Title Improving 1-methylcyclopropene efficacy in papaya fruit by holding in ambient prior to treatment

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Citation Program and Abstracts, 4th International Symposium on Tropical and Subtropical Fruits, November 3-7 2008, Bogor, Indonesia. 215 pages.

Keyword Papaya; 1-MCP; shelf life

Abstract

The present study determined the postharvest responses of two fruit maturities (mature green, 5-15% yellow) of papaya (cv. Kapoho) to holding time in ambient (0, 1, 2 days) prior to 1-methylcyclopropene (1-MCP) treatment. At nine days after treatment, treated fruit were better in visual quality because these lost lesser weight, were more firm and less diseased than the untreated lot. Color change was slower and shelf life longer in treated fruit. Total soluble solid was not affected by 1-MCP. Papaya treated with 100 nl l^{-1} 1-MCP for 4 hours showed an improvement of 23 and 44% in shelf life, for mature green and 5-15% yellow fruit, respectively. Similarly, the delay in reaching the edible ripe stage (ERS) was at 19 and 46% while the delay in disease occurrence was at 23 and 27%. For this papaya cultivar, holding fruit for two days in ambient prior to 1-MCP treatment significantly extended the number of days to reach ERS and shelf life.