

GREENHOUSE EVALUATION OF FLINT AND PROCURE FOR PROTECTION OR AFTER INFECTION ACTIVITY AGAINST EASTERN FILBERT BLIGHT, 2001 - 2002. Eight week old hazelnut seedlings grown from open-pollinated seed of 'Royal' were inoculated with ascospores of *Anisogramma anomala* ( $5.0 \times 10^6$  spores per ml) using a pump sprayer on 26 Mar 01. 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°F days and 62°F nights). Seedlings were transplanted from small "6-paks" to 1 gal pots on 25 May 01 and fertilized with Osmocote Slo-Release fertilizer 18-6-12 (1 teaspoon/pot) on 1 Jun 01. Seedlings were moved to an outside (colder), rain protected location on 28 Sept 01 then moved back into the greenhouse on 18 Apr 02 where temperatures were set at 70°F days and 62°F 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 02.

All trees inoculated with EFB but not sprayed with fungicide became infected. All fungicide treated trees had a lower disease incidence than nontreated trees except when Flint was used 72 hours after inoculation. Disease incidence for trees treated with Flint 24 or 48 hours after inoculation was not significantly different from that on trees treated with Flint 24 hours before inoculation. Disease incidence for trees treated with Procure 24 hours after inoculation was significantly lower than disease incidence for trees treated with Procure 24 hours before or 48 or 72 hours after inoculation. Flint appears to have some useful after infection activity as does Procure.

Treatment and Rate/100 gal	Hours Before Inoculation	Hours After Inoculation	Disease Incidence (%)*	
Nontreated.....	---	---	100	a
Flint 50 WG at 1 oz .....	24	---	6	d
Flint 50 WG at 1 oz .....	---	24	23	d
Flint 50 WG at 1 oz .....	---	48	23	d
Flint 50 WG at 1 oz .....	---	72	84	ab
Procure 50 WS at 3 oz .....	24	---	54	c
Procure 50 WS at 3 oz .....	---	24	4	d
Procure 50 WS at 3 oz .....	---	48	46	c
Procure 50 WS at 3 oz .....	---	72	65	bc

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

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