

BLUEBERRY (*Vaccinium corymbosum* 'Bluetta')
Ripe Rot (Anthracnose); *Colletotrichum acutatum*
Botrytis Blight; *Botrytis cinerea*
Alternaria Fruit Rot; *Alternaria tenuissima*

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Fungicide management of blueberry fruit rots, 2013.

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 hydraulic handgun sprayer at approximately 100 psi at a rate of 290 gal water/A. Approximately 2 gal of a spray suspension were applied per 6 bushes. Treatments were applied on 5 Apr (5% bloom), 12 Apr (25% bloom), 18 Apr (full bloom), 25 Apr, 2 May (end of bloom), 9 May (green fruit), 17 May, 23 May, 31 May, 6 Jun (beginning of ripening) and 14 Jun (pre-harvest). Each fungicide-treated bush was flanked on each side by non-treated bushes. Nu-Cop 50 DF (8 lb/A) was applied on 25 Oct 12 (>50% leaf drop) to help prevent bacterial blight. Bushes were pruned 27 Jan 12 to 3 Jan 13 by thinning out small, dead and spindly shoots and removing older non-productive stems. Supreme Oil (5 gal/100 gal water) was applied on 18 Feb to control scale insects. Makaze (generic glyphosate at 3.2 oz/gal) was applied on 7 Mar and 11 Apr and Rely (1.7 oz/gal) was applied 3 Jun to control weeds. Plots were fertilized on 26 Apr, 16 May and 4 Jun with approximately 160 lb/A (based on in the bush row area) of 21-0-0-24. Overhead irrigation was started on 3 May and continued 2 times per week during the growing season. Nets were placed over bushes on 10 Jun to reduce bird damage. On 18 Jun, 100 healthy appearing, ripe 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 for 13 to 14 days. Berries were evaluated for development of fruit rot symptoms daily. The number and type of fruit rot was recorded prior to removal from the moist chamber.

Spring growing conditions were unusually dry with 3 weeks of warm 80 F weather beginning the last week of April and continuing throughout bloom. Fruit rots were not observed in the field prior to harvest. In addition to ripe rot, Botrytis blight, Alternaria fruit rot and *Rhizopus* sp. was observed on rotting fruit at variable frequencies. Overall, disease pressure was considered low and there was high block variation in fruit rot numbers. The highest number of fruit rotting due to ripe rot was from bushes treated with Botector. All other treatments developed significantly less ripe rot including non-treated bushes. Botrytis blight was highest on non-treated bushes and significantly lower on fungicide-treated bushes. There was no significant difference among the fungicide treatments for control of Botrytis blight. There were no differences among treatments with regard to the development of Alternaria fruit rot or total fruit rots. No phytotoxicity was observed on any other fungicide-treated bushes.

Treatment & Rate/A or /100 gal as indicated	Time of Application*	Ripe Rot (Anthracnose)** (%)	Botrytis Blight** (%)	Alternaria Fruit Rot** (%)	Total Fruit Rots** (%)
Non-treated	None.....	1.2 b	3.0 a	2.2	8.5
Pristine 38 WDG at 18.5 oz	A, C, E, G, I, K..	1.0 b	0.5 b	2.0	5.3
Botector WP at 7 oz/100 gal	All.....	11.7 a	0.8 b	0.8	13.3
Regalia at 1 gal.....	All.....	1.7 b	0.8 b	2.2	5.5
Abound at 15 fl oz.....	A, C, E, G, I, K..	1.8 b	0.5 b	1.5	4.0
Abound at 15 fl oz plus Regalia at 1 gal.....	A, C, E, G, I, K..	0.3 b	1.2 b	2.5	8.5
Abound at 15 fl oz plus Regalia at 1 gal	A, D, G, J				
Alternate Regalia at 1 gal.....	C, F, I, K.....	0.5 b	1.2 b	1.2	9.8

* Treatments were applied on A = 5 Apr (5% bloom), B = 12 Apr (25% bloom), C = 18 Apr (full bloom), D = 25 Apr, E = 2 May (end of bloom), F = 9 May (green fruit), G = 17 May, H = 23 May, I = 31 May, J = 6 Jun (beginning of ripening) and K = 14 Jun (pre-harvest).

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