

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

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### **Comparison of fungicides for management of cherry diseases, 2016.**

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 using a hydraulic handgun sprayer at 100 psi, such that 6 gal of a spray suspension were applied per 4 trees (164 gal water/A). Fungicide treatments were applied on 15 Apr (shuck split), 28 Apr, 5 May, 12 May, 18 May, 26 May and 9 Jun. A dormant oil spray of Omni supreme-oil (1.5 gal/A) was applied on 8 Feb and Assana XL (5 fl oz/A) was applied on 13 May for aphid management. Insecticides were applied using a Rear's air blast speed sprayer. Forefit 280 (2 qt/A) was applied on 19 Apr and Rely (2 qt/A) was applied on 7 Jun for weed and sucker management. Trees were pruned from 9 to 24 Feb to reduce height and thin canopy. Trees were not fertilized. 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 bud break through Jun: 2 high infection periods (20 Mar and 14 May), 0 medium infection periods and 2 light infection periods (21 Apr and 2 Jun). Incidence of cherry leaf spot was evaluated on 7 to 8 Jun by examining all leaves on each of 10 vigorous shoots from around the tree (average of 142 leaves per 10 shoots). Incidence of cherry leaf spot on fruit stems was also evaluated at the same time by examining 100 fruit stems arbitrarily selected from around the tree. Incidence of powdery mildew was evaluated on 27 to 28 Jun 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.

Spring growing conditions were considered warmer and dryer than normal with several heat spikes including 83°F on 7 Apr, 85°F on 18 Apr, 87°F on 2 May, and 95°F on 4 Jun. Conditions resulted in accelerated tree growth 2 to 3 weeks ahead of average. Cherry leaf spot and powdery mildew were both first observed on 25 Apr. Highest amount of leaf spot was found on non-treated trees. All fungicide-treated trees had significantly lower amounts of leaf spot on both fruit stems and leaves than on non-treated trees. (Note that there were significantly fewer total leaves on non-treated trees (129) when compared to fungicide-treated trees (average of 145).) There was no significant difference among the various treatments for leaf spot on fruit stems. Lowest amount of leaf spot on leaves was found on trees treated with Luna Sensation alternated with Viathon but the amount found on trees treated with Luna Sensation alternated with Quintec was not significantly different. Highest amount of powdery mildew was found on non-treated trees. All fungicide-treated trees had significantly lower amounts of powdery mildew than non-treated trees. There was no significant difference among the various treatments for powdery mildew. No phytotoxicity was observed in trees treated with any of the various materials used.

Treatment & Rate/A or /100 gal as indicated below	Time of Application*	Cherry Leaf Spot (%)**		Powdery Mildew (% leaves)**
		Fruit Stems	Leaves	
Non-treated.....	None.....	85.0 a	75.9 a	87.0 a
Luna Sensation at 5 fl oz plus Nu-Film-P at 16 fl oz/100 gal .	A, B, D, F, G	31.0 b	10.1 c	14.5 b
Luna Sensation at 5 fl oz plus Nu-Film-P at 16 fl oz/100 gal alternate with Quintec SC at 7 oz.....	A, D, G B, F, .....	17.3 b	4.4 cd	16.0 b
Luna Sensation at 5 fl oz plus Nu-Film-P at 16 fl oz/100 gal alternate with Viathon 4.08 SC at 4 pt.....	A, D, G B, F, .....	16.5 b	1.3 d	23.0 b
Luna Sensation at 5 fl oz plus Nu-Film-P at 16 fl oz/100 gal then Serenade Opti at 1 lb then Quintec SC at 7 oz.....	A, F B, E, G C.....	17.8 b	22.0 b	29.5 b

\* Fungicide treatments were applied on A = 15 Apr (shuck split), B = 28 Apr, C = 5 May, D = 12 May, E = 18 May, F = 26 May and G = 9 Jun.

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