Title Effect of calcium chloride as pre-harvest sprays on the storage performance and post-harvest quality of 'Cat Hoa Loc' mango

Author Hoa Le-Van, Ve Nguyen-Bao, Robyn McConchie, Naoki Sakurai, and Pierre Debergh

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Abstract

'Cat Hoa Loc' mango (*Mangifera indica* L. cv Cat Hoa Loc) is considered as one of the choicest fruit among other mango cultivars grown in the Mekong Delta because its fruit flesh has good flavor, attractive yellowish-orange color and delicious taste. However, the skin of 'Cat Hoa Loc' mango fruit is very thin and its climacteric respiration appeared quality after harvesting, thus it is difficult to prolong storage life, and to transport the fruit over long distances. To overcome these problems, the role of calcium in fruit firmness was investigated during the season 2000-2002. Pre-harvest treatment with calcium chloride delayed fruit ripening, as well as climacteric respiration after harvest. Changes in the cell wall components of the fruits were analyzed to clarify the mode of action of calcium. Application of $CaCl_2$ (2000 ppm) as a foliar spray 2 months prior to harvest prevented and/or inhibited the activity of hydrolytic enzymes that are responsible for disintegration of the cell walls, and "softening" of the tissues, leading to an increase in the fruit firmness and delayed fruit ripening.