Title Application of 1-methylcyclopropene prior to cutting reduces wound responses and maintains quality in cut kiwifruit

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Abstract

After being treated with 1 μl l^{-1} 1-methylcyclopropene (1-MCP) for 10 h at 20 °C, kiwifruit (*Actinidia deliciosa* cv. Hayward) were cut longitudinally in halves and stored at 2 °C for 10 d. Respiration rate, ethylene production, electrolyte leakage, firmness, soluble solids and color were determined. Wound responses were observed as increased respiration rate and ethylene production immediately after cutting. Wounding activated the ripening process by indicating lower firmness and higher soluble solids and electrolyte leakage in cut kiwifruit than intact fruit. Treatment of 1-MCP before cutting influenced all parameters measured. Compared with untreated samples, 1 μl l^{-1} 1-MCP treatment resulted in reduced respiration rate and ethylene production, lowered electrolyte leakage, delayed softening and color change. Therefore, application of 1-MCP prior to cutting showed beneficial effects on reducing wound responses and delaying ripening in cut kiwifruit.