

Short communication

Vase life of anthurium cut flowers as influenced by holding solutions

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Anthurium are tropical plants grown for their showy cut flowers and attractive foliage. These tropical cut flowers received a boost with the emergence of anthurium in the world scenario, dominated largely by sub-tropical and temperate cut flowers. Because of its long shelf life, anthurium is an excellent export product. The flowers are perishable and therefore need to be treated with suitable chemicals to enhance their life in vase and to improve the quality. One important factor causing senescence is the increase in loss of water from flower parts coupled with the reduced rate of water uptake during storage. Various holding solutions preservatives are used for the long term storage of anthurium cut flowers.

The present investigation was carried out during June-July 2005 at the Department of Horticulture, IGAU, Raipur. The cut flowers were harvested after the unfolding of the spathe is complete. Immediately after harvest, cut end of harvested flowers were dipped in freshly collected tap water and brought to laboratory. Thereafter, fresh cut stems was taken and kept in equal sized large test tubes containing 100 ml of each holding solution viz., Benzyl adenine (25 ppm); Benzoic acid (500 ppm) and Sucrose (5% solution). The experiment was laid out in completely randomized design. Each treatment was replicated thrice keeping six cut stems in each replication. The termination of vase life was marked by the wilting of Spathe and colour fading.

Data presented in Table 1 indicates that the complete flower opening and vase life varied significantly while kept in different holding solutions, namely Benzyl adenine (25 ppm) benzoic acid (500 ppm) and Sucrose (5% solution) under different cultivars viz., Titicala, Grace, Esmeralda, Flame and Akapana. Titicala, the maximum vase life (21.33 days) was recorded in Benzyl adenine (25 ppm) followed by 15.33 days vase life in Benzoic acid (500 ppm) while minimum vase life (14.33 days) was recorded in Sucrose (5% solution). In grace the maximum vase life (15.66 days) was recorded in benzyl adenine (25 ppm) followed by 15.33 days vase life in Benzoic acid (500 ppm) while minimum

vase life (11.00 days) was recorded in Sucrose (5% solution). In Esmeralda the maximum vase life (20.00 days) was recorded in Benzyl adenine (25 ppm) followed by 14.66 days vase life in Benzoic acid and minimum vase life (14.00 days) was recorded in Sucrose (5% solution) in Flame the maximum vase life (17.33 days) was recorded in Benzyl adenine (25 ppm) followed by 13.33 days vase life in benzoic acid (500 ppm) and minimum vase life (11.66 days) was recorded in sucrose (5% solution). In Akapana the maximum vase life (14.00 days) was recorded in Benzyl adenine (25 ppm) followed by 11.00 days vase life in Benzoic acid (500 ppm) and minimum vase life (10.66 days) was recorded in sucrose (5% solution). Difference in vase life between cultivars under holding solution may be due to their genetical character. Kushal *et al.* (2001) reported that the pre harvest, harvest and post harvest factor affecting the post harvest life and quality of cut flowers, including genetic or inherent factors.

The maximum vase life was recorded with Benzyl adenine (25 ppm) treatment followed by Benzoic acid (500 ppm) because of its bactericidal properties. The use of bactericides with their resulting reduction of bacterial population, improves water balance, inhibit senescence and prolong the vase life of flowers. Similar results for Benzyl adenine were reported by Salvi *et al.* (1997). Paull and Chantrachit (2001) reported that the anthurium cvs. that responded positively to Benzyl adenine. Shrirakawa *et al.* (1964) reported that treatments with Benzyl adenine reduced respiration rate of anthurium flowers.

Table 1. Effect of holding solution on vase life of Anthurium

Cultivars	Benzyl adenine (25 ppm)	Benzoic acid (500 ppm)	Sucrose (5% solution)
Titicala	21.33	15.33	14.33
Grace	15.66	11.33	11.00
Esmeralda	20.00	14.66	14.00
Flame	17.33	13.33	11.66
Akapana	14.00	11.00	10.66
C D at 5%	1.3	1.69	2.30

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