Studies on Rooting of Kollankola (*Pogostemon heyneanus Benth*) as Affected by Potting Media, Cutting Types and a Rooting Hormone

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Abstract: Kollankola (*Pogostemon heyneanus*) is a very important medicinal herb in indigenous medicine as well as perfumery and soap industry. Kollankola leaves, stems, flowers, fruits and roots are used for the Ayurvedic preparations and essential oil production as fresh or dried form. Having insect repellent properties, this also used for the pesticide preparations. Kollankola generally propagated through stem cuttings. For the field planting of Kollankola, successfully rooted stem cuttings are essential. Current market price of dried Kollankola leaves is about Rs. 150/kg at local markets. However, there is no any systematic cultivation to fulfill annual Kollankola requirement in Sri Lanka. Availability of sufficient amount of quality planting materials creates problems in large scale cultivation of Kollankola. Present study was focused on media, cutting types and hormone on rooting of Kollankola stem cuttings and thereby improves the availability of quality planting materials. For this purpose, two separate pot experiments were carried out at the medicinal plant garden, Faculty of Agriculture, University of Ruhuna. Experiment I was to select proper potting mixture for successful rooting of Kollankola stem cuttings. For this experiment, ten different potting mixtures [such as sand alone, top soil alone, coir dust alone, mixtures of sand: top soil (1:1), sand: coir dust (1:1), sand: compost (1:1), top soil: coir dust(1:1), top soil: compost (1:1), sand: compost: coir dust (1:1:1), sand: top soil: compost (1:1:1)] were used to select proper media for successful rooting. Experiment II was designed to select suitable cutting type and hormone effect on rooting of Kollankola stem cuttings. As assign in different treatments, soft wood, semi hard wood and hard wood cuttings were used with or without Indole butyric acid (IBA). Results revealed that sand: compost: coir dust (1:1:1) potting mixture showed the significantly higher ($P<0.05$) survival percentage, higher rooted cutting percentage, higher number of roots and higher root length and 3000 mg/L IBA treated semi hardwood cuttings recorded significantly higher ($p<0.05$) number of roots, higher root length, higher survival percentage and higher rooted cuttings percentage. Therefore, IBA treated semi- hardwood stem cuttings and sand: compost: coir dust (1:1:1) potting mixture could be used to obtain successfully rooted Kollankola stem cuttings.

Keywords: Hormone, Kollankola, Potting mixture, Stem cuttings