CONTROLLED RELEASE FERTILIZER AND GROWING MEDIUM ON GROWTH AND QUALITY OF *Cordyline terminalis* 'RED EDGE'

P.A.L.K. Dharmapala[1], M.K. Rubasinghe[2] and T.A.B.D. Sanjeewa[1]

[1]Dept. of Plant Sciences, Faculty of Agriculture, Rajarata University of Sri Lanka, Puliyankulama, Anuradhapura, Sri Lanka.
[2]Floriculture Research and Development Unit, National Botanic Gardens, Peradeniya, Sri Lanka.

This experiment investigated a suitable growing media and a fertilizer ratio for *Cordyline terminalis* 'Red edge', which is an ornamental foliage plant with a high export demand. Two growing media of sand: coir dust, 1:1(M_1) and sand: coir dust: leaf mould, 1:1:1 (M_2) were used. Control (without fertilizer) and three controlled release fertilizers (15N+9P+11K+3MgO+Fe, 18N+11P+10K, 14N+14P+14K) with and without foliar fertilizer (30N+10P+10K +TE) were used as treatments with six replicates each. Treatment effects were assessed by plant height, leaf number, leaf length and width in two weeks intervals. Plant fresh and dry weights were measured at the end of the experiment. Data was analyzed using ANOVA and ANACOVA in SAS statistical package.

Leaf number and plant height were significantly ($p<0.05$) high in M_2, under non-fertilized (control) conditions, though the differences were vice versa under fertilized conditions. Plants treated with controlled release fertilizers and controlled release fertilizer + foliar fertilizer in M_1 showed significantly high leaf number, plant height, leaf width, fresh and dry weight when same treatments in M_2 showed significantly high leaf number, leaf width and fresh weight compared to the control. Three controlled release fertilizers were not significantly different from each other three controlled release fertilizer + foliar fertilizer in the same media.

There is no effect of applying foliar fertilizer with controlled release fertilizers. Results indicate that three controlled release fertilizers are effective as fertilizer and Sand: Coir (1:1) dust medium is the best growing media for *Cordyline terminalis* 'Red edge'.

Key words: Controlled release fertilizer, *Cordyline terminalis*, Growing media, 'Red edge'