Vegetative propagation of Vanilla (*Vanilla fragrance*) as affected by different types of cuttings and potting media

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The species, V*anilla fragrance* is economically important as a source of natural vanillin. It is mainly used as a flavor ingredient in confectionery industry and also in perfume and pharmaceutical industries. Vanillin is extracted from properly cured matured pods of the vanilla vine. Artificially synthesized vanillin is being mostly used in industry, as it is much cheaper than natural vanillin. The world demand for natural and organic products has been increased at present and natural vanillin is in great demand and future prospects seem brighter. Therefore, vanilla is being introduced to the farming community of Sri Lanka as an economically viable small scale Export Agricultural crop suitable for home gardens. Conventional method for Vanilla propagation is done by using 1 m long vines but major problem for expand the crop is limitation of planting materials. Therefore simple and cost effective propagation technique has to be developed for mass scale production of seedlings.

Vegetative propagation of Vanilla as affected by maturity of cutting, length of cutting and different potting media were tested. Mature and immature vines were used with single, double and triple nodal cuttings and they were separately planted in two types of media (compost 3: sand 1: top soil 1 medium and compost 1: sand 3: top soil 1 medium). Cuttings were planted in 8" x10" black poly bags and they were kept in shade for about 5 days to accelerate the initiation of buds and roots. Then cut the lower end as close as possible to the node and dipped into 1 % fungicide solution (Thiram) for 10 minutes.

Early bud formation was observed (21 days) with triple nodal cuttings taken from mature vines and planted in compost 3: Sand 1:top soil 1 media. The highest shoot length (102.2 $\pm$ 2.9 cm) and number of leaves (16.4 $\pm$ 1.5) were recorded six month after planting. Bud initiation was very slow (45 days) while minimum shoot length (4.9 $\pm$ 1.3 cm) and the lowest number of leaves (1.4 $\pm$ 0.6) were recorded in immature vines with single nodal cuttings grown in compost 1:sand 3:media. It can be concluded that three nodal cuttings from mature vines were shown better growth than other treatments, while media containing high proportion of compost recorded better shoot and root growth. During six month period, a large number of plants can be produced than conventional method. Further studies are necessary to evaluate the performance of the rooted plants in the field.