

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

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Evaluation of fungicide tank mixes for control of eastern filbert blight, 2014 - 2015.

Healthy appearing two-year-old ‘Ennis’ hazelnut trees were planted on 19 Feb 14 at the Botany and Plant Pathology Field Laboratory, Corvallis, OR. Limbs with EFB cankers were cut on 22 to 27 Jan 14 from heavily diseased ‘Ennis’ trees. A total of 275 cankered limbs were placed above test trees on chicken wire, supported by a 6 wire horizontal trellis, on 3 Mar 14. Treatments were arranged in a randomized complete block design. Each treatment consisted of 8 single tree replicates. Fungicides were applied to trees from two directions, until runoff, using a Solo-Pump-Style backpack sprayer. Approximately 0.25 gal of a spray suspension was used per 8 trees within each treatment. Fungicide treatments were applied on 13 Mar 14 (bud break), 24 Mar 14, 10 Apr 14, and 25 Apr 14 for a total of 4 applications. Rely (25 oz/10gal) was applied as a spot treatment on 22 May 14, 26 Jun 14, 18 Jul 14 and 22 Aug 14 for management of weeds. Trees were fertilized with 46-0-0 at a rate of 0.5 lb/6 trees on 16 Apr 14. Supplemental irrigation was provided as needed during the 2014 growing season. The number of EFB cankers on the main tree trunk and total length of these cankers/tree was determined on 3 Aug 15. Due to limited tree survival only treatments with at least 4 surviving trees were analyzed using a completely randomized design. Nontreated trees from adjacent blocks were also utilized in this analysis.

Although the dormant season was considered unusually dry with record cold temperatures, spring growing conditions had normal precipitation and warmer temperatures overall. Cold injury to young trees resulted in only 56% tree survival overall (data not presented). Nontreated trees had significantly more cankers than any of the various fungicide treated trees. Cankers did not develop on the surviving trees treated with the high (full) rate of Equus. The number of cankers found on trees treated with other fungicides, including the low (half) rate of Equus, were not significantly different from zero. No phytotoxicity or growth regulation activity was observed in trees treated with any of the various materials used. Liquid chlorothalonil product labels (such as Bravo Weather Stik or Echo 720) do not allow tank mixing with other pesticides. Dry chlorothalonil product labels (such as Echo 90 DF or Equus DF) do allow tank mixing. Labels are continually changing so check before using in a tank mix.

Treatment and Rate/100 gal water	Ave Number of Cankers/Tree*	Total Canker Length/Tree* (cm)
Nontreated	3.0 a	60.7 a
Cabrio 20 EG at 2.4 oz plus Echo 720 at 16 fl oz	0.3 b	3.8 b
Cabrio 20 EG at 2.4 oz plus Equus DF at 0.6 lb.....	0.5 b	9.0 b
Equus DF at 0.6 lb	0.5 b	8.3 b
Equus DF at 1.2 lb	0.0 b	0.0 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).