Title	Shelf life of papaya (*Carica papaya* L.) as influenced by fruit maturity, holding time in ambient and 1-methylcyclopropene
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Keyword	shelf life; 1-MCP; papaya

Abstract

The postharvest responses of two fruit maturities of *Carica papaya* cv. Kapoho to various holding times (0, 1, 2 days) in ambient prior to treatment with 100 nl l^{-1} 1-methylcyclopropene (1-MCP) were determined. Total Soluble Solids (TSS) was higher in 5-15% yellow fruit (5-15Y) regardless of holding time. At 6 days after treatment (DAT), peel yellowing was slower in 5-15Y held for 2 days. At 9 DAT, visual quality was better in mature green fruit. Fruit were firmer while disease tended to be less severs in the treated 5-15Y lot. Weight loss was lower when held for 2 days. Shelf life and days to edible ripe stage (DERS) were longer in fruit held for 1 or 2 days and in 5-15Y held for 2 days. Relative to the control, fruit that were 5-15Y and held for 2 days prior to 1-MCP gave a 59% improvement in shelf life, 73% delay in DERS and 51% delay in DDO. Responses of 5-15Y fruit held for a day prior to treatment with various 1-MCP concentrations (0, 50, 100, 150 nl l^{-1}) were also determined. 1-MCP at 100 nl l^{-1} resulted in a longer shelf life of 14.3 days or 30% improvement in shelf life, less yellow but firmer fruit at 9 DAT as well as DERS and DDO at 23 and 25%, respectively. Respiration rate was lower in treated 5-15Y regardless of holding time. Percentage ion leakage which increased with time was significantly lower for 1-MCP treated fruit. All treated fruit reached edible ripe stage. Thus, holding fruit for a day or two in ambient conditions prior to treatment with 100 nl l^{-1} 1-MCP is effective in prolonging shelf life of Kapoho papaya.