RESEARCH ARTICLE

GIS AIDED SPATIAL VARIABILITY MAPPING OF SECONDARY NUTRIENTS FOR DECISION SUPPORT IN COCONUT RESEARCH STATION, ALIYARNAGAR, TAMIL NADU

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Abstract: GIS aided spatial variability mapping in research stations is imperative to comprehend the native nutrient supply power of the soil and to assess the temporal and spatial variability so as to undertake decision support. A study was undertaken at Coconut Research Station, Tamil Nadu Agricultural University, Aliyar nagar to characterize the spatial variability of secondary nutrients Ca, Mg, S and free $CaCO_3$. Two hundred and fifty eight geo - referenced soil samples were collected from the surface (0-15 cm) and subsurface (15- 30 cm) layers of A, B and C blocks of the farm. The farm is predominantly sandy textured belonging to the taxonomic class Typic / Fluventic Ustropept. GIS aided fertility maps were prepared for all the parameters employing kriging. Exchangeable Ca and Mg were sufficient throughout the farm, deficiency of available sulphur was witnessed across 5 % of the farm area. The farm is moderately calcareous with sporadic spots of intense calcareousness. Thus spatial variability mapping employing GIS techniques is an ideal tool for the researchers and policy planners in decision support for crop selection and land use planning.

Keywords : Aliyarnagar, GIS, Spatial variability, Secondary nutrients

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