USE OF ROOTSTOCKS AND RIDOMIL FOR CONTROL OF PHYTOPHthora ROOT AND CROWN ROT

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ABSTRACT

The control of Phytophthora root and crown rot using Ridomil 2E is being tested in an orchard in Calaveras County. Northern California black and Paradox hybrid rootstocks grafted with Sunland were planted in an area where the original orchard trees had been lost to Phytophthora. There are twenty replications of Ridomil 2E-treated and untreated of each rootstock. The orchard is sprinkler irrigated.

The four rootstocks, Northern California black walnut, Paradox hybrid, English walnut, and wingnut are being evaluated for susceptibility to Phytophthora in an orchard in Tulare County. Half the trees of each rootstock are treated with Ridomil 2E, the other half are untreated, for ten replications of these two treatments. The orchard is furrow irrigated.

Trees in both orchards will be observed for two or three years for disease.

OBJECTIVE

To compare the susceptibility of walnut rootstocks to Phytophthora, with and without Ridomil treatments, under field conditions.

PROCEDURE

Calaveras County: Sunland trees on black and Paradox rootstocks were planted in April 1984 in randomized groups of four, one of each rootstock to be treated and the others left as checks. A scoop of soil taken from a nearby tree with symptoms of crown rot was added to each tree site at the time of planting. Ridomil 2E is applied as a soil drench, 1 gm a.i. in 1 l of water per tree at two month intervals from planting through March of 1985. Treatments will be suspended until September then resumed at two month intervals through spring. The orchard is sprinkler irrigated.

Tulare County: Ungrafted Northern California black walnut, English walnut (cultivar Waterloo), Paradox hybrid, and wingnut trees were planted in an orchard between trees showing symptoms of Phytophthora root and crown rot. At the time of planting, a scoop of soil from the base of an adjacent infected tree was added to each planting site. Ridomil 2E, 1 gram a.i. in 1 l water per tree, was applied as a soil drench and this treatment was repeated in May and will continue at two month intervals from September through March for three years.

RESULTS
No trees died of root rot this first year. In Calaveras County there is a striking difference in the appearance of the trees with those on Paradox being much more vigorous. In Tulare County only two wingnuts remain, the others died of undetermined causes.

CONCLUSIONS

None.