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

S. A. Cluskey and J. W. Pscheidt
Dept. of Botany and Plant Pathology
Oregon State University
Corvallis, OR 97331-2903

GREENHOUSE EVALUATION OF ABOUND AND ELITE FOR PROTECTION OR AFTER INFECTION ACTIVITY AGAINST EASTERN FILBERT BLIGHT, 2000 - 2001. Eight week old hazelnut seedlings grown from open-pollinated seed of 'Royal' were inoculated with ascospores of *Anisogramma anomala* ($5.0x10^6$ spores per ml) using a pump sprayer on 12 Jan 00. Seedlings were sprayed with various fungicides using a hand held pump sprayer 24 hours before or 24, 48 or 72 hours after inoculation with spores. One treatment did not have any fungicide applied to inoculated plants and served as the nontreated control. Each treatment consisted of 4 sets of 12 seedling trees. After inoculation, all seedlings were placed in a mist chamber with intermittent misting for 10 sec out of every 30 min during daylight hours. Seedlings for the 24 or 48 hour post inoculation treatment were removed from the mist chamber, allowed to dry for a few hours, sprayed with fungicide, allowed to dry again for a few hours and then returned to the mist chamber. All seedlings were removed from the mist chamber after 3 days incubation and placed on greenhouse benches (70^oF days and 62^oF nights). Seedlings were transplanted from small "6-paks" to 1 gal pots on 22 Feb 00 and fertilized with Osmocote Slo-Release fertilizer 18-6-12 (1 teaspoon/pot) on 20 Apr 00. Seedlings were moved to an outside (colder), rain protected location on 27 Oct 00 then moved back into the greenhouse on 1 Mar 01 where temperatures were set at 70^oF days and 62^oF nights. Disease incidence was determined by recording trees that had died or showed symptoms of EFB or cambium staining below the point of inoculation during May 01.

Seedlings treated with Abound 24 hours before inoculation did not develop infections while almost all seedlings inoculated and left nontreated with fungicide showed symptoms of EFB. Significantly fewer seedlings treated with Abound 24 hours after inoculation developed symptoms of EFB than nontreated seedlings but had significantly more seedling with symptoms than those treated 24 hours before inoculation. A similar number of seedlings treated with Abound 48 or 72 hours after inoculation developed symptoms as nontreated seedlings. Significantly fewer seedlings treated with Elite 24 hours before inoculation developed symptoms of EFB than nontreated seedlings however the number of seedlings with symptoms was still quite high. A similar number of seedlings treated with Elite 24 hours after inoculation developed symptoms as nontreated seedlings. However, a similar number of seedlings treated with Elite 48 or 72 hours after inoculation developed symptoms as seedlings treated with Elite 24 hours before inoculation. The data indicate that Abound has little useful kickback activity against EFB at these high rates. The Elite data is not as clear indicating about the same level of activity before and after inoculation. Further trials with Elite compared to other DMI fungicides for kickback activity against EFB are still needed.

Treatment and Rate/100 gal	Hours Before Inoculation	Hours After Inoculation	Disease Incidence (%)*
Nontreated……..	----	----	98 a
Abound 2.08 F at 12.3 oz	24	----	0 d
Abound 2.08 F at 12.3 oz	----	24	76 bc
Abound 2.08 F at 12.3 oz	----	48	92 ab
Abound 2.08 F at 12.3 oz	----	72	90 ab
Elite 45 DF at 2 oz	24	----	69 c
Elite 45 DF at 2 oz	----	24	90 ab
Elite 45 DF at 2 oz	----	48	76 bc
Elite 45 DF at 2 oz	----	72	79 bc

*Means followed by the same letter do not differ significantly based on Fisher's protected LSD (P=0.05).

Acknowledgements: We would like to thank David and Nita McAdams for the Royal seed nuts used in this trial.