Quality changes of exotic tropical fruits during storage in semipassive modified atmosphere

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Abstract

Most exotic tropical fruits are seasonal fruits that have relatively short shelf-life. Tropical fruits are different from fruits grown in temperate climate, due to the evolution stages; therefore they are unlikely to be stored under low temperature. An attempt of storing fruits at the temperatures of 15 and 20°C under semi-passive modified atmosphere packaging was developed. It was aimed to minimize the changes of tropical fruits quality by reducing the respiration rates of fruits in packaging through the typical patterns of valves as the air regulator. The results showed that the patterns of valves along the sides of the package could extend the shelf life of exotic fruits up to four times compared with the regular packing method. There were only slight changes in total sugar, vitamin C, total acid, weight loss, and color of fruits before and after stored in the package. Most panelists could not differentiate the fruits after stored in this typical package with the fresh harvested fruit.