					
Induce at 15 fl oz/100 gal	All.....	8.0	13.5	59.5 a	6.6 a
Luna Tranquility 500 SC at 16 fl oz					
Induce at 15 fl oz/100 gal	All.....	0.0	7.0	19.5 b	0.3 b
Luna Experience SC at 8.6 fl oz plus					
Induce at 15 fl oz/100 gal then	A				
Serenade Opti at 16 oz plus					
Induce at 15 fl oz/100 gal then	B				
Luna Tranquility 500 SC at 16 fl oz					
Induce at 15 fl oz/100 gal then	C				
Serenade Opti at 16 oz plus					
Induce at 15 fl oz/100 gal.....	D.....	10.5	13.5	60.5 a	6.5 a
GWN-10411 at 5 oz plus					
Induce at 15 fl oz/100 gal	All.....	0.5	1.0	28.5 b	0.9 b
GWN-10411 at 7 oz plus					
Induce at 15 fl oz/100 gal	All.....	0.5	0.5	11.0 b	0.3 b
GWN-10411 at 10 oz plus					
Induce at 15 fl oz/100 gal	All.....	0.5	0.5	21.5 b	0.3 b
Botector at 10 oz/A.....	All.....	2.0	6.5	31.5 b	1.2 b

* Treatments were applied on A = 12 Jun (full bloom, BBCH 64), B = 10 Jul (bunch close, BBCH 78), C = 27 Aug (past Veraison, BBCH 85), and D = 14 Sep (preharvest).

** Means followed by same letter do not differ significantly based on Fisher's protected LSD ($P=0.05$). Means without letters are do not differ significantly.

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