

Title Comparison of two commercially viable postharvest firmness measurement methods for mango

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Abstract

One of the characteristic postharvest ripening changes of mangoes is the considerable softening of the flesh. A review of the recent literature shows that a variety of methods have been used to measure these changes. These methods include subjective grading through hand touch, compressive force, penetrometer force (with a number of different probes) and, more recently, relationships developed between firmness and ultrasonic wave and acoustic technologies. Of these methods, only the penetrometer force firmness determination method provides a cheap, rapid and user independent method that is able to be used with accuracy in the commercial environment. In more recent times, firmness of other fresh produce (in particular pome fruit and tomatoes) has been measured with the acoustic impulse response, which provides an advantage over penetrometer measurement in that the measurement is non-destructive. This poster illustrates the ability of the penetrometer and acoustic impulse response methods to measure firmness changes of 'B74' ('CalypsoTM') mangoes through a variety of constant and variable temperature storage scenarios and finds a correlation between the two measurement techniques.