Characterization of soil physico-chemical status in rice growing areas of Chintapalli mandal of Alluri Sitharama Raju District, Andhra Pradesh

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ABSTRACT

The present study entitled "Characterization of Soil Physico-Chemical Status in Rice growing area of Chintapalli Mandal of Alluri Sitharama Raju District, Andhra Pradesh" was undertaken to assess the fertility status of soils and generate baseline information for sustainable soil management. A total of 200 surface soil samples (0–15 cm) were collected from different villages of Chintapalli Mandal and analyzed for important physico-chemical properties, namely soil pH, electrical conductivity (EC) and organic carbon (OC). The results revealed considerable variation in soil properties across the study area. Soil pH ranged from 5.52 to 7.92, indicating that the soils varied from moderately acidic to neutral in reaction. Electrical conductivity values ranged from 0.02 to 1.09 dS m^{-1}, indicating that the soils were non-saline and suitable for crop cultivation. Organic carbon content varied from 0.52 to 2.0 per cent, reflecting low to high levels of soil organic matter. The higher organic carbon content observed in some locations may be attributed to the continuous addition of organic residues and slow decomposition under the cool climatic conditions and high rainfall prevalent in the hilly regions.

Key Words: *Electrical conductivity, Organic carbon, Soil characterization, Soil pH and Soil fertility*