

Avocado Postharvest Quality

*Mary Lu Arpaia
Dept. of Botany and Plant Sciences,
UC Riverside
Kearney Agricultural Center,
9240 S. Riverbend Ave.,
Parlier, CA 93648*

Cooperating Personnel: M. Butts, J. Sievert, S. Collin, D. Stottlemeyer, J. Smilanick (USDA-ARS), A. Woolf (HortResearch, New Zealand), A. Kurlaender and on farm and packinghouse cooperators

Benefit to the Industry

This project will help to maintain and enhance the California avocado industry by continuing a project evaluating the potential of snap harvesting and initiating postharvest evaluation on patented and unreleased varieties. Each of these project objectives will assist the California avocado industry in shipping fruit of high quality to the consumer. This in turn will assist the grower to maximize their profit potential and further build a market identity for California avocados as fruit of the highest quality. This is critical as the California industry faces increased competition in the domestic market and elsewhere.

Objectives

- A. To continue a project initiated in Summer 1997 evaluating the potential of snap harvesting 'Hass' avocado.
- B. To initiate a postharvest evaluation program on the unreleased plant material from the breeding program.

Summary

- A. To continue a project initiated in Summer 1997 evaluating the potential of snap harvesting 'Hass' avocado.**

We are repeating our research project that was initiated in November 1997. We are harvesting fruit from 4 groves (San Diego, Oxnard, Somis, Santa Paula) at approximately 6 week intervals from November 1998 through August 1999. As in 1997 - 1998, depending on fruit availability, we will include limited testing of snap harvesting of other commercial cultivars. Equal numbers of snapped and clipped fruit will be harvested and stored for either 0 or 3 weeks. Fruit will be conditioned with ethylene prior to ripening. Overall fruit quality including days to ripeness, weight loss, shriveling and postharvest decay will be assessed following ripening. We also plan to work with a packinghouse (tentatively Mission Produce, Inc.) to cooperate with us so that 1 to 2 semi-commercial shipments of snapped or clipped 'Hass' fruit can be evaluated at the retail level.

B. To initiate a postharvest evaluation program on the unreleased plant material from the breeding.

Depending on fruit availability (we will need approximately 300 uniformly sized fruit each harvest) we will initiate postharvest fruit studies on the most promising of the 6 unreleased varieties and the 'Sir Prize'. With sufficient fruit we will evaluate tolerance to storage (0, 3, 6 weeks at 34 or 41 F) by examining the days to ripeness, susceptibility to chilling injury and postharvest decay and browning potential. Additionally, the feasibility of snap harvesting these varieties will be assessed by snapping fruit and holding at 41F for either 0 or 3 weeks. Fruit will be ripened with ethylene. Whenever possible, a 'Hass' control treatment will be included. We would also like to undertake limited sensory evaluation of these varieties.

The frequency of harvesting will be dependent on the amount of fruit available. We would like to conduct at least 3 evaluations per cultivar. If fruit is available from multiple sources, we will conduct postharvest evaluation of fruit from different growing regions.