

**EFFECT OF ROOTING HORMONES ON
PROPAGATION OF DIFFERENT VARIETIES OF
CARNATION (*Dianthus chinensis*)**

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ABSTRACT

Dianthus chinensis (Carnation) belongs family Caryophyllaceae and one of the leading cut flower in the world. Hayleys Quality Seed Co. Ltd producing F1 hybrid seeds to full fill the cut flower demand in Sri Lanka as well as the export market. Most common form of asexual propagation is stem cuttings of *Dianthus spp.* Some varieties of *Dianthus chinensis* reported less rooting percentage ($< 30\%$) in Hayleys Quality Seed Co. Ltd. For this purpose of study was conducted to study the effect of different types of rooting hormones in male and female plants in different varieties of *Dianthus chinensis*. Five varieties of male and female plants (DIM 271, DIK 188, DIL 256, DIM 151 and DIH 145) and three types of commercially available rooting hormones (Clonex, Rapid Root and Root Most) were used for this study. Clonex and Rapid Root contain 0.3 % of IBA. Untreated cutting were used as a control. Coir dust was used as a rooting media. Experiment was designed as Complete Randomized Design with two factors. Factor one is types of rooting hormones and factor two is sex of each varieties. Each treatment combination was consisted of two replicates. Data were collected after four weeks on rooting percentage, number of roots and length of roots of cuttings. High significant difference of rooting was observed in cuttings treated with hormones than the untreated cuttings in all five varieties of male and female plants. Clonex was showed highest rooting percentage in male and female plants of different varieties of *Dianthus chinensis*. Clonex is the best rooting hormone rather than Rapid Root and Root Most in all five varieties.

Key words: IBA, *Dianthus chinensis*, Rooting hormone, Propagation, Stem cuttings