

Stimulatory Effect of Indole – 3 – Butyric Acid and Rooting Media on Adventitious Rooting in *Epipremnum aureum* ‘Marble Queen’ Cuttings

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Epipremnum aureum ‘Marble Queen’ is a widely used foliage plant for interiorscape purposes (hanging baskets, dish gardens, and totems). It has high demand in the floriculture industry and is propagated commercially using single nodal cuttings. In floriculture industry, they are exported as rooted and unrooted cuttings. Rooting medium has a decisive influence on rooting of cuttings. This experiment was conducted to optimize the rooting of 'Marble Queen' cuttings using an appropriate rooting medium and an optimum concentration of Indole – 3 – Butyric Acid (IBA). Two experiments were conducted to determine the rooting performance of 'Marble Queen' cuttings under the production of rooted cuttings and unrooted cuttings for the export market. In experiment one, the effect of rooting media and IBA was evaluated to produce rooted cuttings. In experiment two, the rooting performances of unrooted cuttings after an export simulation (48-hour cold storage at 21°C) were tested. Two different rooting media (coir dust and oasis) and four different concentrations of IBA (0 mg·L⁻¹, 250 mg·L⁻¹, 500 mg·L⁻¹, and 1000 mg·L⁻¹) were tested. Rooting media showed the most significant effects on rooting of 'Marble Queen' cuttings. Coir dust medium reported highest number of roots per cutting, roots-to-shoot ratio, and average root diameter. Minimum days to bud and root initiation and a higher number of leaf buds were observed in oasis medium. Early rooting and a higher number of roots were observed with the application of 500 mg·L⁻¹ IBA. The use of appropriate rooting media and optimum concentration of IBA would help in the rapid propagation of 'Marble Queen' cuttings. Application of 500 mg·L⁻¹ IBA in the oasis medium was more efficient in early rooting and shoot growth of 'Marble Queen' cuttings. Coir dust medium along with 500 mg·L⁻¹ IBA was most suitable for the efficient growth and development of 'Marble Queen' cuttings.

Keywords: Cuttings, Indole – 3 – Butyric Acid, Marble Queen, Propagation, Rooting media

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