

Title Effects of GA₃ and ethephon as preharvest sprays and storage conditions on postharvest quality and shelf life of mandarin (*Citrus reticulata* Blanco cv Hong)

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Abstract

'Hong' mandarin is a valuable citrus cultivar grown in the Mekong Delta, especially in the Lai Vung district, Dong Thap province. Fruits are harvested just before the lunar New Year and supplied to the local consumers for making offering to their ancestors during the New Year celebration. Many growers keep fruit on the tree as long as possible. Often resulting in fruit of unacceptable quality in the market as well as decreasing tree health and vigour. To improve the postharvest quality and shelf life for commercial purpose fruit needs to be treated with some chemicals and/or stored in appropriate conditions. Results of our experiment showed that: (1) treatment with GA₃ (20 ppm) 2 months prior to harvest prolonged fruit ripening and storage time by 4 weeks at ambient temperature; (2) storage at 15°C extended fruit shelf life up to 7 weeks with skin color becoming more attractive; (3) using a PE bag with 3 holes (1 mm diameter each) for storing 'Hong' mandarin fruits retained quality for 5 weeks without any decay; (4) the combined treatment of a perforated PE bag with storage at 15°C prolonged fruit quality for up to 9 weeks; and (5) degreening with ethephon (100 ppm) significantly improved skin color of treated fruits more than control.