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Research Article

Zinc and boron application on groundnut yield and nutrient uptake in coastal sandy soils

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Summary

In determining the yield and quality of groundnut, the role of Zn and B is much pronounced. Restricted availability of these nutrients in sandy soil greatly impairs the yield of groundnut. A field experiment was conducted to find out the effect of micronutrients *viz.,* Zn and B on the yield and nutrients uptake by groundnut in coastal sandy soil. The experiment was carried out in a farmer's field at Ponnanthittu village in Cuddalore district, Tamil Nadu during December – March 2007. The initial fertility status of experimental soil was pH 8.39, EC-1.61dSm^{-1}, organic carbon 2.7g kg^{-1} and represented low status of micronutrients. The various treatments included were T_1- Control, T_2-100% NPK,T_3-150% NPK, T_4-150% NPK + $ZnSO_4$ @ 30 kg ha^{-1},T_5-150% NPK+ Borax @15 kg ha^{-1}, T_6-150% NPK + $ZnSO_4$ @ 30 kg ha^{-1} + Borax @15 kg ha^{-1} along with composted coirpith @ 12.5 t ha^{-1}. The experiment was carried out in a Randomized Block Design (RBD) with four replications, using groundnut variety VRI 2 as test crop. The results clearly indicated that, T_6-150% NPK + $ZnSO_4$ @ 30 kg ha^{-1} + Borax @ 15 kg ha^{-1}along with composted coirpith application significantly increased the yield and nutrients uptake by groundnut. This treatment recorded the highest pod yield of 2466 kg ha^{-1} and haulm yield of 3354 kg ha^{-1} which represented 31.31 and 25.95 per cent increased in pod and haulm yield, respectively over 100 per cent NPK application.

Key words : Zinc, Boron, Groundnut, Coastal sandy soil

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