

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

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### **Comparison of fungicides for control of cherry powdery mildew and leaf spot, 2009.**

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 6 single tree replicates. Fungicides were applied approximately every 14 days using a hydraulic handgun sprayer at 110 psi, such that 10 to 11 gal of a spray suspension were applied per 6 trees (173 to 195 gal water/A) depending on the time of year. Fungicide treatments were applied on 8 May (shuck-split), 20 May (1<sup>st</sup> cover), 3 Jun (2<sup>nd</sup> cover), and 16 Jun (3<sup>rd</sup> cover). Dormant oil (Omni spray oil at 5 gal/A) was applied to the entire block on 18 Feb for aphid control. A tank mix of Success Naturalyte Insect Control (8 oz/A) plus Assana XL (8 oz/A) was applied on 9 Jun to control Western Cherry fruit fly. Rejexit (1.5 gal/A) was applied on 12 Jun as a bird repellent. Insecticides and bird repellents were applied using a Rear's air blast speed sprayer. No fertilizer was applied. Weeds in the tree row were managed with an application of Rely (5 qt/A) on 1 May and Goal 2XL (3 qt/A) on 18 Jun. Fungal infection periods were monitored using an Adcon A730 weather station equipped with standard sensors. A total of 7 cherry leaf spot infection periods were detected from Apr through May: 3 high infection periods (1 May, 1 and 3 Jun) and 4 light infection periods (4, 5, 6 and 13 May). Incidence of powdery mildew was evaluated on 30 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. Incidence of cherry leaf spot was also evaluated on 30 Jun by examining all leaves on each of 10 vigorous shoots from around the tree (average of 117 leaves per 10 shoots).

Spring weather conditions were cold and dry during early shoot growth but back to typical conditions favorable for plant disease in May. Powdery mildew was confirmed on 11 May with the observation of a few colonies with conidia. Symptoms may have been present as early as 27 Apr but were not sporulating. Symptoms of cherry leaf spot were first observed 11 May. All treatments significantly reduced development of cherry leaf spot when compared to nontreated trees except on trees treated with Quintec. Lowest incidence of leaf spot was on trees treated with Luna Experience but it was not significantly different from leaf spot on trees treated with Luna Sensation, Adament or Rally. All treatments significantly reduced development of powdery mildew when compared to nontreated trees. Lowest incidence of powdery mildew was on trees treated with Quintec but it was not significantly different from powdery mildew on trees treated with Adament or Luna Sensation. There was no significant separation among fungicide treatments with respect to powdery mildew severity. No phytotoxicity was observed in trees treated with any of the various materials used.

Treatment & Rate/A	Cherry Leaf Spot (%)*		Cherry Powdery Mildew (%)			
			Incidence*		Severity*	
Nontreated .....	60.3	a	70.0	a	4.5	a
Rally 40 WP at 6 oz.....	8.0	d	22.8	b	0.5	b
Quintec at 7 fl oz.....	53.8	ab	2.3	c	0.0+	b
BASF 5600 3F at 10.24 fl oz.....	43.3	bc	33.3	b	0.7	b
BASF 5600 3F at 10.24 fl oz plus						
Sylgard 309 at 0.03% V/V.....	45.3	bc	32.3	b	0.7	b
BASF 5600 3F at 15.36 fl oz.....	36.8	c	30.3	b	0.5	b
Adament 50 WDG at 6 oz.....	3.7	d	6.0	c	0.1	b
Luna Sensation (USF 2016) 500 SC at 4 fl oz...	3.0	d	3.3	c	0.0+	b
Luna Experience (USF 2017) 400 SC at 6 fl oz	1.8	d	27.3	b	0.5	b

\*Means followed by the same letter do not differ significantly based on Fisher's protected LSD (P=0.05). The data represented as 0.0+ indicate the value was very low but not equal to zero.