Effects of gibberellic acid and calcium on reducing growth period of iris *(Iris holandica* var. Blue Magic) in greenhouse and extension of its cut flower life

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(Received: May 16-2011 ; Accepted: February 25-2012)

Abstract

In order to reduce the growth period of *Iris hollandica* cv. 'Blue Magic' in greenhouse and to extend the vase life of its cut flowers, a factorial experiment, based on completely randomized design with three replications, was performed in the Research Glasshouse of College of Agricultural Sciences, University of Guilan, Rasht, Iran. The treatments consisted of three levels of gibberellic acid (0, 300 and 600 mg/L) and three levels of calcium nitrate (0, 5 and 10 mM). The measured parameters included sprouting time, flowering time, calcium content of shoot, anthocyanin content of petals and vase life of iris cut-flowers. The results revealed that gibberellic acid (GA_3) treatments had significant effects on reduction of sprouting time, enhancing flowering time, and increasing calcium content of shoot. The anthocyanin content of petals and chlorophyll content of leaves were increased too in GA_3 treatments. Calcium treatments had significant effects on calcium content of shoot and anthocyanin content of petals. In general, the interaction of GA_3 and calcium had significant effects on vase life of Iris cut-flowers.

Keywords: Anthocyanin, Sprouting, Flower emergence, Calcium content of shoot.

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