## Impact of GA<sub>3</sub> and spermine on postharvest quality of anthurium cut flowers (*Anthurium andraeanum*) cv. Arizona

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## Abstract

Anthurium cut flowers exposed to low temperatures may be subjected to chilling injury, whereas higher temperatures may accelerate their metabolism and induce premature senescence. Plant growth regulators, as gibberellic acid (GA<sub>3</sub>) and spermine (SPM), have been described to extend the postharvest life of flowers. In this study, both compounds were applied by spraying or pulsing in anthurium cv. Arizona before storage at 20 °C. The solutions were constituted of 144  $\mu$ M GA<sub>3</sub> and 2  $\mu$ M SPM, which were used separately or in combination, and analyzed for 12 d. Spraying with GA<sub>3</sub> + SPM extended the vase life and kept the commercial quality. These treatments increase the phenols content, as well as, the activity of polyphenol oxidase (PPO), peroxidase (POD), and superoxide dismutase (SOD). Spadix sprayed with GA<sub>3</sub> or SPM retained high amounts of spermidine (SPD), and in the combination of GA<sub>3</sub> + SPM by spraying can be used to reduce the senescence in anthurium cut flowers stored at 20 °C, and improve the commercial quality of the inflorescences.