



AN ALTERNATIVE SUBSTRATE FOR LAWN SOD/MAT PRODUCTION OF *Axonopus compressus* 'DWARF'

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Abstract

Lawn establishment is a lucrative industry around the globe and popular for its instant effect for the landscapes. Sodds and lawn mats are commonly used for this purpose in the Sri Lankan context. Both require coir dust in media, hence the cost of production is high as coir is expensive and freely unavailable. Hence, this study was conducted to introduce an alternative substrate for the production of lawn sods/mats using *Axonopus compressus* 'Dwarf'. Five different substrates were used as treatments including four replicates in each treatment, and fresh rooted grass were used for propagation inside a net house (12,000 lx). Plots were arranged in Completely Randomized Design (CRD) and data were collected after ten weeks of planting. The data were analysed by General Linear Model. Fresh weight of lawn mats, growth performance of grass and quality of lawn mats were evaluated. The mean weights of fresh lawn mats were significant among the treatments and substrates consisted of 100% coir and coir dust: sawdust (1:1) showed the lowest values ($P < 0.05$). Higher pore spaces in both coir dust and sawdust, contribute to the light weight of substrate. The growth of grasses and quality of lawn mats in all treatments showed a better performance leaving no any significant difference. Rolling ability and integration of substrate were different among the treatments. Substrates associated with coir dust recorded better rolling ability compared to the substrates incorporated with topsoil. The best mat was recorded with 100% coir. In order to overcome the problems associated with production using 100% coir, coir dust: sawdust (1:1) can be recommended as the alternative substrate and sawdust is an economical substitute, as it is a waste product. Further research could be carried out on cost-benefit analysis of this alternative solution.

Keywords: *Axonopus compressus* 'Dwarf', Lawn mat, Rolling ability, Coir dust, Sawdust