BEHAVIOR OF WALNUT SPURS UNDER SUN AND SHADE

D. Ramos, B. Marangoni, R. Snyder, D. Holmberg, and K. Ryugo

Fruitful and non-fruiting spurs from inside (shaded) and outside (exposed) of the tree canopy are being sampled throughout the growing season (April 1977-March 1978) in a dense 10-year-old Hartley orchard (25'x25') to help characterize shoot growth and fruitfulness under these different light conditions. The collected spurs are divided into current season's and previous year's growth. Data being obtained on spur and nut samples include: shoot length; fresh and dry weight; amount of soluble sugars and starch; oil accumulation in the nuts; and the number, size, and chlorophyll content of leaves associated with these spurs. Measurements being taken in the sample locations include: periodic light measurements (PAR), proportion of spurs bearing nuts, and the return bloom of spurs in relation to the number of leaves and nuts present in the previous year.

PRUNING CLOSE PLANTED HARTLEYS

L. C. Brown and D. E. Ramos

Selective annual pruning, as compared with no pruning, was continued in 1977 for the third consecutive year in an 18-year-old Hartley orchard (30'x30') in Kings County. The two treatments are replicated nine times with 30 trees per plot. Pruning consists of 10 to 30 thinning cuts (1-21/2" in diameter) per tree each year to open up the centers and remove close and crossing branches. The yield of the pruned trees was reduced by 14% in both 1975 and 1977 and only equal to the non-pruned trees in 1976. Yields for the non-pruned trees were 2.1, 2.6, and 2.9 tons per acre for 1975, 1976, and 1977, respectively. Nut size was significantly larger in the pruned trees.

PRUNING VS. TREE REMOVAL IN CLOSE PLANTED HARTLEYS

D. C. Holmberg and D. E. Ramos

Differential pruning was started in a 10-year-old Hartley orchard (25'x25') in Yolo County to compare annual thinning out of limbs on all trees with "whisk-brooming" and eventual removal of alternate trees. Production has been over 2.2 tons per acre in the last three seasons, but the trees are beginning to crowd and shade out lower fruiting wood. Pruning of temporary trees consists only of removing any outside limbs that come within 5'-6' of adjacent permanent trees. No outside cuts are made on these permanent trees.