Development of an Acclimatization Medium for Tissue Cultured Dendrobium Orchid Plants

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Floriculture sector is the one of the popular sectors all over the world. Cut flowers, bedding plants, potted plants, cut foliage dried flowers are major product in floriculture sector. Sri Lankan cut flower industry has a limited type of flowers. Orchid flowers have high demand in the Sri Lankan floriculture sector. Among orchids dendrobium is one of the potential cut flowers in flower industry. It is belonging to family Orchidaceae which is mainly use for decorative purposes. There are number of colors and hybrids. However, unavailability of quality planting material is the major constraint for its use among the local growers. Success of in vitro propagation experiment based on plant material which can tolerate adverse condition. Therefore, efforts were mainly focused on the production of in vitro plants, which show higher survival rate in the field condition. This study was undertaken to find out the best acclimatization medium for tissue cultured dendrobium orchid plants. The effect of different acclimatization media including, charcoal (T1), charcoal: brick (1:1) (T2), Charcoal: brick: coconut chips (1:1:1) (T3), and metal chips: coir dust (1:1) (T4) on tissue cultured dendrobium orchid plants were investigated. Plants were placed inside the propagator. Two weeks after planting acclimatization was done by gradually opening the polythene covers. Then two months after planting plants were remove from the propagator and placed inside the plant house. The highest survival rate (65%) as well as most of the growth parameters was observed in the charcoal: brick (T2). Therefore, charcoal: bricks (1:1) (T2) can be recommended as the best medium for the survival of the plants after acclimatization.

Key words: Acclimatization medium, Dendrobium, Floriculture, Orchids

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