Title Shelf life of three durian (*Durio zibethinus* Murr.) cultivars in ambient conditions as influenced by 1-methylcyclopropene

Author Emma Ruth V. Bayogan, Danica Riza V. Delgado and Miguela S. Anabesa

Citation Book of abstracts, APS2010 & SEAsia2010 & GMS2010, August 2-4, 2010, Radisson Hotel, Bangkok, Thailand

Keyword Durian; 1-MCP; shelf-life

Abstract

The effect of various 1-methylcyclopropene (l-MCP) concentrations (0, 500, 1000 and 2000 nL L^{-1} for 12-h on shelf life of three durian fruit cultivars (cvs. Arancillo, Duyaya, and Puyat) was studied followed by treatment duration (0, 6, 12 h with 1000 nL L^{-1} 1-MCP). Freshly harvested fruit were dipped in 500 ppm thiabendazole, air-dried, and treated with 1-MCP (SmartFreshTM) in a sealed airtight chamber (28±2°C and 83.5± 5%) and stored in ambient. 1000 nL L^{-1} 1-MCP for 12 hours improved the shelf life of the three durian cultivars by up to about four days more or 45.37% longer relative to the untreated control. Arancillo and Duyaya responded best with 6 hours treatment time while Puyat had significant reduction in ion leakage, delay in days to capsule splitting, and days to disease occurrence when applied with 1000 nL L^{-1} 1-MCP at 12 hours. It also delayed capsule splitting and ripening of fruit for up to three days but with higher final weight loss due to longer shelflife. Visual quality rating was also improved in treated fruit with 1000 nL L^{-1} having significantly better visual quality compared with all treatments. The 12 h treatment duration was not significantly different from the 6 h treatment but it delayed ripening of durian fruit further. Total soluble solid (TSS) was not affected by both 1-MCP concentrations and treatment duration.