

# Effect of Media and Fertilizer on the Growth of *Ophiopogon Japonicus*

S. M. K. H. Wijayabandara<sup>1</sup>, J. W. Damunupola<sup>2</sup>, S. A. Krishnarajah<sup>3</sup>,  
W. A. M. Daundasekera<sup>4</sup>, D.S.A. Wijesundara<sup>5</sup>

<sup>1</sup>Postgraduate Institute of Science, University of Peradeniya, Sri Lanka  
hansani8526@gmail.com

<sup>2,4</sup>Department of Botany, Faculty of Science, University of Peradeniya, Sri Lanka  
<sup>2</sup>jilushi@yahoo.com, <sup>4</sup>malkantheid@pdn.ac.lk

<sup>3</sup>Royal Botanic Gardens, Department of National Botanic Gardens,  
Peradeniya, Sri Lanka; shelomi28@hotmail.com

<sup>5</sup>Royal Botanic Gardens, Department of National, Botanic Gardens,  
Peradeniya, Sri Lanka, siril.wijesundara@gmail.com

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## ABSTRACT

*Ophiopogon japonicus* is an ornamental foliage plant that belongs to the family Liliaceae. It is popular in the local floriculture industry as an export-oriented plant. Obtaining required leaf length (50 -60 cm) of *O. japonicus* is one of the most important limiting factor. Hence, objective of this study was to select the suitable potting media and fertilizer treatment to extend the leaf length and improve the growth of the plant. The experiments were conducted in the Department of Botany, Faculty of Science, University of Peradeniya, Sri Lanka. Plastic pots with 14 cm in diameter and 13 cm in depth were used to grow plants. Shoots trimmed up to 4 cm from shoot-root junction were potted in two different potting media; coir dust: compost: sand 1:1:1 and a mixture of sand, coir dust 1:1 by volume. High nitrogen fertilizer, balanced fertilizer and high phosphorous fertilizer were applied in three concentrations ( $\times 1/2$ ,  $\times 1$ ,  $\times 2$ ). Distilled water was used as the control. Each treatment consisted of 15 replicates. Six months after plant establishment, length of leaves was measured. Roots and shoots were oven dried separately at 70 °C for 48 hours and dry weight of shoots and dry weight of roots were taken. There was a significant effect of growth media on *O. japonicus* leaf length, shoot dry weight and root dry weight. A significant difference was not observed between the control and fertilizer treatments on leaf length and shoot dry weight. However, there was a significant difference between fertilizer treatments and control on root dry weight. Most effective growth media and fertilizer treatment for *O. japonicus* were sand: coir media (1:1) and Royal Botanic Gardens, Sri Lanka- recommended dosage of fertilizer treatment (high nitrogen (2.5 g/L), balanced (1.25 g/L) and high phosphorous fertilizer (2.5 g/L) respectively.

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