HAZELNUT (*Corylus avellana* 'Ennis')
Eastern Filbert Blight; *Anisogramma anomala*

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Evaluation of fungicide tank mixes for control of eastern filbert blight, 2007 - 2008.

Healthy appearing two-year-old 'Ennis' hazelnut trees were planted on 25 to 26 Jan 07 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 6 Dec 06. A total of 400 cankered limbs were placed above test trees on chicken wire, supported by a 6 wire horizontal trellis, on 23 Feb 07. Treatments were arranged in a randomized complete block design. Each treatment consisted of 6 single tree replicates. Fungicides were applied to trees from two directions until runoff using a Solo backpack sprayer. Approximately 0.6 gal of a spray suspension was used per 6 trees. Fungicide treatments were applied on 14 Mar 07 (bud break), 29 Mar 07, 12 Apr 07 and 26 Apr 07 for a total of 4 applications. Sucker shoots on treatment trees were sprayed with Rely (60 oz/A) on 15 May and 10 Aug 07. Roundup ULTRAMAX (1.5 qt/A) plus Oryzalin (2 qt/A) plus GoalTender (3 qt/A) was applied to control weeds between trees on 30 Apr 07. Roundup ULTRAMAX (1.5 qt/A) plus GoalTender (3 qt/A) was applied to control weeds on 7 May 07. Preen (1 oz/10 sq ft) was used 17 and 23 May 07 for weed control as well as Roundup ULTRAMAX (1.5 qt/A) plus Dual (6 oz/A) on 9 Aug 07. Trees were fertilized with 16-16-16-7 at a rate of 40 oz/8 trees on 23 May 07 and 19 Jun 07. Supplemental irrigation was provided as needed during the 2007 growing season. The number of EFB cankers on the main tree trunk and total length of these cankers/tree was determined on 9 Jul 08.

Spore counts were high during the first two weeks of April but declined after that time. Many treatments were effective at limiting canker development or preventing them altogether. All treated trees had significantly fewer cankers than nontreated trees. Trees treated with tank mixes of Bravo plus Cabrio did not develop cankers even when both chemicals were at half rates. Trees treated with tank mixes of Bravo plus Orbit did not develop cankers unless both chemicals were at half rates. Trees treated with a tank mix of Orbit plus Cabrio developed significantly more cankers than most other treatments but significantly less than nontreated trees.

Treatment and Rate/100 gal water	Ave Number of Cankers/Tree*		Total Canker Length/Tree* (cm)	
Nontreated ……...……...…	4.5	a	64.5	a
Bravo Weather Stik at 32 fl oz plus Orbit 3.6 EC at 4 fl oz ……..……...	0.0	c	0.0	c
Bravo Weather Stik at 32 fl oz plus Orbit 3.6 EC at 2 fl oz ……..…….	0.0	c	0.0	c
Bravo Weather Stik at 16 fl oz plus Orbit 3.6 EC at 4 fl oz ……..…….	0.0	c	0.0	c
Bravo Weather Stik at 16 fl oz plus Orbit 3.6 EC at 2 fl oz ……..…….	0.3	bc	4.5	b
Bravo Weather Stik at 32 fl oz plus Cabrio 20 EG at 4.75 oz ……..……...	0.0	c	0.0	c
Bravo Weather Stik at 16 fl oz plus Cabrio 20 EG at 4.75 oz ……..……...	0.0	c	0.0	c
Bravo Weather Stik at 32 fl oz plus Cabrio 20 EG at 2.4 oz ……..……...	0.0	c	0.0	c
Bravo Weather Stik at 16 fl oz plus Cabrio 20 EG at 2.4 oz ……..……...	0.0	c	0.0	c
Orbit 3.6 EC at 4 fl oz plus Cabrio 20 EG at 4.75 oz ……..……...	0.5	b	5.5	b

* Analysis of variance is based on log10 (x+1) transformation. Means followed by the same letter do not differ significantly based on Fisher's protected LSD (P=0.05).