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Development of cost effective propagation techniques for *Nyctanthes arbor-tristis* L. for sustainable flower harvesting

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Nyctanthes arbor-tristis L (Sepalika) is a hardy shrub up to 10m in height; flowers are small, white with bright orange corolla tubes. Flowers and leaves are used for preparation of traditional medicines to treat obstinate sciatica, inflammations, dyspepsia, chronic fever, bronchitis, asthma, cough, hemorrhoids. Flowers contain volatile substance that gives favorable aroma for cosmetics. Thusly extracted flavor can be used for various types of cosmetics. Cosmetics industries are dominated by a small number of multinational companies and they earn higher profits. Therefore, it is very important for countries like Sri Lanka to enter this emerging field to obtain higher foreign exchange. The objective of this experiment was to find out cost effective propagation techniques for *Nyctanthes arbor-tristis* L. for sustainable flower harvesting. The experiment was carried out during mid-February to mid April 2011 in department of Crop Science, Faculty of Agriculture. Three types of cuttings (soft wood, semi-hard wood and hard wood) were selected for the experiment and those were treated with and without rooting hormone (Rooceta: IBA Hormone) and all are planted in sand compost 1:1 medium in single propagator. After one month, survived and rooted cutting percentages, root volume, number of lateral roots, new shoots, new leaves and height of new shoot were measured. Experimental design was factorial complete randomized design. Semi-hard wood cuttings treated with rooting hormone, planted in single propagators showed promising growth performances such as significantly higher survived cutting percentage (82.21%), rooted cutting percentage (78.75%), root volume (0.62cm³) and mean number of new shoots (0.84) with compared to other treatments. Therefore, semi-hard wood cuttings treated with commercial hormone (Rooceta-IBA) and planted in single plant propagator filled with 1:1 sand: coir dust potting mixture and maintained for 1 month can be recommended for large scale planting material production of *Nyctanthes arbor-tristis* L.

Keywords: *Nyctanthes arbor-tristis* L, cosmetics, flowers, semi hard wood, IBA hormone