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Influence of hormones on rooting of *Dizygotheca elegantissima* shoot cuttings

Dizygotheca elegantissima is a woody ornamental plant species belongs to family Araliaceae. The production of healthy vigorous rooted cuttings of *D. elegantissima* is the main challenge faced by Sri Lankan growers due to its poor rooting ability. Therefore this study was conducted in order to promote the root initiation and production of vigorous rooted cuttings of three cultivars of *Dizygotheca elegantissima* (cultivars Gemini, Yellow and Green) using different types and concentrations of plant growth regulators.

The treatments were three different rates of IBA (500ppm, 1500ppm, and 3500ppm) 1500ppm NAA, 500ppm IBA with 500ppm NAA, 3500ppm IBA with kinetin and Secto. Cumulative root length, root dry weight, and number of roots per plant were measured from 4 to 7 weeks after planting to evaluate the root initiation and growth of *Dizygotheca elegantissima*.

Higher cumulative root length was found in 3500ppm IBA than low concentrations of IBA in case of cultivar Gemini and Yellow. Cultivar Green showed higher cumulative root length when used auxin with kinetin than single applications.

Higher root dry weight of cultivar Yellow and Gemini were found when higher concentrations of IBA (upto 3500 ppm) were used. For root dry weight of Yellow, 3500ppm of IBA was better than other applications, whereas for Gemini and Green the best treatments were combination of auxins and auxin with kinetin, respectively.

Irrespective of cultivar, higher root number was found when higher concentrations of IBA were used, For most cultivars, combinations both types of growth parameters, IBA showed better rooting than NAA, and Secto resulted lowest rooting performances except for cultivar Green.