Enhancement of Growth Performances of *Ophiopogon japonicus* Ornamental Foliage Plant

S.M.K.H. Wijayabandara 1*, J.W. Damunupola 2, S.A. Krishnarajah 3, W.A.M. Daundasekera 2 and D.S.A. Wijesundara 3

1 Postgraduate Institute of Science, University of Peradeniya, Sri Lanka
2 Department of Botany, University of Peradeniya, Sri Lanka
3 Royal Botanic Gardens, Department of National Botanic Gardens, Peradeniya, Sri Lanka

Received: 26 April 2015 Accepted: 24 June 2015
*Corresponding author’s email: hansani8526@gmail.com

*Ophiopogon japonicus* is a perennial, ornamental foliage plant, which belongs to the family Liliaceae. It has a high demand in the local and international export market due to the presence of glossy white-green stripped lanceolate leaves. Improved leaves and plants of *O. japonicus* will be more popular in the floriculture industry. Hence, objective was to investigate the growth responses of *O. japonicus* for best potting media and fertilizer treatments. Shoots of *O. japonicus* trimmed up to 4 cm from the root-shoot junction were potted in two potting media as soil type 1, coir dust, compost and sand as 1:1:1 and soil type 2, sand, coir dust 1:1 by volume. High nitrogen fertilizer, balanced fertilizer and high phosphorous fertilizer were applied as foliar sprays in three concentrations (×1/2, ×1 and ×2 times of the RBG recommended dosages) and distilled water was used as the control. There was a significant (p<0.05) effect of growing media on the *O. japonicus* leaf length, plant fresh weight, shoot dry weight, root dry weight, number of leaves and number of shoots. However, there was no significant difference between the control and fertilizer treatments on leaf length, shoot dry weight, number of leaves and number of shoots while there was a significant difference among fertilizer treatments on plant fresh weight and root dry weight. Most effective potting media and fertilizer treatment for *O. japonicus* were sand:coir dust media (1:1) and Royal Botanic Gardens, Sri Lanka-recommended dosage (RBG) of fertilizer treatments (high nitrogen (2.5 g/L), balanced (1.25 g/L) and high phosphorous fertilizer (2.5 g/L), respectively.

**Keywords:** Fertilizer, Floriculture industry, Potting media.