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Research Article

Response of hybrid maize to soil and foliar application of iron and zinc on entisols

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Summary

An investigation was carried out for three years (2010 to 2012) on *Typic Ustorthent* to study the response of hybrid maize to different soil and foliar application of iron and zinc on Entisol. The treatments comprised of foliar and soil application of iron and zinc sources of EDTA and sulphate form at two critical growth stages of maize crop. The availability of DTPA-Fe and Zn was increased in soil after harvest of crop due to soil application of respective source of Fe and Zn, however, it was not increased in foliar application. The total uptake of Fe and Mn was significantly higher in treatment T_{12} (GRDF + soil application of $FeSO_4$ + $ZnSO_4$ @ 5 kg ha^{-1} each at two stages *i.e.* 7536 and 1222 g ha^{-1} Fe and Mn, respectively. The total uptake of Zn was also significantly higher in treatment T_{12} (852 g ha^{-1}) followed by T_{11} (836 g ha^{-1}) and T_{10} (821 g ha^{-1}). The highest maize grain yield (79.4 q ha^{-1}) was significantly increased in the treatment of T_{12} followed by T_{11} treatment, where Fe and Zn sources were added in soil as a sulphate and chelated form, respectively.

Key words : Soil and foliar application of Fe, Zn, Macro and micronutrient uptake, Yield of maize, Entisol

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