

Title Effects of GA₄₊₇ and benzyladenine application on postproduction quality of 'Seadov' pot tulip flowers

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Abstract

We investigated the effect of gibberellin₄₊₇ (GA₄₊₇) plus benzyladenine (BA) on postproduction quality of potted tulips. Plants of *Tulipa gesneriana* 'Seadov' were sprayed with GA₄₊₇ plus BA, and placed in a simulated consumer environment (SCE) in order to determine effectiveness of the compound at each stage. Regardless of plant stage, treatment with GA₄₊₇ plus BA improved individual flower longevity and postproduction longevity in the range of concentrations tested, with BA being the main active ingredient in the mixture. At bud stage application, postproduction quality was improved with higher doses of GA₄₊₇ plus BA. GA₄₊₇ plus BA had a strong effect on enhancing flower longevity when sprayed at the mature (fully colored) bud, and a lesser effect when applied to immature (green) buds. When applied at bloom stage, however, concentrations over 50 mg L⁻¹ reduced individual flower and postproduction longevity relative to lower concentrations as a result of undesirable hyper-opening of older flowers and greatly stimulated gynoecium growth. For all flower ages, concentrations as low as 10 mg L⁻¹ significantly increased tulip flower longevity.