

Growth and postharvest quality of mandarin (*Citrus reticulata* 'Fremont') fruit harvested from different altitudes

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Abstract

The experiment was aimed at studying the growth pattern, quality changes and shelf life of 'Fremont' fruit harvested from different altitudes i.e., 500, 650 and 800 m above sea level (a.s.l.). Fruits were harvested according to orchard harvesting criteria. Different altitudes influenced fruit growth periods and the intensity of peel color. Fruit growth period was delayed at higher altitudes, but the orange color on peel was more intense. Altitudes in the range of 500-800 m above sea level did not affect fruit firmness and total soluble solids (TSS) content in fruit juice at harvest time, however, there was a tendency that fruits from trees grown in the higher altitude had a higher acid and vitamin C content. Decreases in weight of fruit, fruit firmness, acids and vitamin C contents and increase of TSS content were observed during storage, showed no differences among the treatments. The fruits of 'Fremont' should not be stored more than 4 weeks, since they experienced significant weight loss and severe peel shrinkage that resulted in unmarketable fruits.