

Title Physical stem-end treatment effects on cut rose and acacia vase life and water relations
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Citation Postharvest Biology and Technology, Volume 59, Issue 3, March 2011, Pages 258-264
Keywords Bark removal; Hot water scalding; Relative fresh weight; Rose; Stem-end splitting; Stem-end crushing; Vase solution uptake; Vase life; Water relations; Wattle

Abstract

Cut *Rosa hybrida* cv. High & Mighty flowers and *Acacia holosericea* (Velvet Leaf Wattle) foliage were subjected to various physical stem-end treatments as practised by florists. Their effects on longevity (vase life) and water relations [relative fresh weight (RFW) and vase solution uptake (VSU)] were quantified. All vase water contained sodium dichloroisocyanurate (DICA) biocide. Bark removal had either positive or neutral effects on the vase life of fresh-cut rose and had either neutral or negative effects on fresh-cut acacia. Stem-end splitting had either no or negative effects on the vase life of fresh-cut rose and acacia. However, both bark removal and stem-end splitting increased the vase life of both species when applied after short term storage for 24 h at 4 °C. Crushing stems had no effect on the vase life of fresh-cut rose, but tends to increase the vase life of fresh-cut acacia. Hot water scalding either increased or had no effect on the vase lives of rose and acacia. The tendency for bark removal to increase vase life of fresh-cut rose was associated with better maintenance of RFW and sustained VSU. However, for the most part, stem-end treatments had typically negative or neutral effects on RFW of fresh-cut rose and acacia. Likewise, the treatments had mostly negative or neutral effects on VSU. Overall for both species, there is little or no benefit and potentially negative effects on vase life, RFW and VSU of applying stem-end treatments as sometimes advocated by florists.