

Effect of different plant growth regulators on growth, quality, yield and yield components in chrysanthemum (*Chrysanthemum coronarium* L.)

■ SAINATH, D.S. UPPAR AND M.K. MEENA

SUMMARY

A field experiment was conducted at Main Agricultural Research Station, University of Agricultural Sciences, Dharwad during *Kharif 2008* to study the effect of different plant growth regulators on growth, seed yield and quality in annual chrysanthemum (*Chrysanthemum coronarium* L.). The experiment consisted of nine different plant growth regulators treatments combinations. It was laid-out in Randomized Block Design (RBD) having three replications. The results indicated significantly higher plant height (97.28cm /plant), number of branches (27.32), leaf area (4497.24cm²/plant) and dry weight (0.747g/plant), number of seeds (265.33)/flower and seed yield (500.00kg/ha) in GA3 @200ppm followed by all other treatments. The seed quality parameters like thousand seeds weight (2.14g /plant), germination percentage (67.67%), seedling length (10.60cm), vigour index (717) and dry weight (36.37mg) were also higher in treatment of GA3 @200 ppm .

Key Words : Growth regulators, Chrysanthemum, Germination per cent, Plant height, Seedling vigour index, Number of flower, Seed yield

How to cite this article : Sainath, Uppar, D.S. and Meena, M.K. (2012). Effect of different plant growth regulators on growth, quality, yield and yield components in chrysanthemum (*Chrysanthemum coronarium* L.). *Internat. J. Plant Sci.*, 7 (1) : 10-17.

Article chronicle : Received : 30.06.2011; **Sent for revision :** 19.07.2011; **Accepted :** 12.10.2011

Chrysanthemum is a member of family Asteraceae. There are about 160 species of chrysanthemum among which the modern autumn flowering perennial (*Chrysanthemum morifolium*) is most common, usually propagated through suckers (mums) followed by annual chrysanthemums which are propagated through seeds. The crown daisy or Garland chrysanthemum (*C. coronarium*) is a native to Southern Europe, is a branching annual with finely

cut foliage reaching a height up to a metre, size of flowers varies from 2.5 to 4 cm and colour is usually in shades of yellow and white with cream zone at the center (Swarup, 1967).

It is a fast growing winter blooming annual. In North India, it is one of the cheapest sources of floral material for worship and garland particularly in early summer months when flowers are inadequate in supply. Apart from this, it is used in potted plants, vases, and flower decoration, preparation of bouquets and as border in the garden. Its leaves are steamed or boiled and used as greens, especially in chinese cuisine, yellow and white chrysanthemum flowers are boiled to make a sweet drink in some parts of Asia known as 'chrysanthemum tea' has many medicinal uses, bioactive terpenes such as dihydro chrysanoride and cumambrin, contents of essential oil proven to have medicinal effect on cancer and blood pressure reduction. It is an economically important as a natural source of insecticide, the flowers are pulverized and an active component called pyrethrin is extracted and used in

MEMBERS OF THE RESEARCH FORUM

Author to be contacted :

D.S. UPPAR, Department of Crop Physiology, University of Agricultural Sciences, DHARWAD (KARNATAKA) INDIA
E-mail: dsuppar@gmail.com

Address of the co-authors:

SAINATH, Department of seed Science and Technology, University of Agricultural Sciences, DHARWAD (KARNATAKA) INDIA
.....

M.K. MEENA, Department of Crop Physiology, University of Agricultural Sciences, DHARWAD (KARNATAKA) INDIA