

EFFECT OF PACLOBUTRAZOL AND CYCOCEL ON GROWTH AND FLOWERING OF PARROT IMPATIENS

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The Parrot Impatiens (*Impatiens niamniamensis*) is also called as “Congo Cockatoo” belongs to large genus *Impatiens* L. of Balsaminaceae family. Parrot Impatiens normally grows up to two-three feet tall and has a very beautiful scarlet red and yellow coloured flower. But the height of plant, location, and growth behaviour of the flower is not suitable as a potted plant. The objective of this research was to develop *I. niamniamensis* as an attractive potted plant with more flowers and branches, which can be introduced for the Sri Lankan floriculture market as a potted plant. Plants were treated with paclobutrazol and cycocel as foliar spray at two week intervals in two times after planting. For each retardant, three concentrations were used; paclobutrazol (50, 100, 150 ppm), cycocel (1000, 2000, 3000 ppm). Plants died in 2000 and 3000 ppm cycocel treatments after application. Direct foliar application of high concentration of cycocel caused wilting and burning of leaves and stem. Therefore, drench application of cycocel would be better than direct foliar application. There was no significant difference ($p < 0.05$) among means of treatments in percentage of the plant height and number of branches per plant after eight weeks. Thus, there was no effect on plant height and number of branches per plant of *I. niamniamensis* by cycocel and paclobutrazol. Also, cycocel (1000 ppm) and paclobutrazol (50, 100, 150 ppm) sprayed plants delayed flowering of parrot plants and gained an increase in flowering, when compared with plant in control treatment of which the flower induction was at earliest. The highest number of flowers per plant and number of days taken to flowering were observed from 1000 ppm cycocel sprayed plants. Cycocel showed an effect of delaying flowering, in addition increased the number of flowers per plant significantly ($p < 0.05$). In conclusion, paclobutrazol and cycocel concentrations decreased leaf area compared to control treatment.

Keywords: *Impatiens niamniamensis*, Plant retardant, Potted plant