## Annual Report



ALMUND JUARD

Project No. 83-J1-Tree and Crop Research

Measurement of Nut Detachment Forces Before and After

Harvest

Project Leader:

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Objectives: To identify the reasons for incomplete nut removal during shake

harvesting.

Interpretive Summary: The field work demands of other on-going projects (raisin grapes, wine grapes and tomatoes) and the unavailability of suitable research personnel during the 1983 harvest season prevented the initiation of and progress on this project as originally envisioned. Preliminary tests of a mechanical force gage did suggest, however, that the measurement of tension force to remove nuts from the tree would be simpler and less subject to variability than the measurement of nut bending strength. The studies in 1984 will be carried out using a mechanical hand held force gage.