

Title IAA increases in anthocyanin content of cut oriental hybrid lily flowers
Author X.M. Geng, J. Liu, Y.F. Ding, H. Okubo and I. Miyajima
Citation Book of Abstracts. International Conference on Quality Management in Supply Chains of Ornamentals. 21-24 February, 2012. Golden Tulip Sovereign Hotel, Bangkok, Thailand.
Keywords anthocyanins; cut lilies; IAA; postharvest quality; pulsing solution

Abstract

Effects of the pulsing solution containing different concentrations of IAA on postharvest quality and some related physiological indicators of cut flowers of Oriental hybrid lily were investigated. The application of sucrose and 8-hydroxyquinoline citrate (8-HQ) prolonged vase life of cut flowers, increased their fresh weight and ornamental quality. Addition of lower concentrations of IAA with sucrose and 8-HQ increased anthocyanin content in the petals, but did not significantly affect the vase life, diameter of the opened flowers, chlorophyll content in leaves and other related morphological indicators. It also decreased the content of soluble proteins and induced the accumulation of malondialdehyde (MDA). The application of higher concentrations of IAA reduced the vase life, anthocyanin level in petals and the size of opened flowers. In particular, that with 50 mg/L IAA depressed the increase of fresh weight of cut flowers and absorption of sucrose during the treatment. The higher concentration of IAA, however, increased the content of soluble proteins at the beginning of the postharvest period and depressed MDA accumulation in the petals. The results in this study suggest that auxin is not the predominant factor inducing the senescence of cut lilies, but may increase anthocyanin content.