

International Conference on Agricultural & Horticultural Sciences

September 14-15, 2012 Hyderabad International Convention Centre, India

A study on the effect of plant growth regulators on yield, biochemical and physiological characters of bitter gourd (Momordicacharantia L)

Geeta Biradar, C.M. Nawalagatti and Pavithra C.B University of Agricultural Sciences, India

B itter gourd is an important vegetable crop since its fruits are brought to use either as vegetable or medicinal purpose. A compound known as charantin, present in the bitter gourd is used in the treatment of diabetes in reducing blood sugar level. In the present days due to increase in number of diabetic patients there is more demand to meet the requirement. The available literature on cucurbits said that, growth regulators had significant effect on conversion of sex ratio of flowers, which helps in enhancing the yields of the crop. Keeping this as an objective a study on "Effect of plant growth regulators on yield, biochemical and physiological characters of bitter gourd (Momordicacharantia L.)" was conducted during Rabi 2007-08 at University of Agricultural Sciences, Dharwad. Foliar application of the plant growth regulators such as Gibberlic acid (GA₃) at 20, 40, and 60ppm, naphthalene acetic acid (NAA) at 50ppm and cycocel (CCC) at 100 and 200 ppm, was done at 45 days after sowing. Application of plant growth regulators significantly increased the biochemical and physiological characters in bittergourd such as chlorophyll content (Chl a, Chl b and total chlorophyll), nitrate ReductaseActivity (NRA), sugar content (reducing, non-reducing and total sugars), and total phenol content. Among the different treatments GA₃ @ 20 ppm was most effective in increasing the fruit yield and yield components such as No. of female flowers, no of fruits per plant as compared to control.

b4ugeeta@gmail.com