

GRAPE (*Vitis* interspecific hybrid 'Vignoles')
 Botrytis bunch rot; *Botrytis cinerea*
 Rhizopus rot; *Rhizopus* spp.
 Blue mold; *Penicillium* spp.
 Aspergillus rot; *Aspergillus* spp.

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

This trial was conducted with 9-yr-old vines trained to a single-curtain, high-wire cordon 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 8 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. The incidence (percent clusters infected) and severity (percent area infected) of Botrytis bunch rot and total rot (Botrytis bunch rot, Rhizopus rot, blue mold, and Aspergillus rot) were determined on 19-20 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 moderately heavy bunch rot development in Vignoles. 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 Vanguard at veraison) significantly reduced the incidence and severity of Botrytis bunch rot (BBR). Two additional applications of fungicide (Vanguard at 50-80% capfall, Elevate at pre-harvest) significantly reduced the incidence but not the severity of BBR as compared to two applications alone. Two and four fungicide applications did not reduce total rot (TR) incidence, but modestly reduced TR severity when compared to the untreated check. ProGibb supplements to two fungicide applications significantly improved control of BBR and TR incidence when applied at bloom at the 0.35, 0.88, and 1.4 oz rates. All ProGibb bloom supplements significantly reduced BBR and TR severity compared to two fungicide applications alone. The most effective ProGibb supplements were applied at bloom at the 0.35, 0.88, and 1.4 oz rates, and reduced the severity of BBR and TR more than two additional fungicide applications at 50-80% capfall and pre-harvest.

Treatment and rate/A	Timing ^z	Botrytis bunch rot		Total rot		
		% Infected	% Area infected ^y	% Infected	% Area infected ^y	% Control ^x
ProGibb 40% WSG 1.4 oz (40 ppm)	2					
Elevate 50 WDG 1 lb	4					
Vanguard 75WG 10 oz.....	5.....	35.5 a ^w	5.67 ab ^w	45.5 a ^w	5.98 a ^w	74
ProGibb 40% WSG 0.88 oz (25 ppm)	2					
Elevate 50 WDG 1 lb	4					
Vanguard 75WG 10 oz.....	5.....	46.0 ab	4.63 a	55.0 ab	5.46 a	76
ProGibb 40% WSG 0.35 oz (10 ppm)	2					
Elevate 50 WDG 1 lb	4					
Vanguard 75WG 10 oz.....	5.....	52.5 bcd	6.63 ab	59.5 bc	7.48 ab	67
ProGibb 40% WSG 0.18 oz (5 ppm)	2					
Elevate 50 WDG 1 lb	4					
Vanguard 75WG 10 oz.....	5.....	57.9 cde	8.82 bc	69.3 cd	10.45 bc	54
ProGibb 40% WSG 0.88 oz (25 ppm)	1					
Elevate 50 WDG 1 lb	4					
Vanguard 75WG 10 oz.....	5.....	58.5 cde	9.25 cd	70.0 d	11.02 bcd	52
ProGibb 40% WSG 0.35 oz (10 ppm)	1					
Elevate 50 WDG 1 lb	4					
Vanguard 75WG 10 oz.....	5.....	72.5 fg	15.90 e	80.5 e	16.95 e	26
ProGibb 40% WSG 0.18 oz (5 ppm)	1					
Elevate 50 WDG 1 lb	4					
Vanguard 75WG 10 oz.....	5.....	63.0 def	11.11 cd	75.5 de	12.99 cde	43
Vanguard 75WG 10 oz	3 5					
Elevate 50 WDG 1 lb.....	4 6.....	49.5 bc	10.85 cd	74.5 de	13.66 cde	40
Elevate 50 WDG 1 lb	4					
Vanguard 75WG 10 oz.....	5.....	65.0 ef	13.22 de	76.5 de	15.06 de	34
Untreated Check.....		77.0 g	22.23 f	81.0 e	22.76 f	

^zTiming: 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).

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

^xPercent control = control of disease severity on berries over that of the untreated check.

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