

Effect of Gibberellic Acid, Benzyladenine and Silver Nanoparticles on Quality of Cut Flower *Lilium L.* Hybrid cvs: 'Navona' and 'Ceb Dazzle'

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Abstract

This research was conducted to study the effects of gibberellic acid (GA_3) and gibberellic acid (GA_3) plus benzyladenine (BA) on the quality of two cultivars of *Lilium L.* hybrid 'Navona' and 'Ceb Dazzle'. *Lilium* cut flowers were harvested when the first flower bud showed full color. The experiment conducted with ten treatments, including distilled water as control, three treatments of GA_3 and five treatments of GA_3+BA and one treatment was silver nanoparticles plus sucrose. *Lilium* cut flowers were pulsed in different solutions for 24 hours; then they were transferred to preservative solution including 2ppm silver nanoparticles plus 3% sucrose. GA_3 200+BA 20 mg/l treatment were the most effective ones on the inflorescence longevity and relative fresh weight and flower water content of both cultivars. Moreover in cultivar 'Navona', GA_3 200+BA 20 mg/l treatment increased water uptake and improved membrane stability index. GA_3 200 mg/l treatment were the most effective treatment on retention leaf chlorophyll content. On the other hand in 'Ceb Dazzle' cultivar, GA_3 100+BA 10 mg/l, increased water uptake, whilst GA_3 200 mg/l was the most effective on maintaining membrane stability index and leaf chlorophyll content.

Keywords: *Benzyladenine, 'Ceb Dazzle', Gibberellic acid, Lilium, 'Navona'*