

Title Effect of 1-decylcyclopropene in improvement of the display life of Kalanchoë (*Kalanchoë blossfeldiana* Poelln.) flowers

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Abstract

Pre-treatment of *Kalanchoë blossfeldiana* Poelln. 'Alexandra' flowers with 1-decylcyclopropene (1-DCP), an ethylene action inhibitor, delayed inrolling and prolonged the display life of flowers. 1-DCP was the most effective at concentration of 200 nl L⁻¹, similar to 1-methylcyclopropene (1-MCP) used as standard/control. However, 1-DCP treatment extended the display life of individual flowers to almost 10 days and was significantly better than treatment with 200 nl L⁻¹ of 1-MCP. The effectiveness of 1-DCP was a function of time and temperature. 30 min exposure time significantly increased display life of flowers (three fold of controls), however, 6-hours exposure time was most efficient. 1-DCP was most effective at 20°C while lower temperatures reduced its performance. The reasons for differences in the effect of 1-DCP under various temperature conditions and exposure time are discussed.