

PEAR (*Pyrus communis* 'Bartlett')  
 Scab; *Venturia pirina*  
 Pacific Coast Pear Rust; *Gymnosporangium libocedri*

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**Efficacy of fungicides for control of pear scab and rust, 2003.**

Treatments were arranged in a randomized complete block design in a block of 'Bartlett' pears planted in 1954 on a 20 x 20 ft spacing. Each treatment consisted of 7 single tree replicates. Fungicide treatments were applied using a hydraulic handgun sprayer at 150 psi at a rate of 100 to 140 gal water/A (only the last two applications were at the higher gallons per acre). All treatments received approximately 7 to 9 gal of a spray suspension per 7 trees. Fungicide treatments were applied on 24 Mar (green tip/prepink), 8 Apr (70% full bloom), 22 Apr (80 % petal fall), 6 May (1<sup>st</sup> cover) and 20 May (2<sup>nd</sup> cover). Supreme Oil (5 gal/A) was applied using an Air Blast Speed Sprayer on 26 Feb for pear psylla control. Weeds were controlled using Surflan AS (2.8 qt/A) plus Glyphos X-TRA (2.8 qt/A) applied on 15 Apr 03. Fallen leaves were collected from an infected backyard tree during the fall of 2002. Leaves were placed between 6 sets of wire screens spaced equidistant on the orchard floor. Screens remained closed throughout the dormant season to prevent worm predation. Top screens were removed on 31 Mar. Pear scab infection periods were monitored using an Adcon A730 weather station equipped with standard sensors. Using the Spotts model and the rule that wet periods start with rain and end with 8 hr drying time, a total of 2 (maybe 3) infection periods were detected during the early spring on 23 Apr and 11 May. A light apple scab infection period occurred on 2 Apr with 32.5 hours of leaf wetness at an average temperature of 40° F which is outside the range of the Spotts model. Incidence of fruit scab and rust was evaluated on 14 May by examining all fruit (up to 100 pieces per tree) from the lower portion of each tree (55-100 fruit). Most trees had at least 100 pieces of fruit while only a few had less. The number of fruit was not significantly different among treatments. Also, all fruit up to 100 pieces per tree was removed and examined on 15 Aug for incidence of pear scab, fruit length and width. Shoot length was also measured on 19 Aug by examining 50 shoots from each tree.

Rust and scab were first observed on 28 Apr. All fungicide treated trees had significantly less fruit with scab than nontreated trees. There were no significant differences in fruit scab among the various fungicide treatments. Trees treated with Flint did not have significantly less fruit with rust than nontreated trees. All trees treated with the V numbered compounds had significantly less fruit with rust than nontreated trees. Trees treated with V-10116 did not have significantly shorter shoots but did have significantly smaller fruit length to width ratio than nontreated trees. This smaller ratio has been associated in the past with the application of certain DMI compounds (with growth regulation activity) during bloom.

Treatment & Rate/A	Average Shoot Length (cm)*	Fruit Length to Width Ratio*	% Fruit Scab*		% Fruit Rust*
			14 May	15 Aug	14 May
Nontreated.....	31.5	1.32 a	41.1 a	44.1 a	1.4 a
Flint 50 WD at 2 oz.....	36.0	1.32 a	5.9 b	1.8 b	0.6 ab
V-10116 at 0.08 lb A/A.....	33.4	1.25 b	7.7 b	0.6 b	0.0 b
V-10116 at 0.107 lb A/A....	29.4	1.26 b	4.4 b	0.3 b	0.1 b
V-10114 at 0.15 lb A/A.....	31.8	1.31 a	14.4 b	11.2 b	0.4 b

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