

Micro Nutrient Status of Some Rice Soils of Andhra Pradesh in Relation to Soil Properties

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ABSTRACT

The physicochemical properties and status of micro nutrients in the intensively rice growing soils representing from eight districts of Andhra Pradesh under Krishna-Godavari zone, Nagarjuna Sagar project area and Telangana region were assessed. The relationship between various soil properties and available micro nutrients was studied for better manipulation and to obtain sustainable crop yields of rice. The results of the study revealed that the soils varied widely in texture (scl to c), neutral to slightly alkaline (pH 6.35 - 8.22), non saline (EC 0.14 - 2.23 dS m⁻¹) having low to high in org. C (0.46-1.17%), 220-418, 8.38-18.68 and 114-373 kg/ha of available N, P and K, respectively. It was observed that Zn deficiency is severe in all the districts of the study, whereas other micro nutrients (Fe, Mn and Cu) were above the critical limits. The available micro nutrients showed significantly negative relationship with pH and sand fraction and significantly positive relationship with clay, organic carbon content of the soil. It was found that the soil pH and organic carbon were the major contributing factors towards the availability of various micronutrients and hence, maintenance of organic matter and pH of the soil is essential to sustain the soil fertility and to enhance the crop productivity.

Key words : Micro nutrients, Rice, Soil properties