

CHERRY (*Prunus avium* 'Royal Anne')
Brown Rot Blossom Blight; *Monilinia laxa*
Brown Rot Fruit rot; *Monilinia fruticola*

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Comparison of fungicides for control of cherry brown rot, 2003.

Treatments were arranged in a randomized complete block design in a 'Royal Anne' sweet cherry orchard on Mazzard F 12-1 rootstock planted in 1964 on 20 x 40 ft spacing and grafted in 1967. Each treatment consisted of 5 single tree replicates. Fungicides were applied using a hydraulic handgun sprayer at 300 psi and at a rate of 272 to 305 gal water/A. Approximately 25 to 28 gal of a spray suspension were applied per 5 trees. Fungicide treatments were applied on 30 Mar (46% popcorn), 8 Apr (80% full bloom), 19 Apr (60% petal fall) and 12 Jun (7 days preharvest). According to a brown rot blossom blight risk model there were 3 infection risk periods detected during bloom on 10, 11 and 23 Apr. Glyphos X-TRA (2 qt/A) plus Goal 2XL (3 qt/A) was applied on 1 May for weed control. All herbicide rates are based on in the tree row area. A 16-16-16 fertilizer was broadcast around each tree on 30 Apr at 288 lb/A. Incidence of brown rot blossom blight was evaluated on 29 Apr by examining 500 blossoms randomly selected from the lower portion of each tree. Fruit was harvested on 19 Jun by hand picking 100 healthy-appearing fruit per tree. A total of 50 fruit were placed side to side in a plastic gutter to evaluate fruit width. All fruit were then placed into plastic boxes lined with moist paper towels and incubated in the laboratory at ambient temperature (68 to 80°F). Incidence of fruit with brown rot, *Botrytis* sp., *Rhizopus* sp. and other rots were monitored daily for a total of 12 days (1 Jul).

Spring weather conditions in Western Oregon were considered normal to wet with above normal rainfall. Both the popcorn and/or full bloom applications occurred before the 3 brown rot infection periods. Brown rot blossom blight was first found on 9 Apr. All fungicide treated trees had significantly less brown rot blossom blight than nontreated trees, except trees treated once with Indar at petal fall. There were no significant differences in brown rot blossom blight among the other fungicide treatments. There was no significant difference in brown rot blossom blight on trees treated only once with Indar at popcorn or full bloom but significantly more was detected on trees treated only once at petal fall. There were no significant differences in brown rot fruit rot on the trees at harvest. All fungicide treated trees had significantly less post harvest brown rot than nontreated trees, except trees treated once with Indar at petal fall. There were no significant differences in post-harvest *Botrytis* fruit rot among the various treatments (data not shown). Only trees treated with Rally, Cabrio or Pristine developed significantly less total post harvest rots than nontreated trees. Only trees treated with Cabrio or Pristine developed significantly wider fruit than nontreated trees. The small but significant difference is only a half mm and may not represent a commercially significant change (11 row cherries = 24 mm and 10 row cherries = 26 mm). No phytotoxicity was observed on any trees treated with any fungicide.

Acknowledgement: We would like to thank the boys of Troop 163 of the Oregon Trail Council for help in discouraging bird feeding.

Treatment & Rate/A	Time of Application**				Brown Rot Blossom Blight (%)*	Post-harvest Brown Rot (%)*	Post-harvest Total Rots (%)*	Average Fruit Size (cm)
	P	FB	PF	PH				
Nontreated	--	--	--	--	3.3 a	6.4 a	14.6 a	2.47 bc
Rubigan 9 fl oz.....	X	X	X	X	0.6 b	0.8 b	9.0 abc	2.52 ab
Rally 40 W at 5 oz.....	X	X	X	X	0.5 b	0.4 b	6.4 bcd	2.48 bc
Cabrio 9.6 oz +								
Superior Spray Oil 3 gal	X	X	X	X	0.8 b	0.2 b	4.8 cd	2.53 a
Pristine 14.7 oz +								
Superior Spray Oil 3 gal	X	X	X	X	0.1 b	0.0 b	2.0 d	2.53 a
Indar 75 W 2 oz +								
Latron B-1956 at 4.5 oz	X	--	--	--	0.6 b	0.2 b	9.4 abc	2.48 bc
Indar 75 W 2 oz +								
Latron B-1956 at 4.5 oz	--	X	--	--	0.4 b	1.4 b	9.2 abc	2.46 c
Indar 75 W 2 oz +								
Latron B-1956 at 4.5 oz	--	--	X	--	2.8 a	6.2 a	11.8 ab	2.49 abc

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

** Treatments were applied on P = Popcorn (30 Mar), FB = Full Bloom (8 Apr), PF = Petal Fall (19 Apr), and PH = 7 days preharvest (12 Jun).