POSTHARVEST ROTTING OF HASS AVOCADOS, EFFECTS OF STORAGE AND RIPENING TEMPERATURES AND INFLUENCE OF ETHYLENE

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In 2005, the incidence of rotting was low, probably due to the low vigour of the trees and the dry spring. Three experiments, in the same set of trees and identical treatments, were performed in late season (4/27, 5/19 and 6/14). The number of trees, used as statistical blocks, varied between 15 and 20 in the three experiments. After 12.5 days of storage at 6.5º C, three ripening temperatures, 15º C, 17.5º C and 20º C were compared, with or without an ethylene treatment (24 h – 54 ppm) applied 1 day after the start of the ripening period. Without previous cold storage, three ripening temperatures 15º C, 17.5º C and 20º C were compared, with the same ethylene treatment applied 1 or 2 days after the start of ripening period. Control treatments were directly ripened, without prior cold storage, at 20º C or ambient temperature.

The softening period was significantly reduced by 2 or 3 days, when the ripening temperature was increased from 15º C to 20º C. The decrease was smaller with 2-day application of ethylene in some of the experiments at 15º C but nearly null at higher temperatures. Application 2 days instead of 1 day after ripening initiation decreased this difference even more. Treatment effects on stem end and body rots varied somewhat in the three different experiments. Ripening at ambient temperature generally increased rots slightly when compared to 20º C ripening. In most cases, rotting was slightly higher at 20º C than at 17.5º C or 15º C, but the contrary was also observed.
Ethylene applied 1 or 2 days after ripening initiation, with or without a previous storage period at 6.5º C, did not clearly affect rotting.