

Title Effects of 1-methylcyclopropene and controlled atmosphere on ripening and volatile compounds of 'Keaw Sawoey' mango

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Abstract

'Kheaw Sawoey' mango (*Mangifera indica* L.) is a popular cultivar in Thailand usually consumed at the unripe or green stage. In the present study, mature green fruit were treated with 1-MCP (500 ppb 1-MCP at 25°C for 16h) and controlled atmosphere (CA) (3% O₂ and 5% CO₂) and stored at 13°C, 90-95% RH. CA was most effective in delaying ripening measured in terms of green peel colour retention and firmness. The fruit maintained acceptable quality for at least 20 days. Aroma volatiles comprised of 3-hexenol, 1-*R*-alpha-pinene and hexanal. 3-Hexenol was the predominant volatile compound. Fruit treated with 1-MCP and CA had reduced volatile production than the untreated control. Ethanol started to accumulate after 12 days in CA.