GRAPE (*Vitis vinifera* 'Chardonnay')
Botrytis bunch rot; *Botrytis cinerea*

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Evaluation of fungicides and gibberellic acid for management of Botrytis bunch rot of Chardonnay grapes, 2008.

This trial was conducted on 9-yr-old vines trained to a four cane kniffen trellis system at the Lake Erie Regional Grape Research and Extension Center in North East, PA. Treatments were applied to single-vine plots in a randomized complete block design with 5 replications. Vangard and Elevate were applied with a Friend covered-boom plot sprayer at 100 psi and 100 gal/A. ProGibb (gibberellic acid) was applied to runoff with a backpack sprayer at 30 psi. Other diseases were controlled with standard fungicides applied with a Kinkelder air blast sprayer. The incidence (percent clusters infected) and severity (percent area infected) of Botrytis bunch rot were determined on 25 Sep from 25 clusters per plot.

Cumulative rainfall during the ripening period was slightly below average but frequent wetting periods during the first three weeks of ripening encouraged moderate bunch rot development in Chardonnay. Rainfall for May, Jun, Jul, Aug, and Sep was 4.09, 5.35, 8.46, 4.21, and 4.8 in., respectively. Compared to the untreated check, two applications of fungicide (Elevate at pre-closure and Vangard at veraison) did not statistically reduce the incidence or severity of Botrytis bunch rot (BBR). Two additional applications of fungicide (Vangard at 50-80% capfall, Elevate at pre-harvest) greatly improved control and significantly reduced the incidence and severity of BBR over two fungicide applications and the untreated check. All ProGibb supplements to two fungicides numerically reduced the incidence and severity of BBR compared to two fungicides alone. The pre-bloom ProGibb at 0.88 and 0.18 oz and the bloom ProGibb at 0.18 oz significantly reduced BBR severity as compared to two fungicides alone and were statistically equal to four fungicide applications.

Treatment and rate/A	Timing[z]	% Infected	% Area infected[yx]	% Control[w]
ProGibb 40% WSG 0.88 oz (25 ppm)	2			
Elevate 50 WDG 1 lb	4			
Vangard 75WG 10 oz……	5	32.0 abc[v]	2.73 ab[v]	63
ProGibb 40% WSG 0.35 oz (10 ppm)	2			
Elevate 50 WDG 1 lb	4			
Vangard 75WG 10 oz……	5	36.8 abcd	2.81 ab	62
ProGibb 40% WSG 0.18 oz (5 ppm)	2			
Elevate 50 WDG 1 lb	4			
Vangard 75WG 10 oz……	5	32.8 abc	1.65 a	78
ProGibb 40% WSG 0.88 oz (25 ppm)	1			
Elevate 50 WDG 1 lb	4			
Vangard 75WG 10 oz……	5	24.0 ab	1.20 a	84
ProGibb 40% WSG 0.35 oz (10 ppm)	1			
Elevate 50 WDG 1 lb	4			
Vangard 75WG 10 oz……	5	43.2 bcd	3.88 abc	48
ProGibb 40% WSG 0.18 oz (5 ppm)	1			
Elevate 50 WDG 1 lb	4			
Vangard 75WG 10 oz……	5	28.8 ab	2.13 a	71
Vangard 75WG 10 oz	3 5			
Elevate 50 WDG 1 lb……..	4 6	19.2 a	1.55 a	79
Elevate 50 WDG 1 lb	4			
Vangard 75WG 10 oz……. …….	5	48.8 cd	5.95 bc	20
Untreated Check……..		56.0 d	7.47 c	

[z]Timing: 1 = 7 Jun (9 days prior to trace bloom); 2 = 23 Jun (50-80% capfall); 3 = 25 Jun; 4 = 11 Jul (pre-closure); 5 = 13 Aug (veraison); 6 = 4 Sep (pre-harvest)

[y]Severity was rated using the Barratt-Horsfall scale and was converted to % area infected using Elanco conversion tables.

[x]Actual data are shown. Data were subjected to square root transformation before statistical analysis.

[w]Percent control = control of disease severity on berries over that of the untreated check.

[v]Means followed by the same letter within columns are not significantly different by Fisher's Protected LSD ($P \leq 0.05$).