

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, 2008.

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 148 gal water/A. Approximately 11 gal of a spray suspension were applied per 4 trees. Fungicide treatments were applied on 11 Apr (popcorn), 18 Apr (full bloom), 27 Apr (petal fall), and 27 Jun (pre-harvest). 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 were 2 infection risk periods detected on 19 and 23 Apr. Dormant oil (Omni spray oil at 5 gal/A) was applied to the entire block on 4 Mar for Aphid control. Success (8 oz/A) was applied on 5 Jun and again on 25 Jun to control western cherry fruit fly. Rejexit (1.5 gal/A) was applied on 13 Jun and again on 26 Jun as a bird repellent. Additionally, electronic bird distress calls, scare crows and forcefully propelled metallic pellets were used throughout ripening to deter bird pests. Insecticides and bird repellents were applied using a Rear's air blast speed sprayer. No herbicide or fertilizer was applied during the fruiting season. Incidence of brown rot blossom blight was evaluated on 6 May by examining 500 blossoms arbitrarily selected from the lower portion of each tree. On 3 Jul, 100, arbitrarily selected, healthy appearing fruit were harvested from each tree. All 100 cherries were then placed on wire racks within moist chambers located in Cordley Hall. Cherries were incubated at ambient room temperature (70 to 90°F) for 14 days. The number of cherries with symptoms of brown rot were evaluated and removed each day. Fruit rotting from other causes were noted and also removed from the moist chambers daily.

Spring weather conditions in Western Oregon were considered cool resulting in slow crop development and a 2 week delay in major growth stages through the growing season. First symptoms of brown rot blossom blight were obvious by 28 Apr while brown rot fruit rot was first observed on 21 Jun. All fungicide treated trees had significantly fewer blighted blossoms than nontreated trees. There were no significant differences in brown rot among the various fungicide treatments. A single application of Pristine at popcorn and again at preharvest was as effective as 3 applications during bloom and again at preharvest. No phytotoxicity was observed in trees treated with any of the various materials used.

Treatment & Rate/A	Time of Application*	Brown Rot Blossom Blight (%)**	Post Harvest			
			Brown Rot Fruit Rot (%)**		Total Fruit Rot (%)**	
Nontreated	None.....	6.3 a	16.0 a		28.5 a	
Pristine 38 WDG at 14.5 oz plus						
Break-Thru at 4 fl oz/100 gal	All.....	0.4 b	0.3 b		6.0 b	
Pristine 38 WDG at 14.5 oz plus						
Break-Thru at 4 fl oz/100 gal	Only Pop & PH.....	1.4 b	1.0 b		7.5 b	
Elite 45 WP at 6 oz	All.....	0.2 b	1.3 b		14.0 b	
DPX-LEM 17 SC at 14.4 fl oz	All.....	0.4 b	0.5 b		9.0 b	
DPX-LEM 17 SC at 20.6 fl oz	All.....	0.8 b	1.0 b		9.3 b	
DPX-LEM 17 SC at 14.4 fl oz plus						
Elite 45 WP at 3 oz	All.....	0.1 b	1.3 b		11.8 b	

*Treatments were applied on Pop = 11 Apr (popcorn), FB = 18 Apr (full bloom), PF = 27 Apr (petal fall), PH = 27 Jun (pre-harvest).

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