BLUEBERRY (*Vaccinium corymbosum* 'Bluetta')
Botrytis Blight; *Botrytis* sp.
Mummyberry; *Monilinia vaccinii-corymbosi*

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Fungicide control of blueberry diseases, 2004.

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 pump-style backpack sprayer at a rate of 55 to 91 gal water/A, depending on the amount of foliage present on bushes at application. Approximately 0.38 to 1.25 gal of a spray suspension was applied per 6 bushes. Treatments were applied on 13 Mar (late floral bud break), 28 Mar (late vegetative bud break and early bloom), 10 Apr (full bloom), 25-26 Apr (very late bloom), 10 May, 24 May, and 5 Jun. Funginex was not applied past 26 Apr as it was not registered for use past bloom. The first application of Indar plus Latron B1956 did not include the Latron material; however, all subsequent applications included both materials. Each fungicide treated bush was flanked on each side by nontreated bushes. Weeds were controlled using Glystar Plus (4 qt/A) applied in the plant row on 12 Sep 03 and as a spot spray on 16 Mar 04. Also, Scythe (3.25 qts/A) was used in the plant row on 13 May 04 for weed control. Bushes were pruned from 2 to 9 Mar by thinning out small and spindly shoots but leaving dead floral trusses. Plots were fertilized with approximately 165 lb/A (based on in the bush row area) of 20-0-0 ammonium sulfate on 5 Apr and 5 May (a recommended third application was not applied). Supplemental irrigation was used beginning 16 Mar and applied 1 or 2 times per week during the growing season. Cuprofix Disperss (8 lb/A) was applied on 14 Nov 03 to help prevent bacterial blight. Nets were placed over bushes on 5 Jun to reduce bird damage. The total number of floral clusters and vegetative shoots with symptoms of primary mummyberry was evaluated on 28 Apr. On 25 Jun, 100 healthy appearing berries were harvested from each Bluetta plant and placed on wire racks within moist chambers located in Cordley Hall. Each moist chamber contained a random selection of two treatments (200 berries or 100 berries per treatment) separated by a wire mesh. Berries were incubated at room temperature (71-78 F) for 11 days. The number of berries with symptoms of *Botrytis* fruit rot were evaluated and removed each day. Berries rotting from other causes were noted and also removed from the moist chambers daily.

The spring season was characterized as extremely dry with below average rainfall. Apothecia were first observed in an adjacent Berkley block on 1 Apr and may have been present for a few days prior to observation. Apothecia did not continue to develop and began drying up by 5 Apr. A few primary mummyberry strikes were observed on flower clusters starting on 15 Apr. The number of floral clusters with primary strikes on bushes treated with Indar (either alone or in combination with other fungicides) or Funginex was not significantly different from that on nontreated bushes. Very few primary mummyberry strikes were observed on vegetative shoots (data not shown). Only a few secondary mummberries (symptomatic fruit) were observed on 18 Jun. These data indicate low mummyberry disease pressure. The predominate post harvest fruit rot was due to *Botrytis*, however, *Colletotrichum* sp. (ripe rot), *Rhizopus* sp. and many other fungi were also observed rotting fruit in the moist chambers. Fruit from all fungicide treated bushes had significantly less post harvest *Botrytis* fruit rot than fruit from nontreated bushes, except for fruit from Orbit treated bushes. No *Botyrtis* fruit rot was observed on fruit from bushes treated with Pristine plus oil or the high rate of Omega 500. Fruit from bushes treated with Indar plus Latron or Funginex had significantly more *Botrytis* fruit rot than fruit from Pristine treated bushes. Fruit from all fungicide treated bushes had significantly less total fruit rot than fruit from nontreated bushes, except for fruit from Orbit or Indar plus Latron treated bushes. Lowest amount of total fruit rot developed from Pristine treated bushes, however, the amount that developed from bushes treated with Captan alone, Captivate, Switch or Omega 500 was not significantly different. Berries on bushes treated with the high rate of the experimental V10116 appeared to have consistently smaller berries than those found on other bushes (no data taken). Berries and leaves treated with Pristine plus oil did not have the characteristic bright blue (berries) or green (leaves) coloration. It is highly suspected the oil was responsible for the dull blue or green color on the fruit or leaves.

Note: Blueberry Shock Virus was confirmed on a plant this spring and will be a problem for the next few growing seasons as the virus spreads to other plants.

Treatment & Rate/100 gal	Number of applications [x]	Primary Mummyberry Floral Clusters/plant [y]	Botrytis Fruit Rot [y] (%)	Total Rotted Fruit [y] (%)
Nontreated ……	0	4.2 ab	22.0 a	46.0 a
Bravo WeatherStik at 1 pt then	1			
Indar 75 WSP at 2 oz plus				
Latron B1956 at 1 fl oz then	3			
Abound at 6.2 fl oz alternate with	2			
Captan 80 WDG at 2 lb……	1	1.8 bc	7.7 cde	22.3 bcd
Elevate 50 WDG at 1.5 lb…….	7	0.0 c	7.5 cde	25.7 bc
Captan 80 WDG at 3.15 lb……	7	0.2 c	3.2 cde	15.5 cde
Captivate 68 WDG at 4.7 lb……..	7	1.3 c	0.7 de	8.2 de
Captivate 68 WDG at 5.25 lb…..…..	7	0.8 c	1.3 de	6.0 de
Pristine 38 WG at 18.5 oz plus				
Superior Spray Oil at 1 gal……..	7	0.3 c	0.0 e	4.2 e
Indar 75 WSP at 2 oz plus				
Latron B1956 at 1 fl oz ……	7	4.8 a	11.2 bc	33.0 ab
Orbit at 4 fl oz ……..	7	0.5 c	18.2 ab	35.8 ab
Abound at 6.2 fl oz ……	7	0.5 c	7.0 cde	22.3 bcd
Switch 62.5 WG at 11 oz……	7	0.5 c	1.3 de	8.0 de
Funginex 24 fl oz ……..	7	1.8 bc	10.0 bcd	27.3 bc
V10116 at 5.7 fl oz plus				
Latron B1956 at 8 fl oz ……	7	0.7 c	5.8 cde	28.2 bc
V10116 at 7.6 fl oz plus				
Latron B1956 at 8 fl oz ……	7	1.5 c	9.5 bcde	23.3 bcd
Omega 500 at 10.2 fl oz……..…	7	1.3 c	0.7 de	15.0 cde
Omega 500 at 20.1 fl oz…..…..…..…	7	1.8 bc	0.0 e	4.8 e

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