

Title Optimizing postharvest life of cut 'Renaissance Red' poinsettias.
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Abstract

Several treatments were investigated for increasing the vase life of cut 'Renaissance Red' poinsettia (*Euphorbia pulcherrima*) stems. A vase life of at least 20.6 days resulted when harvested stems were placed directly into vases with 22 deg C deionized water plus 200 mg litre⁻¹ 8-HQS (the standard floral solution used) and 0 to 1% sucrose without floral foam. Maturity of stems at harvest, ranging from 0 to 4 weeks after anthesis, had no effect on vase life or days to first abscised leaf. Pretreatments immediately after harvest using floral solution heated to 38 or 100 deg C, or 1 or 10-minute dips in isopropyl alcohol, had no effect, whereas 24 h in 10% sucrose shortened vase life by 6.4 days and time to first abscised cyathium by 4.5 days. Stem storage at 10 deg C decreased vase life, particularly when stems were stored dry (with only 0.8 days vase life after 3 weeks dry storage). Increasing duration of wet storage in floral solution from 0 to 3 weeks decreased vase life from 21.5 to 14.6 days. Placing cut stems in a vase containing floral foam decreased time to first abscised leaf by 3.7 to 11.6 days compared with no foam. A 1 to 2% sucrose concentration in the vase solution produced the longest postharvest life for stems placed in foam but had little effect on stems not placed in foam. A 4% sucrose concentration decreased vase life compared with lower sucrose concentrations regardless of the presence of foam. Holding stems in the standard floral solution increased vase life and delayed leaf abscission compared with deionized or tap water only, with further improvement when stem bases were recut every three days. Commercial floral pretreatments and holding solutions had no effect on vase life and days to first abscised cyathium but delayed leaf abscission.