

Research Article

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Study on the influence of micro nutrients and growth regulator on the growth and yield of sesame (*Sesamum indicum* L.) and nutrient availability in coastal saline soil

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Summary

A pot experiment was conducted in the Department of Soil Science and Agricultural Chemistry, Annamalai University during Feb.-April, 2015. The initial characteristics of experimental soil revealed the saline nature having pH 8.02 and EC 4.26 dS m⁻¹. The available NPK status were low and DTPA extractable Zn and Mn were below the critical limit. The design of experiment was Completely Randomised Design and the treatments were: T₁ – NPK (35: 23: 23 kg N: P₂O₅: K₂O ha⁻¹), T₂ – NPK + ZnSO₄ @ 25 kg ha⁻¹ + MnSO₄ @ 5 kg ha⁻¹, T₃ – T₂ + FYM @ 12.5 t ha⁻¹, T₄ – T₂ + vermicompost @ 4 t ha⁻¹, T₅ – T₂ + humic acid @ 20 kg ha⁻¹. Growth regulator sea weed extract was applied as 0.5 per cent foliar at vegetative and flowering stage for all the treatments except control. The treatments were replicated four times and sesame var TMV- 3 was grown as test crop. The results of the study revealed that among all the treatments, T₅, the application of recommended NPK + ZnSO₄ + MnSO₄ with humic acid application accounted for a significant increase in growth character, yield components and yield of sesame. This treatment also significantly improved the soil nutrient availability.

Key words : Sesame, INM, Growth, Yield, Coastal sandy soil

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