

## IDENTIFICATION OF SUITABLE POTTING MEDIA FOR

### *Petunia hybrida*

H.G.A.M.P.Madurangani<sup>1</sup>, H. K. L. K. Gunasekera<sup>1</sup> and M.C.Wickramasinghe<sup>2</sup>

*1 Department of Agricultural and Plantation Engineering, Faculty of Engineering Technology, The Open University of Sri Lanka*

*2 Botanic Gardens, Asgiriya, Gampaha, Sri Lanka*

#### ABSTRACT

*Petunia hybrida* is a worldwide most popular annual bedding ornamental plants and economically profitable potted plants. Potting media is most important factor which plays a key role of root growth, vegetative growth and quality production dependent on a relatively small volume of the medium. Hence present study was conducted to identify the most suitable potting media for *Petunia hybrida*. The experiment was conducted at the plant house located at botanical garden, Gampaha by using *Petunia* variety of F1 *multi.fenice.*. The experiment was laid out in a Completely Randomized Design (CRD) with seven treatments randomized in three replicates. Treatments were the seven different potting mixtures, *i.e.* river sand: coir dust 1:1(control) ,river sand: compost 1:1, river sand: coir dust:compost1:1:1, river sand: coir dust:compost:top soil 1:1:1:1, river sand: coir dust:compost:cow dung 1:1:1:1, river sand: or dust:compost:leaf manure 1:1:1:1 and river sand: coir dust:compost:half burned paddy husk 1:1:1:1 were used to check the best suitable medium for *Petunia* plants. Measurements were taken on vegetative growth, reproductive growth and floral attributes of *Petunia*. Physical and chemical characteristics of potting media, *i.e.* pH, EC, macro nutrients content (N, P, K) and moisture percentage were analyzed. The data were obtained tabulated and analyzed subjected to the Analysis of variance (ANOVA) procedure of Statistical Analysis System (SAS). Duncan's New Multiple Range Test (DNMRT) was performed to compare the differences among treatment means at P=0.05. Height of plant (cm) had significant differences (p<0.05) among different treatments tested. The highest plant height was reordered from T1, *i.e.* river sand: coir dust 1:1 and the lowest from T2, *i.e.* river sand: compost 1:1. Stem height was not significantly different (p<0.05) among T5, T6 and T7 treatments. Furthermore the best floral attributes was recorded from T3, *i.e.* River sand: coir dust: compost 1:1:1. The overall results showed that the T3 media prepared from River sand: Coir dust: Compost 1:1:1 was the most effective medium to enhance the growth and flowering performance of *Petunia hybrida*.

**Key words:** *Petunia hybrida*, potting media, vegetative growth, flowering performance

1\* - Corresponding Author: hkgun@ou.ac.lk