



Effect of different concentrations of indole butyric acid (IBA) on sprouting, rooting and callusing potential of bougainvillea stem cuttings

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ABSTRACT

A study was conducted to investigate the influence of IBA at 0, 1000, 1500 and 2000 ppm concentration on rooting potential of hardwood cuttings of four varieties of Bougainvillea *i.e.* Louise Wathen, Thimma, Mrs. Butt and Shubhra in 2008-09. The experiment was laid out in Randomized Block Design with sixteen treatments and four replications. The result obtained indicated that both IBA concentration and variety had significant effect on sprouting, rooting, callusing and establishment of cuttings. Louise Wathen cuttings treated with 1000 ppm IBA were found superior with 85.39% sprouting 75.46% rooting and 80.78% callusing. Establishment (100%) was also found best in this treatment.

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Key words : Bougainvillea, Indole butyric acid, Bracts, Callusing

Bougainvillea is one of the most important semi-scandent climber growing in varying agro-climatic condition. This fast growing plant imparts beauty to gardens in north India with their brightly coloured bracts from Feb- June and again in Sep-Dec. The colour of bract ranges from deep magenta to white including purple, mauve, orange, red, scarlet, crimson, pink and yellow. It can be planted in various forms like hedge, as standard or semi-standard shrub or as bush, in pots, as bonsai or even trained against light coloured walls. It is most suited plant for boulevard and city square in today's era of express ways. It can be -propagated easily by cuttings. However, in some varieties cuttings develop root with great difficulty. Plant growth regulators have been reported to stimulate the formation of roots in propagating material (Kale and Bhujbal, 1972; Nath, 1999). The present investigation was carried out to study the effect of different concentrations of IBA on rooting potential of stem cuttings of four different varieties of bougainvillea *viz.*, Louise Wathen, Thimma, Mrs. Butt and Shubhra and also to find out best possible combination of IBA and varieties.

MATERIALS AND METHODS

The investigation was carried out at Main

Experimental Station, Department of Horticulture, Narendra Deva University of Agriculture and Technology, Kumarganj, Faizabad during the year 2008-09. Hardwood cuttings of average length 20-23 cm and 7-10mm thickness of four different varieties of bougainvillea *i.e.* Louise Wathen, Thimma, Mrs. Butt and Shubhra were made from fully matured woody shoots of previous year growth. Cuttings were then treated with three different concentrations of IBA (1000, 1500 and 2000 ppm) along with control for 30 minutes and finally planted in nursery beds under open condition. Planting distance was kept 20 cm between row to row and 10 cm within row. Total of sixteen treatments and four replications of experiment were planted in Randomized Block Design in first week of March. Observations for sprouting percentage were taken when maximum cuttings sprouted. Rooting and callusing percentage was calculated after digging the cuttings in July, 19 weeks after planting. Rooted cuttings were again planted in nursery beds for three months for establishment studies.

RESULTS AND DISCUSSION

The data in Table 1 revealed that percentage of sprouting, rooting, callusing and establishment increased