Preplant Nematode Control -- Interset Trees: G. S. Sibbett, D. E. Johnson

Tree growth of uniform, Paradox hybrid walnut seedlings interset in a Franquette walnut orchard heavily infested with root lesion nematode was measured in a replicated trial comparing several preplant nematode fumigation treatments. Growth of untreated trees was compared with trees growing on tree sites treated with either Methyl Bromide at 1 and 2 pounds per 100 square feet or injected at 1 and 2 feet, Telone \( R \) injected 2 feet at 1 and 2 gallons per site, or du Pont's systemic nematocide 1410L used as a root dip at planting and DFX-1764-106 applied in the tree hole at planting. Although trunk calipers 2 feet above soil level were larger on trees growing on treated sites than on control trees, differences were not significant.

Pre-Plant Fumigation Plots: L. Hendricks

Three walnut pre-plant fumigation plots were established in Merced County in 1971 and one plot in Stanislaus County in 1972. The Yecny plot was on a Delhi loamy sand and lesion nematodes were found in this plot. There is a clay pan at 0-6 feet under this loamy sand. A back hoe was used in all holes to break up this clay pan and the plot was fumigated with 25 cc's, 50 cc's and 100 cc's of Telone per hole on November 19, 1970. Also one pound of methyl bromide per hole was applied. There are ten reps. This material was applied at the depth of about 18 inches in the refilled back hoe hole. In fall 1971, the trunk diameters in 16ths of an inch were for check 14, 25 cc's, 16.1, 50 cc's, 100 cc's, 16.4, and methyl bromide 18.2.

A second plot was established on 1/10/70 at the Bunker orchard. This is a Payne orchard which has lesion nematode and these holes were replant spots within the orchard, not back hoed. Five treatments were used with six reps. The treatments were 1 lb. methyl bromide at 1 ft., 1 lb. at 2 ft., 25 cc's Telone at 18 inches, 50 cc's Telone at 18 inches, and check.

At the Linville Payne orchard replant spots were fumigated and not back hoed. Lesion nematodes are also present at this plot. Six treatments were used, Telone at 25 cc's, 50 cc's and 100 cc's at 18 inches. And one pound methyl bromide at 12 inches, and 1 lb. at 24 inches. At this site, six reps were used.

In 1972 following back hoeing at the Gnesa orchard in Patterson, eight reps were used with five treatments. The treatments are 1 lb. methyl bromide at 1\( \frac{1}{2} \) ft., 2 lbs. at 1\( \frac{1}{2} \) ft., 1 lb. at 3 ft., and 2 lbs. at 3 ft. These treatments were applied January 21, 1972.

In all plots trunk diameters will be measured on an annual basis and eventually yield data will be taken if possible.