Do floral preservatives affect postharvest quality of cut anthurium flowers (*Anthurium andraeanum* L. 'Tropical') after long distance shipment

M P Hettiarachchi* and J Balas

Institute of Fruit Growing and Horticulture, University of Natural Resources and Applied Life Sciences, Peter Jordan street, 82, A-1190, Vienna, Austria

Variability of floral preservatives can cause differences in keeping quality of cut flowers. The relevance of floral preservatives (Standard vase solution-SVS, 8-HQS, Chrysal®, Flora®, Flower fresh™, Biovin®) and tap water (control) on postharvest quality of anthurium (*Anthurium andraeanum* L. 'Tropical') was investigated after long-distance shipment. Cut stems treated with Flower fresh produced the longest vase life (16.01 d) while the shortest vase life (11.89 d) occurred in Chrysal vases. Flowers placed in SVS, Flora, Biovin, 8-HQS and tap water vases had no difference in vase life. Floral preservatives appear to have no significant effect on fresh weight of anthurium flowers. However, flowers placed in Chrysal vases showed earliest spathe blueing by indicating reduced b^* values. It showed significantly ($P < 0.05$) lower water uptake (1.79 ± 0.10) and higher transpiration (2.85 ± 0.22) of flowers kept in Chrysal vases at senescence. Spathe colour intensity (Chroma) of flowers placed in Biovin, Tap water, 8-HQS vases were improved during vase period after recutting stems and topping up vases with specific vase solutions while spathe red hue was positively influenced only in flowers placed in Flora. In contrast, spadix chroma had no significant difference with control. Our results indicate that floral preservatives have the potential to be influenced for colour components (chroma and hue angle) during vase period. However, tap water also plays an important role to maintain flower-keeping quality of cut stems, after long-distance shipment. Results strongly question the use of floral preservatives to prolong vase life and to maintain postharvest quality of cut anthurium flowers.

Financial assistance by Austrian Development Cooperation 'North South Dialogue Ph.D. scholarship programme' is gratefully acknowledged.

* *Present address: Department of Crop Science, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya, Sri Lanka*

* mhettiarachchi@hotmail.com Tel: 041 2292200