



*Journal*

*J. Biol. Chem.*  
*Environ. Sci.*, 2009,  
*Vol. 4(3): 47-61*  
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## INTERACTION EFFECTS AMONG Fe, Mn AND Zn IN AN ALLUVIAL NONCALCAREOUS CLAYEY SOIL AND A CALCAREOUS SANDY ONE DURING AND AFTER CULTIVATION WITH BEAN AND WHEAT PLANTS

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### ABSTRACT

To throw some light on mutual effects among nutritive elements Fe, Mn and Zn in an alluvial clayey non calcareous soil and a calcareous sandy one under wheat (monocotyledonous plant) and bean (dicotyledonous plant), different combinations of Fe, Mn and Zn were added at a rate of 20 mg kg<sup>-1</sup> eac. Moisture content was maintained at 70% of the F.C. and all the fertilization and agricultural practice were conducted as usual.

The obtained results revealed that application of an element whether solely or combined with the other ones caused its AB-DTPA extractable amount to increase whereas application of each of the other ones or both of them caused its AB-DTBA extractable amount to decrease. Such an observation occurred in both the clayey and the calcareous soils. However, amounts of AB-DTAPA extractable Fe, Mn and Zn from clayey soil seemed a higher than the corresponding extractable ones from the calcareous soil. The high CaCO<sub>3</sub> content of the calcareous soil although decreased amount of the AB-DTPA extractable micronutrients, yet it seemed of no or very minute effect on their mutual re relationships.