

BLUEBERRY (*Vaccinium corymbosum* 'Bluetta')
Ripe Rot (Anthracnose); *Colletotrichum* sp.

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Fungicide control of blueberry fruit rots, 2009.

Fungicide treatments were arranged in a randomized complete block design in a block of 'Bluetta' blueberries planted in 1999 on 5 x 10 ft spacing. Each treatment consisted of 6 single bush replicates. Fungicide treatments were applied using a Solo backpack pump style sprayer at a rate of 109 to 145 gal water/A, depending on the amount of foliage present on bushes at time of application. Approximately 0.75 to 1 gal of a spray suspension was applied per 6 bushes. Treatments were applied on 10 Apr (floral bud break), 23 Apr (full bloom), 8 May (late bloom), 21 May (post bloom), 4 Jun (green berry), 18 Jun (fruit coloring) and 2 Jul (pre-harvest). Nu-Cop (6 lb/A) was applied on 29 Oct 08 (50% leaf drop) to help prevent bacterial blight. Bushes were pruned the first week of January by thinning out small and spindly shoots and removing older non-productive stems. Plots were fertilized with a total of 400 lb/A (based on in the bush row area) of 21-0-0-24 applied on 28 Apr, 26 May and 22 Jun. Overhead irrigation was started on 27 May and continued 2 times per week, 4 hour set, during the growing season. Weeds in the bush row were controlled with Honcho Plus (2% solution) applied with a Solo backpack pump style sprayer on 27 May and 11 June. Nets were placed over bushes on 25 Jun to reduce bird damage. On 3 Jul, 100 healthy appearing berries were arbitrarily harvested from each Bluetta bush. Berries were placed on wire racks within moist chambers located in Cordley Hall. Each moist chamber contained two arbitrarily selected treatments, (200 berries or 100 berries per treatment), separated by a wire mesh. Berries were incubated at room temperature (69 to 82°F) for 17 days. The number of berries with symptoms of ripe rot were evaluated and removed each day. Berries rotting from other causes were noted and also removed from the moist chambers daily.

Spring weather conditions were cold and dry during early shoot growth but back to typical conditions favorable for plant disease in May. Fruit rots were not observed in the field prior to harvest. In addition to ripe rot, *Alternaria* sp., *Rhizopus* sp. and *Botrytis* sp. were observed on rotting fruit at low levels. There was unexpected variation between replications with regard to fruit rot development. Almost no fruit rot occurred in one replicate while another had significantly more disease than the other replicates. Each of these two extreme replicates were removed and data analyzed with only 4 replications. All fungicide treatments significantly reduced ripe rot and total rots when compared to nontreated bushes. Although bushes treated with Evito plus Break-thru alternated with CaptEvate had the lowest ripe rot and total rot, the amount of berries rotting from bushes treated with the other fungicides were not significantly different. Ripe rot was observed on berries from bushes treated with Evito plus Break-thru alternated with CaptEvate in the high disease replicate that was not used in this analysis. No phytotoxicity was observed on any fungicide treated bushes.

Treatment & Rate/A	Time of Application *	Ripe Rot (Anthracnose)** (%)	All Fruit Rots ** (%)
Nontreated	None.....	12.3 a	21.8 a
Pristine 36 WDG at 18.5 oz plus			
Break-thru at 4 fl oz/100gal alt with	A, C, E, G		
CaptEstate 68 WDG at 4.7 lb	B, D, F.....	0.5 b	1.8 b
Evito 480 SC at 5.7 fl oz plus			
Break-thru at 4 fl oz/100gal alt with	A, C, E, G		
CaptEstate 68 WDG at 4.7 lbs	B, D, F.....	0.0 b	3.3 b
Evito 480 SC at 5.7 fl oz plus			
Break-thru at 4 fl oz/100gal plus			
Elevate 50 WDG at 1.5 lbs alt with	A, C, E, G		
Captan 80 WDG at 3 lbs	B, D, F.....	0.3 b	5.3 b
PhD WDG at 6.2 oz plus			
Tactic at 8 fl oz/100gal	All.....	1.8 b	6.2 b
Captan 80 WDG at 3 lbs	All.....	0.8 b	2.8 b

* A = 10 Apr (floral bud break), B=23 Apr (full bloom), C =8 May (late bloom), D =21 May (post bloom), E= 4 Jun (green berry), F =18 Jun (fruit coloring) and G =2 Jul (pre-harvest)

** Means followed by the same letter do not differ significantly based on Fisher's protected LSD (P=0.05).