

Title The effect of benzyl adenine, nanosilver, 8-Hydroxyquinolin sulfate and sucrose on longevity improvement and quality characteristics of some dianthus cultivars

Author A. Babaei, E.F. Mehr and P. Moradi

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Abstract

Dianthus is one of the most important ornamental plants and its cultivation has a long history. It is used as a cut flower and also pot plant. Due to ease of production and reasonable price, it has a precious position, economically. In this study, the effect of Benzyl Adenine, in 3 different concentrations of 25, 50 and 100 mg/l as a short time treatment for 48 hours and nanosilver of 2 different concentrations (2 and 4 ppm), 300 ppm 8-Hydroxyquinolin Sulfate and 3% sucrose as along time treatment on Dianthus cut flower longevity was studied. All the flower containers were kept in average temperature of 20 C, relative humidity of 80% and 14 hours photo period supplied by fluorescent lamp ($15\mu\text{mol}/\text{m}^2.\text{s}$). The quality characteristics including vase life, total soluble solid, stem bending rate, electrolyte leakage index, chlorophyll content and solution uptake were properly measured and statistically analyzed. The results showed that the short time treatment of Benzyl Adenine in 100 mg/l plus 4 ppm nanosilver and 3% sucrose totally had the best effect on quality characteristics and longevity of Dianthus cultivars.