

Title Postharvest performance of cut racemes of *Lupinus havardii* Wats.: effect of sucrose and gibberellic acid

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Citation Abstracts of 27th International Horticultural Congress & Exhibition (IHC 2006), August 13-19, 2006, COEX (Convention & Exhibition), Seoul, Korea. 494 pages.

Keywords cut flowers; plant growth regulators; lupines

Abstract

Over the years, as a result of our recurrent phenotypic selection breeding effort, we now have several lines of improved germplasm of *L. havardii* with blue, white, and pink flowers which show considerably reduced or no flower shattering. These genotypes have great potential as a specialty cut flower crop. In this study, we have evaluated the effect of gibberellic acid (GA), alone and in combination with sucrose (30 μ M) on postharvest performance and display life of cut racemes of two white flowered lines (White Select: Texas Ice), two blue flowered (Blue Select: Texas Sapphire) and four pink flowered (Pink Bulk, Light Pink, Dark Pink, and Coral Pink) genotypes of *L. havardii*. Incorporation of GA and sucrose in the vase solution delayed the senescence of flowers and promoted growth of the raceme axis and opening of additional flowers. In 'Texas Sapphire' even the abscission of flowers was also considerably reduced. Together, GA and sucrose acted synergistically in increasing the length of the raceme and eventually improved the overall quality display life and longevity of cut racemes.