

PEACH (*Prunus persica* 'Improved Elberta')  
 Brown Rot Blossom Blight; *Monilinia laxa*  
 Brown Rot Fruit Rot; *Monilinia fructicola*  
 Shothole; *Wilsonomyces carpophilus*

J. W. Pscheidt and L. D. Wallace  
 Dept. of Botany and Plant Pathology  
 Oregon State University  
 Corvallis, OR 97331-2903

COMPARISON OF FUNGICIDES FOR CONTROL OF BROWN ROT AND SHOTHOLE OF PEACH, 2000: Treatments were arranged in a randomized complete block design in an 'Improved Elberta' peach orchard planted in 1984 on 20 x 20 ft spacing. Each treatment consisted of 4 single tree replicates. Fungicides were applied using a hydraulic handgun sprayer at 200 psi and at a rate of 300 gal water/A. Approximately 10.5-14 gal of a spray suspension were applied per 4 trees depending on time of year. Bloom treatments were applied on 24 Mar (40% popcorn), 31 Mar (30% Full Bloom), 8 Apr (60% Petal Fall) and 20 Apr (shucksplit). Preharvest treatments were applied on 17 and 23 Aug (14 and 8 days PHI). Dormant treatments for control of shothole (*Wilsonomyces carpophilus*) and peach leaf curl (*Taphrina deformans*) were applied to all trees on 18 Nov 99 and 7 Mar 00 (Ziram 76 WDG at 8 lb/A). Thiodan at 4 lb/A was applied on 26 Apr 00 for control of peach twig borer. Urea fertilizer was broadcast around all trees on 26 Apr 00 at 120 lb/A. Brown rot blossom blight and shothole were evaluated on 15 May by examining 72-100 limbs (one year old flowering shoots 6-12 inches long with a terminal bud), randomly selected from each tree, for incidence of twig cankers. The incidences of these diseases were again evaluated on 30 Aug by examining 100 fruit randomly selected from each tree. Harvest occurred on 31 Aug by hand picking 60 healthy-appearing fruit per tree. Fruit were placed into plastic packing trays (20 fruit/tray), enclosed in plastic bags (1 tray per bag), and incubated in an enclosed building at ambient temperatures (which ranged from 56-78°F). Incidence of fruit with brown rot and/or other rots (including *Rhizopus* sp. and unidentified fungi) were monitored daily, and final evaluations were made on 13 Sep.

The spring growing season and the preharvest period was characterized as dry which resulted in low brown rot pressure. No significant differences in brown rot twig cankers, preharvest or postharvest fruit rot were detected among the various treatments. Only trees treated with Bravo Weather Stik at shuck split had significantly less fruit with symptoms of shothole than nontreated trees. Only trees treated with a combination of different fungicides or just Stratego (a prepackaged combination of Flint and Orbit) had significantly less postharvest total rot than nontreated trees. Trees treated with Serenade at 6 lb/A or QRD 137 at 6 lb/A had significantly more postharvest total rot than nontreated trees. In general, trees treated with Serenade had a statistically similar level of disease as nontreated trees. No phytotoxicity was observed on any trees treated with any fungicide or fungicide combination. Serenade solutions were excessively foamy under our conditions.

Treatment and Rate/A	Time of Application**	Brown rot		Shothole		Postharvest	
		Twig Cankers (%)	Preharvest fruit rot (%)	Twig Cankers (%)	Preharvest fruit rot (%)*	Brown Rot (%)	Total Rot (%)*
Nontreated .....	None.....	2.9	0.5	10.2	9.5 ab	5.5	25.5 b
Indar 75 WP 2 oz	P						
+ Latron B-1956 12 fl oz.....	P						
Vanguard 75 WG 5 oz .....	FB						
Rovral 50 WP 2 lb.....	PF						
Bravo Weather Stik 5.5 pt	SS						
Orbit 3.6 EC 4 fl oz .....	14 & 8 day phi.....	1.4	0.0	5.8	1.3 d	1.5	7.3 c
Bravo Weather Stik 5.5 pt.....	P, PF, SS						
Abound 2.08 F 12.3 fl oz....	FB, 14 & 8 day phi	0.5	0.0	6.7	1.5 cd	2.8	7.0 c
Vanguard 75 WG 5 oz .....	P, FB, PF						
Flint 50 WG at 2 oz.....	SS						
Orbit 3.6 EC 4 fl oz .....	14 & 8 day phi.....	1.0	0.3	12.1	7.6 abcd	1.5	8.0 c
Stratego 250 EC 10 fl oz.....	All.....	0.9	0.0	10.0	3.8 bcd	0.8	8.5 c
Serenade (QRD 132) at 6 lb...	All.....	3.5	0.0	14.3	8.8 ab	9.5	43.8 a
Serenade (QRD 132) at 8 lb...	All.....	1.1	1.0	14.0	13.3 a	10.8	41.8 ab
QRD 137 at 6 lb.....	All.....	1.1	0.3	10.9	14.0 a	12.0	42.5 a
QRD 137 at 8 lb.....	All.....	3.1	1.0	12.1	8.5 abc	19.5	37.8 ab

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

\*\* Bloom treatments: P = Popcorn (24 Mar), FB = Full Bloom (31 Mar), PF = Petal Fall (8 Apr), SS = Shuck Split (20 Apr), 14 days phi = 14 days before harvest (17 Aug), and 8 day phi = 8 days before harvest (23 Aug).