

CHERRY (*Prunus avium* 'Bing')  
Powdery Mildew; *Podosphaera clandestina*  
Leaf Spot; *Blumeriella jaapii*

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### **Comparison of fungicides for management of cherry powdery mildew and leaf spot, 2011.**

Treatments were arranged in a randomized complete block design in a 'Bing' sweet cherry orchard on Mazzard F12-1 rootstock planted in 1995 on 20 x 20 ft spacing and grafted in 1998. Each treatment consisted of 4 single tree replicates. Fungicides were applied approximately every 14 days using a hydraulic handgun sprayer at 110 psi, such that 5 to 6 gal of a spray suspension were applied per 4 trees (136 to 163 gal water/A) depending on the time of year. Fungicide treatments were applied on 19 May (shuck-split), 3 Jun (1<sup>st</sup> cover, fruit set), 15 Jun (2<sup>nd</sup> cover) and 1 Jul (3<sup>rd</sup> cover, fruit blush). A dormant oil spray of Omni supreme-oil (5 gal/A) was applied on 10 Feb for aphid control. Asana XL (5 oz/A) was applied on 17 Jun for Aphid and Cherry fruit fly control. Insecticides were applied using a Rear's air blast speed sprayer. Rely (5 pt/A) plus Glystar (1 qt/A) was applied on 19 Apr and Rely (5 pt/A) plus Glystar (24 fl oz/A) was applied on 5 Jun for weed control. No fertilizer was applied to trees in the trial. Fungal infection periods were monitored using an Adcon A730 weather station equipped with standard sensors. A total of 4 cherry leaf spot infection periods were detected from Apr through Jun: 2 high infection periods (13 Apr and 26 May) and 2 light infection periods (30 May and 12 Jun). Incidence of powdery mildew was evaluated on 22 Jul by examining the last (distal) five (5) fully expanded leaves on each of 10 shoots from around the tree. To compensate for variations in tree vigor only shoots showing high vigor and strong growth were selected for disease evaluation. Powdery Mildew on fruit was not assessed. Incidence of cherry leaf spot was also evaluated on 11 to 15 Jul by examining all leaves on each of 10 vigorous shoots from around the tree (average of 175 leaves per 10 shoots).

Spring weather conditions in Western Oregon were considered cool and wet resulting in slow crop development and a 2 to 3 week delay in crop growth stages through the growing season. Pits were hard by 31 May. Symptoms of cherry leaf spot and powdery mildew were first observed and confirmed on 6 Jun. All treatments had significantly less cherry leaf spot when compared to nontreated trees except trees treated with JMS Stylet Oil alternated with MBI-10605. Lowest amount of leaf spot was observed on trees treated with Quash but it was not significantly different from leaf spot that developed on other fungicide treated trees except those treated with MBI-10605 alternated with Quintec or JMS Stylet Oil. All treatments had significantly lower incidence of powdery mildew when compared to nontreated trees. Lowest incidence of powdery mildew was on trees treated with the high rate of Merivon but it was not significantly different from powdery mildew on trees treated with the low rate of Merivon plus Latron, the high rate of Mettle, Pristine plus Latron, several materials alternated with Quintec, or TopGuard. No phytotoxicity or growth regulation activity was observed in trees treated with any of the various materials used.

Alternating programs identified the second spray as being the most critical this past growing season for powdery mildew control. Many of the programs had Quintec in that position limiting the conclusions one can make about these programs.

Treatment and Rate/A	Time of Application*	Cherry Leaf Spot (%)**	Powdery Mildew (% leaves)**
Nontreated.....	None	24.0 a	80.0 a
Merivon 500 SC at 5.5 fl oz.....	All.....	3.6 cd	38.5 bcdef
Merivon 500 SC at 5.5 fl oz plus Latron B-1956 at 7.7 fl oz/100 gal.....	All.....	3.7 cd	19.5 fg
Merivon 500 SC at 6.7 fl oz.....	All.....	3.2 cd	14.0 g
Mettle at 6 fl oz.....	All.....	3.0 cd	53.0 bc
Mettle at 8 fl oz.....	All.....	6.0 cd	32.0 defg
Quash 50 WG at 3.5 oz plus Latron B-1956 at 7.7 fl oz/100 gal .....	All.....	0.6 d	42.5 bcde
Pristine 38 WDG at 14.5 oz plus Latron B-1956 at 7.7 fl oz/100 gal .....	All.....	1.1 d	32.0 defg
Pristine 38 WDG at 14.5 oz plus Latron B-1956 at 7.7 fl oz/100 gal Alt Quintec at 7 fl oz.....	A, C B, D.....	3.1 cd	21.0 fg
Luna Sensation 500 SC at 5 fl oz Alternate Quintec at 7 fl oz.....	A, C B, D.....	0.7 d	23.0 efg
MBI-10605 at 2 qt Alternate Quintec at 7 fl oz.....	A, C B, D.....	13.0 bc	16.0 g
JMS Stylet Oil at 1.5 gal/100 gal water Alt MBI-10605at 2 qt .....	A, C B, D.....	20.4 ab	50.0 bcd
Pristine 38 WDG at 14.5 oz then MBI-10605at 2 qt then Pristine 38 WDG at 14.5 oz .....	A B, C D.....	0.8 d	55.5 b
TopGuard SC at 12 fl oz.....	All.....	2.1 d	32.5 cdefg

\* Fungicide treatments were applied on A = 19 May (shuck-split), B = 3 Jun (1<sup>st</sup> cover, fruit set), C = 15 Jun (2<sup>nd</sup> cover) and D = 1 Jul (3<sup>rd</sup> cover, fruit blush).

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