

PEACH (*Prunus persica* 'Red Haven')
 Peach Leaf Curl; *Taphrina deformans*
 Shothole; *Wilsonomyces carpophilus*

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COMPARISON OF FUNGICIDES FOR CONTROL OF SHOTHOLE AND PEACH LEAF CURL, 2001: Treatments were arranged in a randomized complete block design in a block of 'Red Haven' peaches planted in 1971 on a 20 x 20 ft spacing. Each fungicide treatment consisted of 4, single tree replicates. Fungicides were applied using a hydraulic handgun sprayer at 225 psi and at a rate of 200 gal water/A. Approximately 7 to 8 gal of a spray suspension were applied per treatment. Dormant treatments were applied on 3 Nov 00 (50% leaf drop), 15 Dec 00, 11 Jan 01, and 19 Feb 01 (delayed dormant). Urea fertilizer was broadcast around each tree on 16 Mar 01 at 27 lb/A. Roundup Ultra (2 qt/A) and Goal XL (3 qt/A) was applied on 15 Feb 01, and Gramoxone Extra (3 pts/A) was applied on 3 May 01 for weed control. All herbicide rates are based on in the tree row area. Diazinon 50W (4 lb/A) was applied on 20 Mar 01 and 24 Apr 01 for control of peach twig borer. On 16 Apr 01, incidence of dead buds per 50 terminals and 100 laterals was determined for each tree. Incidence of peach leaf curl was evaluated on 25 May 01 by examining 100 lateral shoots and 34 to 100 terminal shoots randomly selected from each tree.

The dormant season rainfall was 16.6 inches below normal. Symptoms of shothole as stem lesions were not as plentiful as in past years, however, dead buds were observed in the spring. Trees treated with lime sulfur at either timing or with Echo 720 only at leaf fall and delayed dormant had a similar number of dead terminal or lateral buds as nontreated trees. The fewest number of dead terminal or lateral buds was observed on trees treated three times with Kocide 2000, however, trees treated with Kocide only twice or with Ziram (either timing) or with Echo three times had a statistically similar number of dead terminal or lateral buds. In general, trees treated mid dormant season with an extra application of fungicide tended to have fewer dead buds. All trees treated with fungicide had significantly fewer terminal or lateral shoots with peach leaf curl than nontreated trees. Trees treated only at leaf fall and delayed dormant had significantly more terminal shoots with leaf curl than all other fungicide treated trees. As determined in previous years, leaf curl control on trees treated at delayed dormant rather than twice mid dormant season was statistically similar. Considering the low shothole pressure due to drought conditions, another year of testing this timing scheme for shothole control seems necessary before firm conclusions can be made.

Treatment & Rate/A	Application Timing**	% Peach Leaf Curl*		% Dead Terminal buds*	% Dead Lateral buds*
		Infected Terminal Shoots	Infected Lateral Shoots		
Nontreated	None.....	34.2 a	36.5 a	43.0 ab	53.0 a
Ziram 76 DF 8 lb	A and D.....	1.0 c	0.3 b	13.5 d	15.0 bc
Ziram 76 DF 8 lb	A, B and C.....	0.5 c	0.5 b	11.5 d	12.0 c
Echo 720 at 3 pt	A and D.....	1.1 c	1.5 b	30.5 bc	34.8 ab
Echo 720 at 3 pt	A, B and C.....	0.5 c	2.3 b	15.0 cd	15.8 bc
Lime Sulfur (29%) 20 gal ..	A and D.....	0.8 c	0.0 b	52.5 a	52.0 a
Lime Sulfur (29%) 20 gal ..	A, B and C.....	0.0 c	0.3 b	41.5 ab	46.5 a
Kocide 2000 12 lb	A and D.....	14.7 b	9.8 b	12.5 d	20.0 bc
Kocide 2000 12 lb	A, B and C.....	1.3 c	1.3 b	3.5 d	5.8 c

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

** A = 3 Nov 00 (50% leaf drop), B = 15 Dec 00, C = 11 Jan 01, and D = 19 Feb 01 (delayed dormant).