

Effect of different polyethylene covers and shade on morphological and physiological characteristics of dwarf Lisianthus cv. Matador

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(Received: Oct. 06-2013 ; Accepted: May 18-2014)

Abstract

One of the effective environmental factors on plant growth is proper lighting condition during its growth period. Planting bedding varieties of dwarf Lisianthus is developing due to its various colors and long flowering-period. This study was conducted to investigate the effect of shade and different polyethylene covers on quantitative and qualitative characteristics of dwarf Lisianthus (*Eustoma grandiflorum*) cv. Matador, as a template plant which spends its primary growth stage under greenhouse conditions. Treatments included polyethylene plastic with different percents of UV-stabilizer additive (0, 3, 5 and 8%), 50% shading cover, and open space (control). Results showed that the highest number of flowering stems, open flowers and flowering stem diameter were observed by 8% UV- stabilizer (20% shade), and had significant difference with 50% shade treatment. Maximum photosynthesis rate was obtained in control and was decreased with reduction of light intensity. To sum up, the results suggest that since no significant difference was observed in flowering characteristics between various coverings with UV-stabilizer ability and control, thus, growing dwarf Lisianthus cv. Matador could be recommended in open spaces.

Keywords: Urban green space, Ornamental plants, Greenhouse cover, Light intensity.

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