

Influence of aminoethoxyvinylglycine on the quality and preservation of *Heliconia psittacorum* x *H. spathocircinata* cv. Golden Torch

Sandra Oliveira de Souza¹, Francine Lorena Cuquel², Maria Auxiliadora Coêlho de Lima³, Agnelli Holanda Oliveira⁴, Andréia Amariz³, Thalita Passos Ribeiro³ and Danielly Cristina Gomes da Trindade³, Fernando Luiz Finger¹

¹Universidade Federal de Viçosa (UFV) – Departamento de Fitotecnia, 36.570-000, Viçosa, MG; ²Universidade Federal do Paraná (UFPR) - Departamento de Fitotecnia e Fitossanitarismo, 80.035-050, Curitiba, PR, francine@ufpr.br; ³Embrapa Semi-Árido, Laboratório de Fisiologia Pós-colheita, 56.302-970, Petrolina, PE; ⁴Universidade Federal da Paraíba – Curso de Engenharia de Alimentos, 58.051-900, João Pessoa, PB.

Abstract

Aminoethoxyvinylglycine (AVG) has been utilized for the purpose of increasing the vase life of cut flowers, where natural senescence is coordinated by ethylene, by inhibiting the enzyme 1-aminocyclopropane carboxylate synthase. To evaluate the combined effect of AVG and sucrose (10%) applied as pulsing solutions on the quality and post-harvest preservation of *Heliconia psittacorum* x *H. spathocircinata* cv. Golden Torch, stems were stored for up to 10 days under ambient conditions (22 ± 4 °C and $47 \pm 13\%$ RH). Floral stems from plants produced in a commercial nursery were picked when they had two expanded bracts and one still closed. Treatments applied were: AVG at 0, 1, 2 and 4 ppm and storage time for 0, 1, 2, 4, 6, 8 and 10 days. Every two days, a 2-cm piece was cut from the base of the stem, water in the vases was changed, and the variables measured. The study was conducted using a randomized complete block design, in a 4 x 7 factorial arrangement (AVG concentration x storage time), with 4 repetitions and 3 stems per experimental unit. The values determined for appearance parameters including value, chroma and hue of the bracts and water uptake decreased significantly with storage time. The floral stems treated with AVG showed an increase of 40% in total soluble sugar level (TSS), on the second day of storage; and the reduction in the variations of fresh weight (VFW) and hue for angle for the bracts (H), where the response was probably due to the greater loss of water in these inflorescences. On the other hand, there was an increase in the values for VFW and H, and reduced levels of TSS in the stems that received $4 \mu\text{g g}^{-1}$ of AVG. However, a better appearance and greater VFW was found in stems treated with $2 \mu\text{g g}^{-1}$ of AVG.



AARHUS UNIVERSITET
KØBENHAVNS UNIVERSITET

9TH INTERNATIONAL SYMPOSIUM ON POSTHARVEST QUALITY OF ORNAMENTAL PLANTS

11-14 AUGUST 2008
ODENSE - DENMARK

