

Evaluation of fungicide tank mixes for control of eastern filbert blight, 2005 - 2006.

Healthy appearing two-year-old 'Ennis' hazelnut trees were planted on 7 Feb 05 at the North Willamette Research and Extension Center, Aurora, OR. Limbs with EFB cankers were cut from a heavily diseased 'Ennis' orchard near Keiser, OR on 22 to 23 Nov 04. A total of 500 cankered limbs were placed on top of chicken wire, supported by a 6 wire horizontal trellis, above test trees on 22 Feb 05. Additional limbs were placed on the wire 8 and 30 Mar 05 and 26 Apr 05. Treatments were arranged in a randomized complete block design. Each treatment consisted of 4 single tree replicates. Fungicide suspensions were applied on two sides of the tree to runoff using a Solo-Pump-Style backpack sprayer. Approximately 0.4 gal of a spray suspension was used per 4 trees. Fungicide treatments were applied on 8 Mar 05 (bud break), 22 Mar 05, 4 Apr 05, and 19 Apr 05 for a total of 4 applications. Roundup ULTRAMAX (2% solution) was applied to control weeds between trees on 6 Jul 05 and 7 Sep 05. Trees were fertilized with Urea (46-0-0) at a rate of 2 lb/6 trees on 3 May 05. Supplemental irrigation was provided as needed during the 2005 growing season. The number of EFB cankers on the main tree trunk and total length of these cankers/tree was determined on 14 Jul 06.

Spore counts peaked during the last half of March during a "pineapple express" weather system and again in mid-May. All fungicide treatments were initiated before the first weather event. It is unknown why canker numbers were high on fungicide treated trees. Due to this high variation there were no significant differences among the various treatments including the nontreated control. Few if any conclusions can be drawn from this data set. Similar treatments in an adjacent test plot were effective in reducing the number of cankers found on trees. Further evaluation of tank mixes should include a higher number of replications.

Treatment and Rate/100 gal water	Ave Number of Cankers/Tree*	Total Canker Length/Tree* (cm)
Nontreated	5.5	110.0
Bravo Weather Stik at 32 fl oz plus Orbit 3.6 EC at 2.5 fl oz	2.0	23.6
Bravo Weather Stik at 16 fl oz plus Orbit 3.6 EC at 1.25 fl oz	1.8	29.2
Bravo Weather Stik at 32 fl oz plus Flint 50 WG at 1 oz	2.0	32.5
Bravo Weather Stik at 16 fl oz plus Flint 50 WG at 0.5 oz	2.3	29.2
Flint 50 WG at 1 oz plus Orbit 3.6 EC at 2.5 fl oz	2.5	33.8
Flint 50 WG at 0.5 oz plus Orbit 3.6 EC at 1.25 fl oz	1.3	15.2

* Analysis of variance is based on log₁₀ (x+1) transformation. Means without any letters did not differ significantly.