

Title High O₂ effects on physiological changes in longan (*Dimocarpus longan* Lour.) fruits
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Abstract

The effects of high O₂ atmosphere (HOA) on physiological changes in longan were determined. Fruit cv. Daw harvested at the commercial stage were enclosed in controlled atmosphere (CA) chambers ventilated with 50, 60, 70 or 80% O₂ or air (control) at 4°C and 95% relative humidity. The changes in respiration, ethylene production weight loss and ethanol content were evaluated at 5 days interval. HOA-stored fruits had lower rates of respiration than those fruits stored in air throughout storage with 70% O₂ as the most effective and prolong storage for 20 days. HOA totally inhibited the rise in ethylene production as manifested by fruits in normal atmosphere. HOA also reduced weight loss. However, the accumulation of ethanol content in longan pulp occurs in all high O₂ concentrations.