EFFECT OF PLANT DENSITY AND FERTILIZATION LEVELS ON THE GROWTH AND FLOWERING OF CARNATIONS

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ABSTRACT

Carnation Cv. white sim planted as 40, 30, 20, or 10 plants/m² received three levels of NPK as full dressing wider planting resulted in higher number of branches/plant, fresh weight of leaves/flower stem, fresh weight and stem length of flower than closer spacing. The planting density increased the flower production per unit area, increased but the flower yield per plant fell. The flower quality was slightly affected concerning the fertilizer, the higher level of NPK [200 kg ammonium nitrate (31% N), 300 kg super phosphate (15.5% P2O5), 100 kg potassium sulphate (48% K2O) per feddan] proved to be the most effective on producing better growth and flowering characters of carnation plants.

In conclusion, the density of 30 or 40 plants/m² with higher level of fertilization could be advised for planting white sim carnation in Egypt especially for the exportation during winter.

As for chemical analysis, the nitrogen, phosphorus and potassium percentages increased in levels with increasing fertilizer level and spacing.