**Effect of some selected plant extracts on rooting and early growth of Salvia (*Salvia splendens*), Henckelia hybrid Ⅱ (*Henckelia moonii* ×*Henckelia communis*) and Impatiens (*Impatiens walleriana*) stem cuttings**

D.S.H.Jayasinghe1\*, G.D.K.Kumara1, M.M.D.J.Senaratne2

*1Department of Export Agriculture, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka.*

*2Royal Botanic Gardens, Peradeniya.*

*\*jayasingheshakeela@gmail.com*

*Salvia splendens*, *Impatiens walleriana* are widely used bedding and border plants in landscaping. Rapid propagation is very important to fulfill landscaping requirements. Both of these plants are propagated by using seeds and cuttings. But there are limitations of seeds propagation. Henckelia plant is an endemic wild flowering plant in Sri Lanka that close to extinction due to indiscriminate collection from its natural habitats. This is normally propagated by using stem cuttings. It needs to be propagated in large quantities especially for biological conservation. Since the rooting hormones are costly and less available, the present study was carried out to find an effective plant extract to increase the rooting of these three plant cuttings. This experiment was conducted according to One Way Analysis of Variance with eight treatments replicated three times. Effect of Moringa leaf extract with 3, 6, 9 g/ L, garlic clove extract with 15, 20, 25 g/ L and commercially available rooting hormone were tested in this study. Distilled water was used as control treatment. In this experiment, number of leaves, shoot height, number of roots, root length, shoots and roots dry weights were measured. Root, shoot characteristics responded differently against different treatments. Moringa leaf extract 3 g/ L performed well than other treatments in root elongation of Salvia. Highest root length, root dry weight was achieved by 6 g/ L Moringa leaf extract in Henckelia. Highest shoot height and number of leaves were performed in 20 g/ L garlic extract and 3 g/ L Moringa leaf extract respectively in Salvia. Highest shoot height and shoot dry weights were performed in 6 g/ L Moringa extract and 15 g/ L garlic extract respectively in Impatiens. Results suggest that both plant extracts have potential in substituting commercially available rooting hormone in propagation of Salvia, Henckelia and Impatiens stem cuttings.

 Keywords: cuttings, garlic clove extract, moringa leaf extract, root characteristics, rooting hormone