Effects of Temperatures and Controlled Atmosphere Conditions on Quality and Storage Life of Sapota (*Achras sapota* L.)

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Abstract

Effects of temperatures and controlled atmosphere conditions on quality and storage life of sapota were investigated. The research work was divided into two experiments. For the first experiment, the effects of low temperatures (8, 10 and 13°C) and control (20°C) on quality and storage life of sapota were determined. Sapota fruits stored at 13°C maintained the proper quality better than 8, 10 and 20°C. Fruits stored at 8 and 10°C were affected by chilling injury, whilst fruits stored at 13 and 20°C were not affected by chilling injury. But the storage life of fruits stored at 20°C was shorter than 13°C during storage. For the second experiment, the effects of controlled atmosphere conditions (air + 5% CO_2, air + 10% CO_2, 2% O_2 + 5% CO_2, 2% O_2 + 10% CO_2, 6% O_2 + 5% CO_2 and 6% O_2 + 10% CO_2) and control (air) on quality and storage life of sapota were analyzed. Sapota fruits stored in 2% O_2 + 10% CO_2 was the best condition for reducing weight loss, loss of firmness, color changes, respiration rate, ethylene production, soluble solids content and producing the highest sensory quality score.

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