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Research Paper

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on growth and flowering of anthurium (Anthurium andreanum Lind) cv. TROPICAL RED

Effect of GA₃ and foliar nutrients along with biofertilizers

ANASUBAI G. HANDARAGALL, R. JAYANTHI¹ AND B.N. RAJENDRA¹

Members of the Research Forum

Associated Authors: ¹Department of Horticulture. University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

Author for correspondence : ANASUBAI G. HANDARAGALL University of Horticultural Sciences, BAGALKOT (KARNATAKA) INDIA Email : anu.handaragall@gmail.com **ABSTRACT**: An experiment was conducted during 2009-10 to investigate the effect of GA₂ and foliar nutrients along with bio-fertilizers on growth and flowering of anthurium cv. TROPICAL RED. Results showed that NPK @ 30:10:10 at 0.2 per cent foliar spray and GA, at 100 ppm along with bio-fertilizers (Azospirillum, Phosphobacteria and VAM each at 2 g per plant) significantly influenced the plant growth and flowering characters in anthurium cv. TROPICAL RED.

KEY WORDS : Anthurium, GA, NPK, Azospirillum, Phosphobacteria, VAM

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nthuriums are tropical ornamental plants of great beauty, elegance with variety of flower colors, grown for their showy cut flowers and foliage. Anthurium belongs to the family Araceae and native to tropical zones of the central and South America. Gibberellins (GA₂) are a group of growth promoting plant hormones influencing a range of developmental processes in higher plants. The major areas where GA, have successfully played their role in commercial flowers are growth control, prevention of bud dormancy, sex expression, enzyme induction, promotion of flowering, prolonging the vase life of flowers and retarding the senescence of cut flowers by stimulating active sucrose uptake.

Foliar fertilization is one of the approaches to achieve an improvement in yield and quality of different flower crops. Nitrogen, phosphorus and potassium are the three important nutrients that play very important role in altering various growth, yield and quality attributes. The effective utilization of bio-fertilizers will not only provide economic benefits to growers, but also improve and maintain the soil fertility level. Bio-fertilizers have been found to synthesize hormones like indole acetic acid and vitamin B and make them available to the crops. Among the bio-fertilizers, Azotobacter, PSB (Phosphate Solubilizing Bacteria) and VAM (Vesicular Arbuscular Mycorrhizae) are important.

RESEARCH METHODS

The experiment was carried out during the year 2009 -2010 under 70% shade net structure situated at Zonal Agricultural Research Station, Department of Horticulture, GKVK, UAS, Bangalore. There were 11 treatments including control, with three replications. The trial was laid out in Completely Randomized Design and the treatments were foliar application of NPK at 0.2% with varying levels of N and P [30,15 and 10,0, respectively with K as constant (10)] along with bio-fertilizers 2 g each per plant (Azospirillum, phosphobacteria and VAM) and GA₃ at 0,50,100,200 and 300 ppm. Control was without any bio-fertilizers, GA, and foliar nutrients.

Nitrogen was applied in the form of ammonium nitrate, phosphorus in the form of ortho phosphoric acid and potassium in the form of potassium nitrate (bi-weekly spray).

Six months old tissue cultured Anthurium plants were used for the experiment and soil media used contained sand, vermicompost and coconut husk as per package of practices for Anthurium. The bio-fertilizers viz., Azospirillum, phosphobacteria and VAM, each at 2 g/plant was given as a root dip treatment by preparing slurry except VAM which was applied as such at the root zone. The NPK dose of 30:10:10 and 15:0:10