

**Efficacy of fungicides for control of grape bunch rot, 2004.**

Fungicide treatments were arranged in a randomized complete block design in a block of 'White Riesling' planted in 1985 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 mid-May. 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 12 Jun (EL 22 or 40% bloom), 15 Jul (EL 33 or 50% bunch closure), 20 Aug (EL 35 or 60% veraison), and 14 Sep (pre-harvest). Leaves were not removed around the fruiting zone. For control of powdery mildew, Thiloux 80 DF (5 lb/A) was applied on 14 May, Stylet oil (1%) was applied on 21 May, Abound (11 oz/A) plus Quintec (4 oz/A) was applied on 5 and 19 Jun, Trilogy oil (1%) was applied on 2 Jul, Silwet (0.05% v/v at 400 gal water/A) was applied on 13 Jul and Abound (15 oz/A) plus Quintec (6 oz/A) was applied 14, 28, Jul and 11 Aug. Urea fertilizer was spread within vine rows on 3 May at 58 lb/A. Canes were cut down to just above the top wire on 13 Jul. Rely (3qt/A) was applied on 10 May to control weeds in the vine row. Nets were placed around vines on 27 Aug to protect fruit from possible bird damage. Incidence of bunch rot was determined on 24, 30 Sep, and 12 Oct by examining 50 clusters from the center vines of each set of vines. Severity of bunch rot was determined on 12 Oct (16.6° Brix) by harvesting and examining 50 clusters from the center vines of each set of vines (east side).

Weather conditions during the grape growing season in Western Oregon were considered wet at critical stages to control bunch rot. A total of 1.24 in rain fell in the week prior to the first bunch rot spray at the beginning of bloom. Although 1.53 in rain fell in the week after the veraison application, another 0.36 in rain fell before the pre-harvest application could be sprayed. Rains continued in Sep with 1.83 in after the pre-harvest application. Bunch rot was first observed on 7 Sep as a slight color change in some berries. These same berries showed the typical sporulation of the fungus the following week on 14 Sep. There was no significant difference between fungicide treated vines and nontreated vines when incidence or severity of bunch rot was compared, except on the 25 Sep. Vines treated with the combination of Elevate plus Quintec had significantly less bunch rot than nontreated vines on 25 Sep. This difference disappeared as the epidemic continued to develop. No phytotoxicity was observed on any vines treated with any fungicide. Since these fungicides have protection activity with little or no after infection activity, poor fungicide timing relative to rainfall seems the best explanation for the lack of control obtained with fungicides.

Treatment and Rate/A	Time of Application**	% Bunch Rot 25 Sep*	% Bunch Rot 30 Sep*	% Bunch Rot 12 Oct*	
				Incidence	Severity
Nontreated .....	None.....	19.5 a	26.8	86.5	13.1
Elevate 50 WG at 1 lb .....	All.....	16.5 a	20.5	81.5	7.2
Elevate 50 WG at 1 lb then Vanguard 75WG at 10 oz...	FB, BC, V and PH...	14.0 ab	23.5	75.5	8.8
Elevate 50 WG at 1 lb then Pristine 38 WG at 12.5 oz...	FB, BC, V and PH	17.0 a	18.5	81.0	8.3
Elevate 50 WG at 1 lb + Quintec 250 SC at 4 oz...	All.....	8.5 b	20.5	84.5	17.1

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

\*\*FB = Full Bloom (12 Jun), BC = Bunch Close (15 Jul), V = Veraison (20 Aug), and PH = PreHarvest (14 Sep).