

Characterization and classification of forest soils of Nizamabad district of Andhra Pradesh

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Accepted : Feb., 2008
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ABSTRACT

Sixteen typical pedons representing eight forest range soils of Nizamabad district of A.P. were studied for their morphological, physical and physico-chemical characteristics. The physiography of the study area was mainly hilly terrain with steep sloppy uplands and with some extent of flat undulating plain nearly level to gently sloppy lands. The soils are shallow to deep in depth and have granular to sub angular blocky structures in surface horizons and sub angular blocky to angular blocky in sub surface horizons. The soil texture ranged from sandy loam to clayey with modevately acidic (pH 5.3) to moderately alkaline (8.6) in reaction and non saline ($<0.70 \text{ dSm}^{-1}$). The bulk density, water holding capacity, organic carbon, cation exchange capacity ranged from 1.32 to 1.75 Mgm^{-3} , 19.9 to 54.3%, 0.20 to 1.46%, 9.98 to 44.07 c mol (p+) kg^{-1} soil, respectively. The dominance of exchangeable bases on exchangeable complex was in the order of $\text{Ca}^{2+} > \text{Mg}^{2+} > \text{Na}^{+} > \text{K}^{+}$. Majority of the pedons placed under Haplustalfs and others under Typic Ustifluvents, and Rhodustalfs.