SELECTIVE PRUNING OF CLOSE PLANTED HARTLEYS

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Selective annual pruning, as compared with no pruning, was continued in 1978 for the fourth consecutive year in a dense, close-planted (30'x30') block of 19-year-old Hartleys in Kings County. Pruning consists of around 10 to 20 thinning cuts (1" to 2-1/2" in diameter) per tree designed to open up the centers and remove crowded limbs in the upper portion of the trees. The yield in 1978 (1.8 tons per acre) was down from the previous three years, but there was no significant difference between pruned and non-pruned trees. Over the past four years, the yield of the pruned trees was reduced in 1975 and 1977 and only equal to the non-pruned trees in 1976 and 1978. The mean yield for the four years is 2.16 tons per acre for the pruned trees compared to 2.36 for the non-pruned, about an 8% reduction in production. These results suggest that once nut production in the lower portion of a densely planted orchard canopy is lost because of shading, it is not sufficiently restored by thinning out of branches in the upper part of the trees to offset the loss of potential production from the branches removed. This study will be continued for another year to reinforce this conclusion.

PRUNING VS. TREE REMOVAL IN CLOSE PLANTED HARTLEYS

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Selective annual pruning vs. "whiskbrooming" of temporary trees for eventual removal was continued for the second year in a 1968 planting of Hartleys spaced 25'x25' in Yolo County. Pruning of permanent trees in both treatments consists of selective thinning cuts to promote greater light penetration; whereas pruning of the temporary trees in the tree thinning plots is limited to the removal of outside limbs that come within five to six feet of a permanent tree. Yield in 1978 did not differ between the two treatments (2.7 tons per acre) nor was there any significant difference in the yield of temporary vs. permanent trees within the "whiskbroomed" plots. However, this represents a substantial increase in the productivity of these trees over the 2.0 tons per acre obtained in 1977.