



Research Paper

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Studies on the effect of IBA on rooting of bougainvillea (var. Thimma) cuttings in open field and polyhouse conditions

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ABSTRACT : The experiment comprised four levels of IBA (0, 1000, 1500, 2000ppm) for treating the hardwood stem cuttings of bougainvillea (var. Thimma) with two conditions viz. open field and polyhouse. The experiment was laid out with Complete Randomized Design followed by three replications. Polyhouse and greenhouse conditions IBA showed to be more advantageous than the process of open field condition. Increase in the concentration of IBA from 1500ppm to 2000ppm showed a significant effect in both conditions but more likely in polyhouse. IBA at 2000ppm was superior to other concentrations for number of rooted cuttings (6.33), percentage of rooted cuttings (63.33%), length of shoots per cutting after one month (3.07cm), length of shoots per cutting after two month (14.73cm), number of roots per cutting (30.00), length of roots (12.85cm) and dry weight of the roots (0.43g). However, including control this concentration was found much better with 63.33 per cent success than other concentration levels of IBA.

KEY WORDS : Bougainvillea, IBA, Polyhouse

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A most popular versatile plant bougainvillea is of great ornamental beauty and rich in its varieties which can be used in different ways like bush, standard shrub, climbers, hedge, pot plant, bonsai, houseplant or hanging basket, ground cover for sloppy land and make the garden colorful for most of the year bougainvillea var. Thimma is a bud sport of 'Mary palmer' with double colored bracts purple and white on the same branch and same times, a member of the Peruviana group is a popular and free flowering. The bougainvillea is propagated through cutting ground or air layering and budding. Some cultivars are difficult to root from cuttings. The purpose of treating cuttings with plant growth regulators is to increase the percentage of cuttings which form roots, hasten root initiation and increase the number of roots.

The best use of IBA could be done with plant species that can be propagated by cuttings and hard to root. Thimma is the most important variety of bougainvillea and hard to regenerate from cuttings. Keeping in view that the important

role played by indole 3-butyric acid (IBA) on the rooting of cuttings of several species, the present investigation studies on the effect of IBA on rooting of bougainvillea (var. Thimma) cuttings in open field and polyhouse conditions was undertaken to test the effectiveness and compare in open field and polyhouse conditions on Thimma cuttings.

RESEARCH METHODS

The experiment was carried out in the horticultural garden of the Department of Horticulture, Institute of Agricultural Sciences and Nursery, Banaras Hindu University, Varanasi during the year the 2009-2010 comprised cuttings planted in the fine sand placed in the earthen pots with four levels of IBA (0, 1000, 1500, 2000ppm) and two conditions viz., open field and polyhouse. About one year old hard wood stem cutting of bougainvillea having length of about 15-20 cm were planted in 24 pots of size 20 x 15 cm with three replications and eight treatments followed by Complete Randomized Design. Observations were recorded to assess the effect of IBA on