

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

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

#### **Efficacy of fungicides for management of grape bunch rot, 2014**

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 27 Feb to 4 Mar. Shoots were not thinned due to severe cold damage during the dormant season. Sucker were removed by hand 4 Jun. Canes were cut above the top wire on 15 Jul and maintained at this height throughout the growing season. Each treatment was replicated on 4 sets of 5 vines. Fungicide applications were applied using a hooded boom sprayer at 150 psi resulting in 88 gal water/A. Approximately 2.8 gal of a spray suspension were applied 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 30 Jun. Treatments were applied on 16 Jun (5% bloom BBCH 61), 17 Jul (bunch close, BBCH 78), 10 Sep (BBCH 81, start of Veraison), and 25 Sep (preharvest). Powdery mildew was managed starting with Rex-Lime Sulfur (120 fl oz/A) applied on 7 Mar (BBCH 01), followed by combinations and/or alternations of Kumulus, Procure, Elite, and Abound, applied every 2 weeks until veraison. Fungicide applications for powdery mildew control were applied using a hooded boom sprayer at 150psi. No insecticides were used for management of mites. GoalTender (32 fl oz/A) plus Makaze (32 fl oz/A) was applied on 13 Mar and Chateau (8 oz/A) plus Reckon (48 fl oz/A) was applied on 2 Apr for management of weeds. Incidence of bunch rot was determined on 26 Sep, 10 and 13 Oct by examining 50 clusters from the center of each set of vines. Severity of bunch rot was also determined on 13 Oct by harvesting and examining 50 clusters (average 18.8° Brix) from the center of each set of vines.

The dormant season was considered unusually dry and with record cold temperatures recorded on 8 Dec 2013 and 6 Feb 2014. Cold damage in this block of Riesling resulted in the loss of many primary and secondary buds through the middle of the block. Although treatments were deployed on the best vines available, some sections were of lower vigor with smaller clusters with "hens and chicks". Statistical analysis was adjusted to block vines based on vigor category, which resulted in 3 replications instead of four. Subtle bunch rot symptoms were first observed on 19 Sep sporadically throughout the vineyard. Incidence of bunch rot increased rapidly so that by 26 Sep, 10 or 13 Oct there were no significant differences between treatments. Vines treated with Luna Tranquility were the only ones to have severity of bunch rot significantly lower than nontreated vines at harvest on 13 Oct. 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**			Severity (13 Oct)
		Incidence (26 Sep)	Incidence (10 Oct)	Incidence (13 Oct)	
Nontreated but leaves were pulled.....	None.....	2.7	39.3	87.7	11.0 a
Luna Tranquility 500 SC at 16 fl oz...	All.....	1.3	28.7	68.0	5.2 b
Luna Tranquility 500 SC at 16 fl oz plus OR-009 at 32 fl oz/100 gal .....	All.....	1.3	24.0	72.0	4.6 b
Luna Experience SC at 8.6 fl oz plus Induce at 32 fl oz/100 gal then Serenade Optimum at 16 oz plus Induce at 32 fl oz/100 gal then Vanguard at 10 oz plus Induce at 32 fl oz/100 gal then Elevate 50 WP at 16 oz plus Induce at 32 fl oz/100 gal .....	A B C D.....	6.7	38.7	85.3	10.9 a
Luna Experience SC at 8.6 fl oz plus Induce at 32 fl oz/100 gal then Serenade Optimum at 16 oz plus Induce at 32 fl oz/100 gal then Luna Tranquility SC at 16 fl oz plus Induce at 32 fl oz/100 gal then Elevate 50 WP at 16 oz plus Induce at 32 fl oz/100 gal .....	A B C D.....	2.0	28.0	86.7	7.6 ab

\* Treatments were applied on A = 16 Jun (5% bloom BBCH 61), B = 17 Jul (bunch close, BBCH 78), C = 10 Sep (BBCH 81, start of Veraison), and D = 25 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.