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

**DSH Jayasinghe1\*, GDK Kumara1, MMDJ Senaratne2**

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

*2Royal Botanic Gardens, Peradeniya, Sri Lanka*

*\*jayasingheshakeela@gmail.com*

*Salvia splendens* and *Impatiens walleriana* are widely used bedding and border plants in landscaping. Rapid propagation is very important to fulfil landscaping requirements. Both of these plants are propagated by using seeds and cuttings. But there are limitations to seed propagation. *Henckelia* plant is an endemic wild flowering plant in Sri Lanka that is close to extinction due to indiscriminate collection from 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. The effect of Moringa leaf extract with 3, 6, and 9 g/ L (dry weight), garlic clove extract with 15, 20, and 25 g/ L (fresh weight) and commercially available rooting hormone were tested in this study. Distilled water was the control treatment. In this experiment, the number of leaves, shoot length, number of roots, root length, shoots and roots dry weights were measured. Root and shoot characteristics responded differently against different treatments. Both Moringa and garlic extracts were performed well in root length and 20 g/ L garlic extract was performed well in shoot length of *Salvia*. Moringa extract has shown better performances in all root and shoot parameters in *Henckelia* except shoot dry weight. The highest root length and shoot length were observed in 9 and 6 g/ L Moringa extracts, respectively in *Impatiens*. 15 g/ L garlic extract has recorded the highest shoot dry weight in *Impatiens*. The results suggest that both plant extracts have the potential in substituting commercially available rooting hormones in the propagation of *Salvia*, *Henckelia* and *Impatiens* stem cuttings.

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