Effect of Different Preservatives on Vase Life of Tuberose

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Abstract

This study was carried out to investigate the effect of different preservative solutions to improve the keeping quality of tuberose (Polianthes tuberosa cv. Single). These preservative solutions (treatments) were: T1= 2% sucrose + 200 mg/l AgNO3, T2= 2% sucrose + 200 mg/l AgNO3 + 25 mg/l citric acid, T3= 2% sucrose + 300 mg/l HQS, T4= 2% sucrose + 300 mg/l HQS+ 25 mg/l citric acid, T5= 2% sucrose + 200 mg/l AgNO3 + 300 mg/l HQS, T6= 2% sucrose + 200 mg/l AgNO3 + 300 mg/l HQS+ 25 mg/l citric acid, T7= 0.01 % sodium hypochloride, T8= 0.05 % sodium hypochloride, T9= 0.10 % sodium hypochloride and T10= tap water (control). The results showed that all treatments had improved the keeping quality and vase life of the cut flowers comparing to control ones. Among all these treatments, 2% sucrose + 200 mg/l AgNO3 + 300 mg/l HQS+ 25 mg/l citric acid showed best water uptake, water loss uptake ratio, percentage of maximum increase in fresh weight of the cut flower stem and vase life which was extended up to 10 days. According to the results of this research it is concluded that, 2% sucrose + 200 mg/l AgNO3 + 300 mg/l HQS+ 25 mg/l citric acid are suitable for prolongation of tuberose vase life.

Keywords: Citric acid, Keeping quality, Polianthes tuberosa, Preservative solution, Sodium hypochloride, Sucrose.