Title Postharvest physiology and biochemistry of the 'carabao' mango

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Abstract

Although the 'carabao' mango is known for its exquisite flavor, its potential markets are limited by its highly perishable nature. Some postharvest technologies which have been successfully used to extend postharvest life, other tropical fruits were found to induce physiological disorders in this mango cultivar. These technologies include modified atmosphere and low temperature storage. Moreover, the 'Carabao' mango was found to be susceptible to hyperthermal injury when subjected to the vapor heat treatment, a method of disinfestation which is currently required by the Japanese market. In an effort to understand the postharvest behavior of the 'Carabao' mango, several physiological and biochemical studies were conducted which aimed at providing information which can be used for formulating recommendations for handling and storage. The studies revealed that: 1.) ethylene is produced by the fruit even before harvest maturity is attained; 2.) low O2 alters carbohydrate metabolism; and 3.) the susceptibility of the fruit to chilling or hyperthermal injury is affected by maturity and pre-treatments. These results will be discussed in relation to the handling requirements for the 'Carabao' mango and the potential of some postharvest technologies which might extend the marketable life of this fruit