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Integrated nutrient management in carnation (*Dianthus caryophyllus* L.) cv. DESIO under green house

■ S. RENUKARDHYA, R. JAYANTHI[1], Y.C. VISHWANATH[1], G.B. SREENIVASULU[1], V. JANAKI[2] AND S. NATRAJ[1]

Associated Authors:
[1]Department of Horticulture, Junagadh Agricultural University, JUNAGADH (GUJARAT) INDIA

[2]Horticulture Department, Taluk Office Compound, BELLARY (KARNATAKA) INDIA

Author for correspondence :
S. RENUKARDHYA Department of Horticulture, Junagadh Agricultural University, JUNAGADH (GUJARAT) INDIA

Abstract : The present investigation on INM in Carnation cv. DESIO reveals that the 50 per cent RDF + vermi compost + 3 per cent Manchurian tea + 3 per cent panchagavya this helps in reducing the application of inorganic nutrients of about 50 per cent without any yield reduction.

Key words : Carnation, Nutrient management, Under green house, R.D.F., F.M.Y., Vermicompost

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Crnation (*Dianthus caryophyllus* L.) is a flowering plant. Its flowers are used in arrangements, they last a long time after being cut and stand well during harsh treatment. Balanced nutrition is one of the most important factor influencing the growth and productivity of carnation. The combined application of organic manures, fertilizers and bio fertilizers along with panchagavya and Manchurian tea may be helpful in the production of quanlity cut flowers. Information on integrated nutrient management is lacking due to raising cost of fertilizers, it has become imperative to arrive at an INM schedule for this crop to achieve target yield at economized use of plant nutrients, soil and optimization of nutrients use of bio inoculants and their efficient application should receive prime importance.

The experiment was conducted during 2004-05 in green house situated at Hebbal. U.A.S Bangalore. The variety chosen was Desio. Experiment comprised of 17 treatments laid out in a randomized block design with 3 replications, individual plot size was 1 m x 1 m. The treatments included inorganic form of N, P_2O_5 and K_2O at 250:80:200 g/m^2 alone as well as in combination with FYM 2 kg/m^2, vermicompost 1000 g/m^2, neem cake 200 g/m^2, bio fertilizers *viz.*, VAM + Azospirulum + PSB @ 240 g/m^2 per year at 2 g/m^2, per plant each bio fertilizer and *Trichoderma* 20 g/m^2. Manchurian tea was used as a foliar spray 500 ml and 4 litre as soil application at 15 days interval. Panchagavya 3 per cent was used as foliar spray and soil application as 4 litre. The growth and yield observations were recorded in three plants randomly selected in each replication.

Significant differences were observed for growth parameters plant height, number of branches, days taken for first flowering, number of flowers per plant per year, flower diameter and flower stalk length. Application of 50 per cent RDF + vermicompost + 3 per cent Manchurian tea + 3 per cent panchagavya recorded maximum plant height (65.86 cm), number of branches (6.50), no. of days taken for flower bud initiation (141.83 days), no. of flowers per plant year (132.33). The increase in height may be due to higher availability of nitrogen which will be converted into aminoacids, the building blocks of proteins which in turn leads to increase in the rate of meristematic activity resulting in better plant height.This is in