

**THE ACCLIMATIZATION POTENTIAL OF SELECTED ORNAMENTAL
FOLIAGE HOUSE PLANTS TO CONTRASTING LIGHT ENVIRONMENTS**

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ABSTRACT

'Low maintenance' has become one of the key issues among present day ornamental plant growers. If quality of plants, primarily aesthetics, could remain unaffected under variable environmental conditions, such plants can be deemed as 'low maintenance plants'. Therefore, this study was conducted to investigate the acclimatization potential of six ornamental foliage house plant species to variable light environments.

Dracaena sanderiana 'Gold', *Dracaena sanderiana* 'Victory', *Codiaeum variegatum* 'Pictum', *Polyscia fillicifolia*, *Scindapsus aureus* 'Lime' and *Ophiopogon intermedius variegatum* were the plants used in the study. Plants were exposed to four contrasting light environments: Full sun, Green shade net (15% shade), Black shade nets of 50 % and 80 % for a period of 100 days.

Results revealed that plants alter their morphology and physiology in order to survive in stressful light environments, higher irradiances in particular. These alterations were particularly observed in leaf and shoot architecture, which are of vital importance in foliage plants, thus most of the morphological changes were of commercial interest. Four of the species tested, namely *Dracaena* 'Gold', *Dracaena* 'Victory', *Codiaeum* and *Ophiopogon* were able to maintain their quality at a commercially acceptable level irrespective of the light environment. Nevertheless, *Scindapsus* and *Polyscia* displayed lower acclimatization potential to higher irradiance levels. Other species were able to achieve the acclimatization, about 60 days after the exposure to variable light environments. *Ophiopogon* was found promising specifically under the green shade nets.

Most of the plant responses under the green net (15 % shade) were analogous to those of under black net (50 % shade), which indicates the effect of light quality, particularly under the green net, on morphological responses of plants.

Key words : Foliage plants, light environment, acclimatization, morphology, aesthetic quality, *Dracaena*, *Codiaeum*, *Polyscia*, *Scindapsus*, *Ophiopogon*

