

Title Non-volatile derivative of 1-MCP prevents ethylene responses in ornamentals
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Abstract

N,N-dipropyl(1-cyclopropenylmethyl)amine (DPCA), a non-volatile derivative of 1-MCP (1-methylcyclopropene), was synthesized in salt form and tested for effectiveness in preventing ethylene responses in various ornamentals. Individual flowers or flower spikes of four ethylene-sensitive plant species: miniature rose, geranium, carnation and orchid were sprayed with different amounts of DPCA in the range of 0-40 nmol and the effectiveness of DPCA was compared with 1-MCP treatment, a volatile application form. After chemical treatments the plant material was exposed to $1 \mu\text{l L}^{-1}$ ethylene and the postharvest performance of flowers evaluated. This study proved that DPCA can be effective at blocking ethylene action when applied as a spray.