

Title Effect of sucrose on postharvest quality of cut *Gloriosa superba* L. 'Misato red' flowers
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Abstract

Postharvest quality of cut *Gloriosa superba* L. 'Misato Red' flowers was investigated in relation to sucrose in a vase solution. All flower buds on stems opened with equivalently sized perianths and similar flower longevity, irrespective of the initial flower bud size when the cut flowers were kept in a vase solution containing 1% sucrose and germicide at 24°C. Smaller flower buds developed smaller flowers with pale color, indicating that flower buds required considerable energy to develop normally when flower buds were detached from cut flowers. However, sucrose in a vase solution had no effect on flower longevity of detached and fully opened flowers. Flower buds on stems developed larger flowers with bright flower color when the vase solution contained 3-10% sucrose. Pulsing of sucrose was not effective for maintaining flower quality and longevity.