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Research Article

Mapping of nutrient status of rice soils in Visakhapatnam district using GIS techniques

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Summary

A study was undertaken to map the nutrient status of rice growing soils of Visakhapatnam district of Andhra Pradesh. Spatial distribution of nitrogen, phosphorus, potassium and organic carbon was studied by collecting geo-referenced surface (1-15 cm) and sub surface (15-30 cm) samples from 69 sites representing intensively rice growing soils using global positioning system (GPS) and mapped in GIS environment. These samples were analyzed for physical, physico-chemical and chemical properties of the soils. The content of available nitrogen varied from 125 to 392 kg ha^{-1}, available P from 9.0 to 39.0 kg ha^{-1}, available K from 98 to 420 kg ha^{-1} and organic carbon varied from low to medium. The maps of various nutrient elements clearly indicated the specific locations, where deficiency of nutrients constrained crop production.

Key words : Soil fertility, Mapping, Spatial variability, Geographic information system

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