

T R E E M A N A G E M E N T

Mechanized Walnut Hedging (Butte Co.) - J. Osgood, E. Roncoroni, F. Perry,
D. Ramos

Hedging either two or four sides of 10-year-old Vina walnut trees spaced 25' x 25' resulted in no difference in yield or quality when compared to hand or no pruning treatments the first year. Trees in this trial just started to touch in the 1971 growing season, thus relatively light pruning was performed by the hedging treatments. Hedging produced more space between trees and good shoot growth (72 feet) in contrast to very little growth on the unpruned trees.

Mechanized Walnut Hedging (Tulare Co.) - G. S. Sibbett, D. E. Ramos

Hedging either one or two sides of 11-year-old Payne walnut trees spaced 30' apart and heavily canopied resulted in significant reduction in yield when compared to hand or no pruning treatments the first year. Hedging one side reduced yield approximately one half that of hedging both sides. No significant difference in quality (total edible kernel) or networth per inshell pound occurred due to treatment.

Walnut Hedging - L. C. Hendricks

Several hundred acres of walnuts in the Gustine area were hedged mechanically in 1972 and two plots were planned, but their execution was prevented by the wet winter weather. On young Payne trees hedging looks very promising. Wood in the range of 1-1/2 to 2 inches in diameter is cut with this hedging operation in young Paynes. In older Eureka trees and trees in which the saws cannot reach the top of the canopy, hedging does not appear to have a great deal of promise. There are many questions about the usefulness of hedging and work will continue in this respect to get these answers.

Pruning - W. Schreader, D. Ramos

Ten observation plots of mechanically hedging older mature trees for invigoration were established in November, 1971. Severe crop loss due to spring frosts prevented getting yield or quality records from these tests, but the following visual observations of growth response were made:

<u>Treatments</u>	<u>Results</u>
Plot 1: Large Paynes. 45' x 45'. Early decline. Saws could only reach	Excellent response. 18 to 24 inches of new growth located principally

Treatments (cont)

about half the tree height. 2 to 3 feet of wood was removed with cuts, averaging about 1 inch in diameter. Trees cut on two sides.

Plot 2: Old, severely declined Paynes 45' x 45'. Could reach the tops of most trees. 2 to 4 feet of wood removed averaging 1-1/2 to 2 inches on two sides.

Plot 3: Eureka trees in moderate decline. Some dieback, little growth. Saws reached most trees. Cut in one direction 2 to 3 feet removed, about 1 inch diameter average.

Plot 4: Same as 3 above except cut in both directions.

Plot 5: Payne trees in moderate decline, planted 25' apart. Cut in one direction. 230 trees, 1" diameter average.

Plot 6: Large Eureka trees in advanced decline. Severe dieback in some trees. Cut in one direction, 2 to 3 feet of limbs removed. 1 to 2 inch diameter.

Plot 7: Same as 6 above but cut in both directions, 1 to 2 inch diameters.

Plot 8: Cut in both directions heavily. 4 to 6 feet of wood removed 3 to 4 inch diameter.

Plot 9: Small Paynes in moderate to advanced decline. Some, considerable dead wood. Cut in one direction 2 to 3 feet of limbs removed. Saws reached the tops; 1-inch diameters.

Plot 10: Same as 9 above but cut in both directions.

Results (cont)

in the cut areas but some influence above. Little influence on uncut sides.

Only response was in close association to cuts over 3 inches in diameter. Should have been cut on all four sides and more severely for greater response.

Excellent response with considerable growth over 3 feet in some trees. Response mostly on the cut sides.

Response on all four sides; looks a little excessive in some trees.

Excellent response; could have been cut lighter. Some trees with over 6 feet of growth.

Very little response except in the largest and heaviest cuts.

Same as 6 above.

Poor response, but better than 6 and 7 above.

Fair to moderate response limited to sides cut. Probably should have cut all directions.

Excellent response throughout tree.

Existing hedging equipment is not maneuverable enough to allow for cutting of smaller, more declined trees which require the greatest amount of cutting.