

Evaluation of fungicides and gibberellic acid for management of Botrytis bunch rot of grapes, 2007.

This trial was conducted on eight-year-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. Vanguard 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. Rainfall for May, Jun, Jul, Aug, and Sep was 2.70, 3.26, 5.89, 6.69, and 3.56 in., respectively. The incidence (percent clusters infected) and severity (percent area infected) of Botrytis bunch rot were determined on 27-28 Sep from 25 clusters per plot.

Bunch rot pressure was light to moderate. Compared to the untreated check, two applications of fungicide (Elevate at pre-closure and Vanguard at veraison) did not statistically reduce the incidence or severity of Botrytis bunch rot (BBR). Two additional applications of fungicide (Vanguard at 50-80 % capfall, Elevate at pre-harvest) dramatically improved control and significantly reduced both incidence and severity of BBR over two fungicide applications and the untreated check. All ProGibb bloom supplements and the 0.88 oz rate at pre-bloom significantly improved control of BBR severity over the untreated check and two fungicide applications alone and were statistically equal to four fungicide applications. There were no significant differences among ProGibb bloom applications. However, the 0.18 oz pre-bloom rate was significantly less effective than the 0.88 oz pre-bloom rate and the 0.18 and 0.88 oz bloom rates.

Treatment and rate/A	Timing ^z	% Infected	% Area ^{yx} infected
ProGibb 40 % WSG 0.88 oz (25 ppm)	2		
Elevate 50 WDG 1 lb	3		
Vanguard 75WG 10 oz.....	4	29.6 ab ^w	1.78 ab ^w
ProGibb 40 % WSG 0.35 oz (10 ppm)	2		
Elevate 50 WDG 1 lb	3		
Vanguard 75WG 10 oz.....	4	24.0 a	1.90 abc
ProGibb 40 % WSG 0.18 oz (5 ppm)	2		
Elevate 50 WDG 1 lb	3		
Vanguard 75WG 10 oz.....	4	21.4 a	0.76 a
ProGibb 40 % WSG 0.88 oz (25 ppm)	1		
Elevate 50 WDG 1 lb	3		
Vanguard 75WG 10 oz.....	4	29.0 ab	1.71 ab
ProGibb 40 % WSG 0.35 oz (10 ppm)	1		
Elevate 50 WDG 1 lb	3		
Vanguard 75WG 10 oz.....	4	48.6 bc	5.88 bcd
ProGibb 40 % WSG 0.18 oz (5 ppm)	1		
Elevate 50 WDG 1 lb	3		
Vanguard 75WG 10 oz.....	4	54.4 c	6.73 cd
Vanguard 75WG 10 oz	2, 4		
Elevate 50 WDG 1 lb.....	3, 5	12.0 a	0.77 a
Elevate 50 WDG 1 lb	3		
Vanguard 75WG 10 oz.....	4	50.0 bc	7.09 d
Untreated Check.....		60.0 c	6.34 d

^zTiming: 1 = 6 Jun (8 days prior to trace bloom); 2 = 20 Jun (50-80 % capfall); 3 = 6 Jul (pre-closure); 4 = 13 Aug (veraison); 5 = 28 Aug (pre-harvest)

^ySeverity was rated using the Barratt-Horsfall scale and was converted to % area infected using Elanco conversion tables.

^xActual data are shown. Data were subjected to square root transformation before statistical analysis.

^wMeans followed by the same letter within columns are not significantly different according to Fisher's Protected LSD ($P \leq 0.05$).