

**Efficacy of fungicides for management of grape bunch rot, 2013.**

Fungicide treatments were arranged in a randomized complete block design in a mixed block of grapes with 4 rows of 'White Riesling' planted in 1985 on a 7x10 ft spacing. Vines were trained to a bilateral cordon with spur pruning. Vines were pruned 6 Mar. Vines were pruned to approximately 60 spurs/vine and thinned to approximately 40 shoots/vine. Sucker removal and shoot thinning by hand occurred 13 May. 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. All bunch rot applications focused on the fruiting zone. Leaves were removed from the fruiting zone on the east side of all but non-treated vines on 12 Jul. Approximately 2.5 gal of a spray suspension were applied per set of 20 vines. Treatments were applied on 11 Jun (5% bloom BBCH 61), 14 Jun (80% bloom, BBCH 68), 17 Jul (bunch close, BBCH 78), 15 Aug (BBCH 81, start of Veraison), and 13 Sep (preharvest). Canes were cut above the top wire on 11 Jul and maintained at this height throughout the growing season. Powdery mildew was managed with alternating applications of Kumulus, Procure, Flint, Abound, or Quintec applied starting mid-May and continued 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 mite control. Aim (2 fl oz/A) was applied on 27 Feb, GoalTender (1 qt/A) plus Makaze (generic glyphosate at 1 qt/A) was applied on 13 Mar and Aim (2 fl oz/A) plus Rely (1.5 qt/A) was applied on 7 May for weed control. Fertilizer, 16-16-16-0 was applied at 87 lb/A on 24 May. Incidence of bunch rot was determined on 19 and 26 Sep by examining 50 clusters from the center of each set of vines. Severity of bunch rot was also determined on 26 Sep by harvesting and examining 50 clusters (average 16.5° Brix) from the center of each set of vines.

After a dry spring and summer, fall was considered very wet with rains returning on 5 Sep (1.5 in) and at record levels (4 in above normal) by the end of the month. Subtle bunch rot symptoms were first observed on 3 Sep sporadically throughout the vineyard. Incidence of bunch rot increased rapidly so that by 19 Sep there were no significant differences between treatments. Vines treated with Luna Tranquility were the only ones to have incidence and severity of bunch rot significantly lower than non-treated vines at harvest on 26 Sep. No phytotoxicity was observed on any vines treated with any material.

Treatment and Rate/A	Time of application*	% Bunch Rot**		
		Incidence (19 Sep)	Incidence (26 Sep)	Severity (26 Sep)
Non-treated and no leaves pulled.....	None.....	38.0	92.0 a	11.0 a
Luna Tranquility 500 SC at 16 oz.....	B, C, D, E...	18.5	71.5 b	3.3 b
Luna Experience 400 SC at 8.6 oz.....	B, C, D, E...	42.0	90.0 a	9.1 a
GWN-10162 at 1.5 oz plus				
Break-Thru at 4 oz/100 gal water...	A & B only.	27.0	87.0 a	10.7 a
GWN-10162 at 3 oz plus				
Break-Thru at 4 oz/100 gal water...	A & B only.	28.0	82.0 a	11.6 a

\* Treatments were applied on A = 11 Jun (5% bloom, BBCH 61), B = 14 Jun (80% bloom, BBCH 68), C = 17 Jul (bunch close, BBCH 78), D = 15 Aug (BBCH 81, start of Veraison), and E = 13 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.

**Acknowledgements**

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