

**DWARFING OF *THEVETIA PERUVIANA* (PERS.) K. SCHUM. SHRUB
 BY**

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ABSTRACT

A pot experiment was carried out to investigate the effect of paclobutrazol at the rate of 100 or 200 ppm (as soil drench) and pinching once or twice on *Thevetia peruviana* plants. The obtained results revealed that pinching the plants once decreased the fresh weight of branches, but increased the total carbohydrates and N % in the branches and P % in the leaves. Pinching the plants twice decreased the branch length and dry weight, meanwhile it increased the stem and branch diameter, number of branches and leaves/plant, fresh and dry weights of leaves, chlorophyll a and carotenoids content, P % in branches as well as K % in leaves and branches. Paclobutrazol at 100 ppm caused an increase in the stem and branch diameter, number of leaves/plant, P % in branches and K % in leave, while it decreased the carbohydrates percentage in the leaves. The concentration of 200 ppm of paclobutrazol resulted in a decrease in fresh and dry weights of the branches, but it increased the number of branches/plant, fresh and dry weights of leaves, chlorophyll a, b and carotenoids content in the leaves as well as N and K % in the branches. The interaction between paclobutrazol at 200 ppm and pinching twice decreased the length of branches, but enhanced the stem and branch diameter, number of leaves and branches/plant, fresh and dry weights of leaves as well as the carotenoids content in the leaves.

From the aforementioned results, it could be recommended to use either pinching the plants for two times alone or with the combination with paclobutrazol at 200 ppm in order to produce a compact plant of high vegetative growth characters for using as a pot plants.

Key words: Paclobutrazol, pinching, *Thevetia peruviana*.

INTRODUCTION

Thevetia peruviana, (Pers.) K. Schum. (Syn. *T. nerifolia*, Juss.ex Steud.), Fam. Apocynaceae is a plant native to Mexico and central America. It is an evergreen tropical shrub or small tree that commonly called lucky nut. *Thevetia* is a tough durable that it inexpensive and easy to grow in most situation. This is a very popular landscaping plant in warmer climates as it does not need much maintenance. The plants are used for sunny decks, patios and other locations around the home. They are also used in a variety of landscape applications including hedges,

screens, foundation plantings and borders (Mabberley, 1997).

Pinching is the removal of the growing point of the stem, resulting in the development of side shoots. Pinching the plants will reduce the height of the plant which in turn helps to develop a shorter stockier plant and provide a bushy, heavily branched plant (Mason, 2006).

Paclobutrazol is a plant growth regulator that slows the vegetative growth by inhibiting gibberellin biosynthesis creating