

**B-69: Significance of time lapse between harvest and hot water treatment, for avocados**

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Effects of treatment of avocado fruits in hot water on different days after harvest on fungal rot development and the natural antifungal activity, were investigated. Six sets of freshly harvested fruits were obtained and 1 set was dipped in hot water (45°C for 15 min.) soon after harvest. The other 5 sets were similarly treated 1, 2, 3, 4 and 5 days after harvest and stored at room temperature. Anthracnose and stem-end rot development was recorded. Antifungal activity of the peel of treated and control fruits was determined for 6 consecutive days by solvent extraction followed by TLC-bioassay.

While hot water treatment of fruits 1 day after harvest reduced disease development by 75%, those treated 4 or 5 days after showed only about 25% reduction. Those fruits treated 2 or 3 days after harvest were similar to the control.

It was shown earlier that the resistance of unripe avocados to certain fungi was due to the presence of at least 5 antifungal principles in the fruit peel. During ripening their concentrations declined making the fruits susceptible to their fungi. Present data indicated that the hot water treatment affected the antifungal activity of the peel and this effect varied with the timing of treatment. Treatment with hot water 1 day after harvest caused a gradual increase in the antifungal activity and this could be the reason for lesser disease development in these fruits.

It was concluded that timing of hot water treatment was critical for avocado fruits in commercial operations.