Abstract:

Cold storage and floral preservative treatments were evaluated in cut *Kniphofia uvaria* Oken 'Flamenco' flowering stems. Geotropic bending of the stems was strongly affected by the storage method. Stems wrapped in wet newspapers and polythene stored at 4 ºC showed better postharvest performances than 'dry' stored stems. Cut stems were placed in floral solutions (Standard vase solution (SVS), commercial floral preservatives (Chrysal, Flora, Flower fresh), A biocide (8-HQS), a biological extract (Biovin) or in tap water as a control. Fresh weight, vase life, flower colour, soluble solid concentration, osmotic potential and water uptake were noted during the vase period. Stems treated with Flora or Flower fresh produced the longest vase life (6.90 or 6.51 d respectively). No significant differences were observed for vase life of flowers placed in 8-HQS (4.86 d) and tap water (5.25 d) vases. Flowers in SVS, Biovin and tap water increased fresh weight up to day 3 and then it decreased throughout the remaining period. In contrast, flowers in Flora, Flower fresh and 8-HQS showed continuous increase in fresh weight until senescence. However, the differences between flowers in control (tap water) and floral preservatives for fresh weight were small and nonsignificant. Results suggest that stem osmotic potential, colour and flower soluble solid concentration are important factors in determining the vase life of *Kniphofia* flowers. For cold storage, flower stems wrapped in wet newspapers was the better option, as it reduced geotropic bending during the storage period and maintained good flower quality during the vase period.