



Supplying Calendula Plants with Some Micronutrients as Foliar Spray under Egyptian Soils Features

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Abstract : A field experiment was conducted during successive seasons (2014/2015) at the Experimental farm in Faculty of Agriculture, Fayoum University, Egypt to study the effect of foliar spray of Zn and Mn as sole or combined treatments on the growth, flowering and some chemical constituents of Calendula plants. It had been deduced that foliar application of Zn and Mn alone or together gave significant increased on all Vegetative growth and flowers parameters under study as compared with control plants in both seasons. Data also, showed that the highest increase in growth, flowering and were especially presented when equal concentrations from Zn and Mn (0.30%) were added together as compared with other treatments. The interaction effects between different Zn and Mn foliar spray significantly promoted chemical constituents (head flower essential oil plant⁻¹, beta carotene, chlorophylla and b, total carotenoids, protein, xanthophylls, total flavonoides, total carotenoids in dry ray flowers, total carbohydrate percentage in stems and leaves N, P and K %.Zn, Mn and Fe (ppm) in herb and seed in Calendula plants.

Keywords: zinc (Zn) and manganese (Mn) foliar spray- vegetative growth - pigments, chemical constituents - Calendula plants.

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