

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, 2006.**

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 4 single tree replicates. Fungicides were applied using a hydraulic handgun sprayer at 110 psi and at a rate of 83 – 140 gal water/A. Approximately 6 to 10 gal of a spray suspension were applied per 4 trees depending on amount of foliage present. Fungicide treatments were applied on 7 Apr (popcorn), 13 Apr (full bloom), 25 Apr (petal fall), 5 May (shuck split), 19 May (1st cover) and 31 May (2<sup>nd</sup> cover). Some treatment protocols had an additional pre-harvest application on 14 Jun. Fungal infection periods were monitored using an Adcon A730 weather station equipped with standard sensors. According to a brown rot blossom blight risk model there was only 1 infection risk period detected during bloom on 14 Apr. Dormant oil, (Omni spray oil, 4 gal/A) was applied for Aphid control to the entire block on 21 Feb using a Rear's air blast speed sprayer. Round-up Ultramax (2 qt/A) plus Oryzalin 4 AS was applied on 13 Mar for weed control. Rejexit (2.5 gal/A) was applied on 6 Jun and again on 13 Jun as a bird repellent. Additionally, electronic bird distress calls, pistol-launched pyrotechnics, scare crows and forcefully propelled metallic pellets were used throughout ripening to deter bird pests. Incidence of brown rot blossom blight was evaluated on 2 May by examining 250 blossoms arbitrarily selected from the lower portion of each tree. On 22 Jun, 100, arbitrarily selected, healthy appearing fruit were harvested from each tree. Then 50 healthy appearing fruit were placed side to side in a plastic gutter to evaluate fruit width. All 100 cherries were then placed on wire racks within moist chambers located in Cordley Hall. Cherries were incubated at room temperature (69 to 81 F) for 11 days. The number of cherries with symptoms of Brown 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 in Western Oregon were considered cold and wet. Brown rot blossom blight was first observed on 12 Apr in nearby Corum pollenizers which indicated there must have been infections during wet periods with temperatures near 50 F on 2 and/or 8 Apr. Brown rot blossom blight was observed in Royal Anne trees by 24 Apr. All fungicide treated trees had significantly less blossom blight than nontreated trees. There were no significant differences in brown rot blossom blight among the various fungicide treated trees. Lowest incidence of post harvest fruit rot was on trees treated with a preharvest application of fungicide. There were no significant differences among any trees, fungicide treated or not, with respect to fruit size. No phytotoxicity was observed on any fungicide treated trees.

Treatment & Rate/A	Time of Application *	Brown Rot Blossom Blight (%)**	Fruit Size (cm)	Post Harvest	
				Brown Rot Fruit Rot (%)**	Total Fruit Rot (%)**
Nontreated .....	None	22.4 a	2.48	81.5 a	83.8 a
Procure 480 SC at 12 fl oz .....	A, B, C, D ..	1.4 b	2.46	75.8 a	77.8 a
Procure 480 SC at 12 fl oz alternate					
Pristine 38EG at 14.5 oz/plus	A, C				
Break Thru at 4 fl oz/100 gal.....	B, D.....	0.9 b	2.44	38.8 bc	43.0 bc
V-10116 at 2.6 oz alternate	A, C				
Abound 2.08 at 12.3 fl oz .....	B, D.....	2.5 b	2.44	27.5 cd	33.5 cd
V-10116 at 2.6 oz alternate					
Pristine 38EG at 14.5 oz/plus	A, C				
Break Thru at 4 fl oz/100 gal.....	B, D.....	0.4 b	2.41	50.0 b	55.3 b
Rovral 50 WP at 2 lb alternate	A, C				
Abound 2.08 at 12.3 fl oz .....	B, D.....	0.9 b	2.47	47.3 b	50.8 bc
Pristine 38 at 14.5 oz plus					
Break Thru at 4 fl oz/100 gal alternate	A, C, E, G				
Rally 40 WP at 5 oz .....	B, D, F.....	1.8 b	2.45	14.0 de	17.0 de
CaptEstate at 3.75 lb then	A				
Indar 75 WSP at 2 oz plus					
Latron B1956 at 2 fl oz/100 gal then	B				
Pristine 38EG at 14.5 oz/plus					
Break Thru at 4 fl oz/100 gal then	D				
Rally 40 WP at 5 oz then	E				
Abound 2.08 at 12.3 fl oz	F				
Orbit at 4 fl oz.....	G.....				
	.	0.5 b	2.46	7.5 e	13.8 e

\*Treatments were applied on A = 7 Apr (popcorn), B = 13 Apr (full bloom), C = 25 Apr (petal fall), D = 5 May (shuck split), E = 19 May (1st cover), F = 31 May (2<sup>nd</sup> cover), and G = 14 Jun (pre-harvest).

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