

Abstract:

Accurate methods to assess avocado firmness are key tools to assess logistic alternatives for avocado exports. Traditional destructive tests do not allow continuous monitoring of the fruit during coldstorage; however, the influence of storage conditions on the firmness of the product over time is significant. The present paper discusses the results found during the continuous monitoring of the acoustic firmness index of five groups of avocado 'Hass', stored at different ambient temperatures.

The results indicate that acoustic measurements may be more appropriate for fruit that has entered the ripening process than for unripe, fully green fruit. The variability of the fruit had the most significant impact on the mean acoustic firmness index, followed by the variation introduced by the storage time and, lastly, the variation due to the storage temperature. The use of mean acoustic firmness indices representing the average results for different fruits that have been treated under a particular set of storage conditions can potentially mask the true effect of the storage conditions. To avoid this problem, the selection of a "representative" firmness decay curve for a single fruit and for each set of conditions is recommended.