

**Title** Improving storability of persimmon cv. Rojo Brillante by combined use of preharvest and postharvest treatments

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#### **Abstract**

The combined use of preharvest treatments, gibberellic acid (GA<sub>3</sub>) or calcium nitrate, with 1-methylcyclopropene (1-MCP) treatment applied postharvest, was evaluated to improve the storability of 'Rojo Brillante' persimmon fruit, at both 1 and 15 °C. Properties linked to commercial quality, such as flesh firmness, external colour, total soluble solids and level of astringency, were evaluated at harvest, periodically during storage, as well as after subsequent shelf-life periods. At both storage temperatures, control fruit and calcium nitrate-treated fruit showed commercial quality for 20 d; the sole application of GA<sub>3</sub> delayed loss of firmness for 30 d while the treatment with 1-MCP by itself allowed storage of the fruit for 40 d. The combined use of calcium nitrate plus 1-MCP did not improve maintenance of quality any more than when 1-MCP was applied alone. The combination of GA<sub>3</sub> and 1-MCP delayed the symptoms of chilling injury, extending the storability at 1 °C for up to nearly 3 months. During storage at 15 °C, the combination of both treatments resulted in high-firmness values for 30 d, but did not prolong the storage period any longer than the 40 d reached by the sole application of 1-MCP. Irrespective of treatment, a loss of efficacy of the deastringency treatment was observed after 30 d of storage at 15 °C.