

## Effect of Paclobutrazol, Gibberellic Acid and Pinching on Growth and Flowering of *Chirita* Royal Queen

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*Chirita* Royal is a hybrid perennial flowering plant produced by Royal Botanic Garden, Peradeniya by crossing *Chirita mooni* and *Chirita zeylanica*. The present study was conducted with the objective of introducing it as a potted flowering plant to the floriculture industry in Sri Lanka. Effects of Paclobutrazol (5 mg/L), GA<sub>3</sub> (50 mg/L), combination of PBZ (5 mg/L) and GA<sub>3</sub> (50 mg/L) and without growth regulators were investigated on growth and flowering of pinched and non-pinched plants. Each treatment was replicated 3 times and each replicate consisted of 10 plants. The experiment was arranged as a Complete Randomized Design (CRD). Plant height, number of days taken to branching, number of days taken to first flowering, number of branches, number of flower buds, corolla length, corolla width and spikelet length were measured at 11<sup>th</sup> week after planting. Plant height was reduced significantly ( $P < 0.0001$ ) in pinched plants. Combination of pinching and paclobutrazol reduced the plant height and produced a bush type *Chirita* Royal Queen plant. There were significant differences between pinching and non-pinching for number of days taken to first flowering and number of days taken to branching. Pinching significantly increased number of lateral branches ( $P < 0.005$ ). Number of flower buds also significantly increased by pinching ( $P < 0.0001$ ). Combination of pinching and paclobutrazol produced highest number of flower buds. GA<sub>3</sub> did not affect the flowering of *Chirita* Royal Queen. As per the results of the study, combination of pinching and paclobutrazol 5 mg/L can be recommended for producing an attractive *Chirita* Royal Queen Plant.

**Keywords:** *Chirita* Royal Queen, Flowering, GA<sub>3</sub>, Growth, Paclobutrazol, Pinching

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