Soil Properties and Forms of Potassium in Rice Growing Soils of Kurnool district.

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ABSTRACT

The rice growing soils of Kurnool district of Andhra Pradesh were evaluated for pH, EC, organic carbon, texture, CEC, available N,P,K status and different forms of potassium (water soluble K, available K, exchangeable K, non exchangeable K and fixed K). The relationship between different forms of potassium and soil properties was studied. The mean values of water soluble K, available K, exchangeable K, non exchangeable K and fixed K were 34, 274, 240, 254 and 528 mg kg^{-1}, respectively. The order of dominance of different forms of potassium was fixed K > non exchangeable K > available K > exchangeable K > water soluble K. Water soluble K exhibited negative correlation with pH, clay, silt and organic carbon whereas available K was positively correlated with pH, organic carbon, CEC. Non exchangeable K was negatively correlated with organic carbon while exchangeable K showed positive relationship with clay, organic carbon but negative with sand fractions. Fixed K was positively correlated with silt, pH and organic carbon. Different forms of potassium were positively correlated among themselves.

Key words : CEC, Clay, Organic carbon, pH, Potassium forms, and Texture.