Distribution of Cationic Micronutrients in Monoculture Rice Soils of Srivaikuntum Block of Thoothukudi district of Tamil Nadu

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ABSTRACT

The study was carried out during 2007-08. Srivaikuntum block is the major rice growing belt under Thamiraparani river basin in Tuticorin district of Tamil Nadu. The monoculture rice soils were identified in ten villages and two hundred soil samples drawn from surface and sub surface were studied for the distribution of cationic micronutrients *viz.,* zinc, copper, iron and manganese (Zn, Cu, Fe and Mn) and their correlation with other important soil properties. The soils of study area was belong to the order of Alfisol, Entisol and Vertisol respectively. Surface and sub surface soils were collected in two depths (0-15 and 15-30 cm). A positive and significant relationship of DTPA Zn with pH, $CaCO_3$ and organic carbon and a negative correlation with EC was observed in all soils. DTPA Fe positively correlated with all soil properties like pH, EC, $CaCO_3$, CEC and organic carbon including the textural analysis (sand, silt and clay). The micronutrient analysis of these soils in ten villages revealed that the samples were deficient in available Zn and Cu. However, the available Fe and Mn were sufficient in all soils in both depth levels.

Key words : Cationic micronutrients, Monoculture rice soils.