Effect of Graded Shade Levels on the Growth and Quality of *Polyscias guilfoylei* `variegata' in the Batticaloa District of Sri Lanka

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Identification of optimum shade level is essential for the cultivation of ornamental foliage plants. A shade house experiment was carried out to assess the effects of graded shade levels on the growth and quality of *Polyscias guilfoylei* `variegata', in the Batticaloa district during the period of July to November 2017. The experimental location was crop farm, Eastern University, Sri Lanka. The experiment was arranged in a completely randomized design with twenty replications. Graded level of shades were defined as treatments *viz.* open field (T1), 50% (T2), 60% (T3), 70% (T4) and 80% (T5) of shade levels. Shade houses were constructed using commercial nylon nets of different shade levels. Rooted and uniform cuttings were used as planting materials. Agronomic practices were followed uniformly for all treatments. Plant height, leaf area, number of leaves and plant biomass were measured at monthly interval and quality of cuttings was assessed at the end of experiment as per the criteria given by Conover and Poole (1986). Analysis of Variance was performed to determine significant difference among treatments ($p < 0.05$). Plants provided with 70% shade level showed significantly ($p < 0.05$) better performance in measured growth parameters. In quality assessment also, plants grown at 70% shade level (T4) received significantly highest score. From this study it could be concluded that, 70% shade level is suitable for the export oriented cultivation of *Polyscias guilfoylei* `variegata' in the Batticaloa district as the growth and quality of the plants was higher.

Keywords: Biomass, Leaf area, Quality assessment, Shade level