

**Evaluation of organic fungicides for control of eastern filbert blight, 2009 - 2010.**

Healthy appearing two-year-old 'Ennis' hazelnut trees were planted on 3 Feb 09 at the North Willamette Research and Extension Center, Aurora, OR. Limbs with EFB cankers were cut from heavily diseased 'Ennis' at NWREC from Nov to Dec 08. A total of 400 cankered limbs were placed above test trees on chicken wire, supported by a 6 wire horizontal trellis, on 23 Feb 09. 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. Fungicide treatments were applied on 26 Mar 09 (bud break), 7 Apr 09, 21 Apr 09 and 5 May 09 for a total of 4 applications. Sucker shoots were killed on trees using Rely (60 oz/A) on 18 May 09. Honcho (2 qt/100 gal) plus Goal Tender (3 oz/100 gal) was applied to control weeds between trees on 15 Apr 09 and 30 Apr 09. Honcho (2 qt/100 gal) alone was used on 18 May 09, 18 Jun 09 and 24 Aug 09 for weed control. Preen (6 lb/1,000 sq ft, with fertilizer 9-17-9) was used on 13 May 09 and 18 Jun 09. Trees were fertilized with 16-16-16 at a rate of 1 lb/8 trees on 28 May 09, 23 Jun 09 and 16 Apr 10. Supplemental irrigation was provided as needed during the 2009 growing season. The number of EFB cankers on the main tree trunk and total length of these cankers/tree was determined on 14 Jul 10.

Several cankers developed on nontreated trees in comparison to last year when almost no cankers developed despite similar spring weather. The number of cankers on trees treated with only Serenade or Serenade plus Nu-film-P was not significantly different from nontreated trees. Trees treated with copper-based products (Nu-Cop or Kocide) alone or tank mixed had significantly fewer cankers than nontreated trees. Lowest numbers of cankers were found on trees treated with Serenade plus Nu-Cop but were not significantly different from trees treated with Nu-Cop alone. Trees treated with Nu-Cop alone or tank mixed with Serenade had significantly fewer cankers than trees treated with Kocide 3000. No phytotoxicity was observed on any of the fungicide treated trees.

Treatment and Rate/100 gal water	Ave Number of Cankers/Tree*		Total Canker Length/Tree* (cm)	
Nontreated .....	11.4	a	206.8	a
Nu-Cop 50 DF at 12 lb.....	3.1	c	44.4	bc
Serenade MAX at 2 lb .....	9.5	a	173.1	a
Serenade MAX at 2 lb plus Nu-Film-P at 6 fl oz .....	10.6	a	174.1	a
Serenade MAX at 4 lb .....	8.6	a	139.3	a
Serenade MAX at 4 lb plus Nu-Film-P at 6 fl oz .....	9.0	a	162.9	a
Serenade MAX at 4 lb plus Nu-Film-P at 6 fl oz plus Nu-Cop 50 DF at 6 lb .....	1.6	c	20.8	c
Kocide 3000 at 5 lb.....	4.5	b	63.8	b

\* Analysis of variance is based on log<sub>10</sub> (x+1) transformation. Means followed by the same letter do not differ significantly based on Fisher's protected LSD (P=0.05).