Effect of organic and inorganic substrates on vegetative and ecophysiological characteristics of coleus (*Coleus blumei*)

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Abstract

In order to study of the effect of substrates on vegetative and ecophysiological characteristics of coleus plant, coleus cuttings containing two leaves were planted in perlite, cocopeat, peatmoss, compost, 50% perlite + 50% cocopeat, 50% perlite + 50% peatmoss, 50% perlite + 50% compost, 5% cocopeat+50% peatmoss, 50% cocopeat + 50% compost and 50% peatmoss + 50% compost with four replicates. Cuttings were irrigated by hydroponic solution after root formation. Results indicated that the highest root fresh and dry weight was observed in 50% perlite + 50% compost treatment, the highest secondary roots in perlite treatment, and the longest root and stem, the most fresh and dry weight of shoot, number of leaves and photosynthesis were observed in peatmoss treatment. Result showed that the best substrate for growth and development of coleus plant is peatmoss.

Keywords: Peatmoss, Perlite, Coleus, Cocopeat, Substrate.

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