

EFFECTS OF BAP (BENZYLAMINOPURINE) AND SUPPLEMENTARY CALCIUM NITRATE ON YOUNG LEAF SHED OF ROOTED STEM CUTTINGS OF TWO SELECTED GARDEN CROTON VARIETIES

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Garden Croton (*Codiaeum variegatum* L.) varieties “Mammy” and “Iceton” are popular ornamental foliage plants, exported from Sri Lanka. The popularity of these varieties are attributed to their attractive foliage colour and shape, and adaptation to both indoor and outdoor conditions. 'Mammy' and 'Iceton' are exported as rooted stem cuttings, produced by rooting 20-25 cm pieces of top cuttings. Two to three young leaf buds and/or leaves are prematurely shed (abscise) from cuttings before they are exported, which reduce the end quality of rooted cuttings and tend to be rejected at the customer's end. Therefore two different chemicals, namely 3 mM of calcium nitrate and 0.2 mM of benzylaminopurine (BAP) were tested for reducing leaf abscission, of *C. variegatum* L. varieties, “Mammy” and “Iceton”, against a chemical-free control (water) in a complete randomized design (CRD) with three replicates during March -July, 2015 in a commercial production unit at Rambukkana (WM3), Sri Lanka. Calcium nitrate applied plants achieved the required export standard followed by benzylaminopurine. The control showed a higher number of leaf shedding and a larger leaf area of shed leaves ($p < 0.05$). Calcium nitrate and BAP treated plants recorded lower leaf shedding and lower leaf area of shed leaves. Number of leaves initiated was higher under calcium nitrate treated plants, followed by benzylaminopurine treated plants. Calcium content in young leaves was significantly higher under calcium treated plants while other treatments yielded lower calcium content. However, number of roots and fresh weight of roots were higher in the control compared to other treatments. However, there was no significant difference in dry weight of roots, fresh weight of shoots, dry weight of shoots and shoot length. In conclusion, foliar application of 3 mM calcium nitrate improves the export quality of *C. variegatum* L. varieties “Mammy” and “Iceton” foliage.

Keywords: Benzylaminopurine, Calcium nitrate, *Codiaeum variegatum*