

IRRIGATION AND SOIL MANAGEMENT

Walnut Root Studies: N. W. Ross

Root counts were made in several orchards and soil types. Maximum root numbers are generally found in the fourth foot below the soil surface. Root numbers seem to increase to about fifteen years of age and then begin to decline, in most orchards. By the time the top of a walnut tree shows distress, only a fraction of the earlier maximum root numbers will be present and alive.

Walnut roots appear to follow the path of least physical resistance. In fine textured soils, the greatest root numbers will be in the less massive areas, when such are detectable while making root counts. In sandy soils, root numbers drop in layers where sand particles are tightly wedged together and the clay fraction drops below seven or eight percent in particle size distribution. In sandy loam soils that are underlain with a silt layer at a depth of five feet below the surface, the trees will be larger and in better health than if the same sandy loam is deeper and is underlain with sand at eight or nine feet below the surface.

Use of Overhead Sprinklers in Walnuts: F. Perry

During the past season close observations and some data was collected from an overhead sprinkler trial located in Butte City. The orchard consisted of vigorous six-year-old Ashleys and Blackmers. Although sunburn in the check plots was minimal, there was an obvious reduction in sunburn in the overhead sprinkler plots. Quality was improved in the overhead sprinkler plots by \$125 per ton in the Ashleys and \$60 per ton in the Blackmers. Due to lack of adequate replications, it is not certain if these differences were due entirely to treatment. But it is felt that, based on sunburn ratings, significant differences did occur. Besides the cooling effects received during the growing season, there seemed to be another benefit of overhead sprinklers in terms of hastening harvest. Also, blight was not a problem in the overhead sprinkler plots. It is thought that the system was not turned on long enough to aggravate the disease situation. However, this information is very limited.