

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

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Comparison of fungicides for management of peach diseases, 2012.

Treatments were arranged in a randomized complete block design in an 'Improved Elberta' peach orchard planted in 1980 on 20 x 20 ft spacing. Each treatment consisted of 4 double tree replicates (4 sets of two adjacent trees). Fungicides were applied using a hydraulic handgun sprayer at 100 psi and at a rate of 108 gal water/A. Approximately 8 gal of a spray suspension was applied per 8 trees. Treatments were applied on 25 Mar (pre-pink), 2 Apr (pink), 13 Apr (full bloom), 24 Apr (petal fall) and 9 May (shuck split). Fungal infection periods were monitored using an Adcon A730 weather station equipped with standard sensors. According to a brown rot blossom blight risk model there were 6 infection risk periods detected on 27 and 29 Mar and 10, 15, 19 and 25 Apr. Ziram 76DF (8 lb/A) was applied on 4 Nov 11 and 17 Feb 12 for control of Peach leaf curl. Trees were pruned from 7 to 20 Dec 11. There were no insecticide applications for the management of insect and mite pests. Chateau (12 oz/A) plus Rely (2 qt/A) plus Aim (2 oz/A) was applied on 15 May and Rely (3 qt/A) was applied on 5 Jul for control of weeds. All herbicide rates are based on in the tree row area. Urea was applied to the block on 16 Apr (65 lb/A) and 16 May (98 lb/A). A 4 hour set of irrigation water was applied every other week starting 16 May. Brown rot blossom blight was evaluated on 11 May by examining 100 shoots (one-year-old flowering shoots), arbitrarily selected from each set of two trees, for twig cankers. All fruit from each tree was harvested on 6 Sep and evaluated for brown rot, shothole and other fungal rots.

Weather conditions for peaches started with record rainfall and remained wet to normal for the rest of the spring. First symptoms of brown rot blossom blight were found by 23 Apr as twig cankers. All fungicide treated trees had significantly fewer brown rot twig cankers than nontreated trees. There were no significant differences in brown rot twig cankers among the various fungicide treatments. The number of fruit from nontreated trees was significantly less than any of the fungicide treated trees. Since there was so little fruit, nontreated trees were not included in the analysis of fruit rot data. There were no significant differences in the number of fruit with brown rot fruit rot or total fruit rot among the various fungicide treatments. Lowest incidence of shothole was found on fruit from trees treated with Fontelis, however, the number of fruit with shothole from trees treated with Indar was not significantly different.

No phytotoxicity was observed in trees treated with any of the various materials used. No phytotoxicity was observed on a set of 4 trees in the same block treated with Fontelis at a high rate of 40 fl oz/A plus Regulaid on 10 Apr (full bloom), 27 Apr (petal fall) and 9 May (shuck split). No phytotoxicity was observed on another set of 4 trees in the same block treated with YT-669 up to a high rate of 32 fl oz/A plus Regulaid also on 10 Apr (full bloom), 27 Apr (petal fall) and 9 May (shuck split).

Treatment and Rate/A	Brown Rot Twig Cankers* (%)	Ave Total Fruit Count per 2 trees	Brown Rot (%)	Shothole (%)	Total Fruit Rot (%)
Nontreated	50.8 a	11 b	---	---	---
Elevate 50 WDG at 1.5 lb	8.5 b	92 a	5.8	21.3 a	27.6
Indar 2 F at 6 fl oz plusRegulaid at 16 fl oz/100 gal ...	8.0 b	74 a	13.5	10.0 bc	25.6
Fontelis at 20 fl oz plusRegulaid at 16 fl oz/100 gal ...	4.5 b	70 a	6.6	5.6 c	13.5
Mettle at 8 fl oz	10.3 b	51 ab	13.6	23.1 a	39.3
Mettle at 10 fl oz	13.3 b	57 a	5.2	19.2 ab	25.2

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