

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

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Preliminary studies on the efficacy of eradicant fungicides on sporulation of the eastern filbert blight pathogen, 2007.

Early objectives in this study were to evaluate if spray lime or lime sulfur might reduce the number of spores coming from EFB cankers.

It was suggested that lack of disease in OSU research plots might be due to the location of plots adjacent to a grower's spray lime trials. Maybe the lime treatments, applied to reduce spore production in the commercial blocks, account for lower canker numbers on test trees. Past research trials from throughout the Willamette Valley from 1997 to 2006 were re-evaluated to see if there was a relationship between spore counts and number of cankers found on non-treated trees. There was no relationship found when these two factors were considered (Figure 1). Some of the highest canker numbers observed on non-treated trees were during years when spore counts were lowest. In addition, some of the lowest canker numbers occurred during years with high spore counts. Clearly there are other factors than spore counts involved in overall disease observed. In other words, having low spore counts does not necessarily translate into less disease.

A group of infected 4-year-old 'Ennis' hazelnut trees located at the North Willamette Research and Extension Center, Aurora, OR were selected for work with spray lime materials. Each tree had at least one EFB canker. Cankers were sprayed with Hydrated Lime 90 WP (at 4% weight to volume), Tetrasul 4s5 29 F (at 9% volume to volume) or left non-treated on 16 Mar 07 (budbreak). Chemical suspensions were applied to runoff using a Solo-Pump-Style backpack sprayer. A total of 8 cankers were collected from each treatment on each of the following dates: 16 and 29 Mar, 19 Apr, 7 May and 4 Jun 07. Cankers were selected from 0.25 to 0.5 in diameter branches and had 15 to 20 stroma. Samples were placed in plastic bags and refrigerated overnight before processing the next day. Each canker was submerged in 30 ml sterile distilled water for 96 hours. After vortexing, a 20 ul sample was placed on a hemacytometer for counting spores. The number of spores per ml was evaluated.

Spore counts decreased as expected during the course of the early spring growing season (Figure 2). Total rainfall (data not shown) also decreased during the same time period. Spore counts from cankers treated with lime sulfur did not seem to differ from cankers left nontreated. The number of spores from cankers treated with hydrated lime was higher on 16 Mar and 4 Jun but lower from the 7 May collection period. Overall, the use of hydrated lime or lime sulfur at bud break does not seem to be a very effective way to reduce sporulation from EFB cankers.

Figure 1. Number of cankers on nontreated trees from 1997 to 2006.

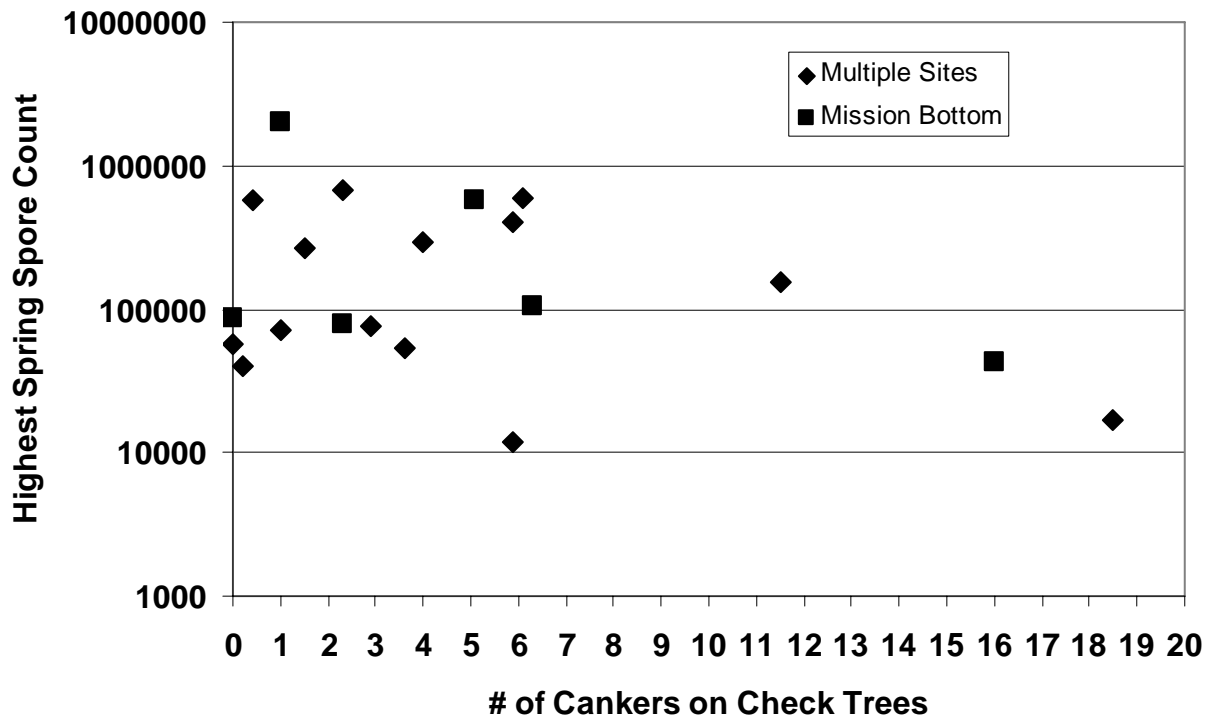


Figure 2. Number of spores from cankers treated with lime sulfur or hydrated lime in the spring of 2007.

