Extending the shelf life of (Anthurium andreanum) using low cost preservatives

Anthurium andreanum produces popular red, orange, white and pink flowers. Production of Anthurium has become a profitable venture to a large number of small-scale growers in Sri Lanka.

The high perishability of flowers renders them vulnerable to a high rate of post harvest losses. Therefore, it is essential to protect the flowers from detorioration after harvest in order to extend their shelf life. There are commercially available preservatives marketed under different trade names. However, it is useful to introduce low cost methods to extend the lifetime of cut flowers for the local producers and retailers, not much for the exporters because the time taken for airfreight is less, This study was undertaken to determine a low cost preservation technique to extend the shelf life of Anthuriums. Stalks of the flowers were subjected to the following treatments: Dipping the stalks of cut flowers in solution of 3 ppm KMnO4 ; 50% Glycerin solution; 1.5% Sucrose; 1.5% Sucrose + 350 ppm Citric acid; 100% Glycerin and 2 ppm KMnO4 continuously. Dipping in 2 ppm KMnO4 ; 1.5% sucrose ; 1.5% sucrose + 350 ppm Citric acid and 100% Glycerin solutions for sixteen hours and subsequently transferring stalks to distilled

water were the other treatments included. In addition, flower stalks dipped in hot water at 80 ^{o}C and subsequently transferred to distilled water was also studied. Flower stalks dipped in distilled water only were used as controls for comparison. At five-day intervals, fresh solutions were introduced to prevent microbial infection.

A panel including five persons evaluated the quality of Anthurium flowers using non-parametric observations. The results were analyzed using the Freedman Test proceeded by the Minitab statistical package. Results showed that dipping stalks of flowers in 3 ppm KMnO4 solution was the best chemical solution to extend the shelf life of Anthuriums and, 2 ppm KMnO4 continuously dipped in a solution also effective. This method of preservation is suitable for small-scale growers and retailers because KMnO4 is cheap, freely available and has no harmful effects.