Postharvest of bellflower cut flowers treated with pulsing of sucrose

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Acta Horticulturae 1060: 171-176. (2015)

Abstract

Campanula medium, popularly known as bellflowers, belonging to the *Campanulaceae* family, is marketed as potted flowers or cut flowers. In cut flowers due to the senescence process it is often necessary to add sources of carbohydrates in the pulsing solution for respiration maintenance and osmotic regulation. Therefore, the aim of this study was to determine the concentration of sucrose in pulsing treatments for bellflower stems conservation. 'White' bellflower stem flowers were standardized with 60 cm length and 15 to 20 opened flowers and treated individually for 24 h in a pulsing solution of sucrose at concentrations of 0, 1, 3 and 5%. The stems were transferred to vases containing 200 ml of tap water and kept until the end of vase life. Daily the water uptake, fresh mass loss of stems, SPAD index of leaves and flower longevity were evaluated. The higher water absorption was observed in stems treated with 5% sucrose. There was stem mass loss 24 h after pulsing, however, at concentrations of 1 and 3% the mass of the stems were constant until the end of vase life. The flower stems treated with 1% kept the SPAD index, that measures the green color of the leaves, for longer period when compared with the other treatments. The longest vase life of 6.8 days was observed in stem flowers treated with 1.0% and lower longevity of 3.6 days was obtained from stems treated with 5% sucrose pulsing solution.