Title Shelf-life extension of highbush blueberry using 1-methylcyclopropene stored under air and controlled atmosphere

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Abstract

The potential of 1-methylcyclopropene for controlling ripening in 'Lateblue' blueberry fruit was explored. After harvest, blueberry fruits were exposed to 1-MCP (0.3 and 0.6 $\mu l\, l^{-1}$). After treatment, samples were stored in air at 0 °C for 35 days and in a controlledatmosphere (3 kPa O_2 + 11 kPa CO_2) for 60 days. Quality parameters were monitored (weight loss, total soluble solids content, titratable acidity, firmness, anthocyanin content, phenolic content, total antioxidant capacity). Blueberries treated with 1-MCP showed a reduced weight loss during storage and a lower total soluble solid content compared to untreated fruit. High titratable acidity values were observed after controlledatmosphere storage, but no significant effect of 1-MCP on this parameter was observed. 1-MCP had no significant effects on anthocyanins, phenolics or antioxidant activities.