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THE EFFECT OF YEAST EXTRACT AND ORGANIC FERTILIZER ALGIDEX SPRAY ON THE VEGETATIVE, ROOT AND FLORAL GROWTH OF THE CHINESE CARNATION

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ABSTRACT

The study was conducted during the winter season 2018-2019 in the lethal canopy of the College of Agriculture, University of Basrah to find out the effect of spraying with yeast extract and organic fertilizer Algidex on the growth and flowering of the Chinese carnation plant. The factorial experiments were carried out according to the Randomized Complete Block Design (RCBD) with three replicates and two factors, the first three concentrations of yeast extract were 0, 1 and 2 ml L^{-1} and the second three concentrations of organic fertilizer were 0, 2 and 4 ml L^{-1}, and the interaction between them. The means of the treatments were compared according to the revised least significant difference test (R-L.S.D) at the level of probability (5%). The results showed the significant superiority of the treatment of spraying with yeast extract at a concentration of 2 ml L^{-1} in the vegetative growth characteristics as the height of the plant, the number of leaves and the dry weight of the vegetative growth were increased, while the rate of root length, fresh, and dry weight of the roots were increased at concentrations 1 and 2 ml L^{-1}. The treatment with a concentration of 2 ml L^{-1} increased the fresh and dry weight of the flowers, while the fresh weight of the shoot increased at a concentration of 1 ml L^{-1}. On the other hand, spraying with an organic fertilizer at concentrations 2 and 4 ml L^{-1} improved the vegetative, root, and flower characteristics of the plant. The interaction between yeast extract at a concentration of 2 ml L^{-1} and organic fertilizer at a concentration of 2 or 4 ml L^{-1} had a significant effect in improving most vegetative, flower, and root characteristics.

Keywords: Dry weight; fertilizer; flowering; foliar application; ornamental plant.