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The Effect of Application of Biological Phosphate Fertilizer (Fertile 2) and Triple Super Phosphate Chemical Fertilizers on Some Morphological Traits of Corn (SC704)

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Abstract : In order to study the effect of different levels of triple super phosphate chemical fertilizer and biological phosphate fertilizer (fertile 2) on some morphological traits of corn this research was carried out in Ahvaz in 2002 as a factorial experiment in randomized complete block design with 4 replications.) The experiment included two factors: first, biological phosphate fertilizer (fertile 2) at three levels of 0, 100, 200 g/ha; second, triple super phosphate chemical fertilizer at three levels of 0, 60, 90 kg/ha of pure phosphorus (P2O5). The obtained results indicated that fertilizer treatments had a significant effect on some morphological traits at 1% probability level. In this regard, P2B2 treatment (100 g/ha biological phosphate fertilizer (fertile 2) and 60 kg/ha triple super phosphate fertilizer) had the greatest plan height, stem diameter, number of leaves and ear length. It seems that in Ahvaz weather conditions, decrease of consumption of triple superphosphate chemical fertilizer to less than a half along with the consumption of biological phosphate fertilizer (fertile 2) is highly important in order to achieve optimal results. Therefore, it can be concluded that biological fertilizers can be used as a suitable substitute for some of the chemical fertilizers in sustainable agricultural systems.

Keywords : biological phosphate fertilizer (fertile 2), triple super phosphate, corn, morphological traits
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