THE ASIAN JOURNAL OF HORTICULTURE
Volume 7 | Issue 1 | June, 2012 | 197-199

Research Paper

Article history :
Received : 12.01.2012
Revised : 10.06.2012
Accepted : 28.06.2012

Effect of GA_3 and BA on growth and flowering of *Dendrobium* cv. SONIA-17

■ S.T. BHATT[1] AND N.M. CHAUHAN

Members of the Research Forum

Associate Author :
[1]Krishi Vigyan Kendra, Regional Research Station, (N.A.U.), Vyara, TAPI (GUJARAT) INDIA

Author for correspondence :
N.M. CHAUHAN
Krishi Vigyan Kendra, Regional Research Station, (N.A.U.), Vyara, TAPI (GUJARAT) INDIA
Email : nilulsinh_m@yahoo.in

Abstract : The experiment was conducted on *Dendrobium species* in greenhouse, Department of Floriculture and Landscaping, ASPEE College of Horticulture and Forestry, Navsari Agriculture University, Navsari in the State of Gujarat to study the effect of growth regulators *viz*., GA_3 (5,10 and 15 mg/ l) and benzyl adenine (5, 10 and 15 mg / l). Effect of various plant growth regulators *viz*., GA_3 (5, 10 and 15 mg/ l) and benzyl adenine (5, 10 and 15 mg / l) on *Dendrobium* orchid were studied in green house pot trial. It was observed that GA_3 at 15 mg/I produced significantly maximum number of shoot, shoot length and number of flowers per plant. BA at 15mg/l was found beneficial for number of leaves per plant in both first and second month after.

Key words : GA_3- Gibbrelic acid, BA- benzyl adenine, Dendrobium

How to cite this article : Bhatt, S.T. and Chauhan, N.M. (2012). Effect of GA_3 and BA on growth and flowering of *Dendrobium* cv. SONIA-17, *Asian J. Hort.*, **7**(1) : 197-199.

Orchids are valued for their long spikes which display a variety of colours and long lasting flowers. They occupy a prime position amongst cut flowers. Genus *Cymbidium* is now amongst the top 10 cut flowers of the world market. Whereas, *Dendrobium*, the most widely cultivated tropical orchid is also marching ahead to find a better place in the export market. Perfection in the form and in the quality of plants as well as to increase the flower production is the grower's main objectives in the cut flower cultivation, today. Various chemicals are now-a-days being increasingly tried for improvement of growth and flowering of orchids plants. Exogenously applied growth substances increasing in the levels of endogenous hormones, thus modifying the growth and development of plants. Hence, the present investigation was undertaken to study the response of *Dendrobium species* to the application of growth regulators (GA_3 and BA).

RESEARCH METHODS

The experiment was conducted on *Dendrobium species* in greenhouse, Department of Floriculture and Landscaping, ASPEE College of Horticulture and Forestry, Navsari Agriculture University, Navsari during 2009 to study the effect of growth regulators *viz*., GA_3 (5,10 and 15 mg/ l) and benzyl adenine (5, 10 and 15 mg / l). Well developed plants were planted in plastic pots having media with husk of coconut, bricks pieces, FYM, gravel and charcoal. Growth regulators were sprayed and observations were taken after one and two months of spray on vegetative and flowering parameters. The experiment was laid out in Completely Randomized Design replicated thrice; each having six plants was taken with control.

RESEARCH FINDINGS AND DISCUSSION

The data presented in Table 1 revealed significantly maximum number of shoot after onemonth of spray in the treatment GA_3 15 mg/ l (4.77), which was at par with GA_3 10 mg/ l (4.66) followed by BA 15 mg/l and BA 10 mg/l (4.33 and 4.15 number of shoot), respectively. While lowest number of shoots were observed in BA 5 mg/l and control (3.85 and 3.55), respectively. The significantly maximum number of shoot after two months of spray was observed in the treatment GA_3 15 mg/ l (5.49) ,which was at par with GA_3 10 mg/ l (4.94) followed by BA 15 mg/l, BA 10 mg/l and GA_3 5 mg/l (4.66, 4.38 and 4.27), respectively, while lowest number of shoot were observed in BA 5 mg/l and control (3.85 and 3.55), respectively. GA_3 promotes vegetative growth by inducing active cell division