

Research Article

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Comparative study of soil quality indicators for rice-based cropping system in *Vertisols* of central plain of Chhattisgarh

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Summary

Fields with rice-based cropping systems are unique from other wetland or upland soils because they are associated with frequent cycling between wetting and drying under anaerobic and aerobic conditions. This alters the C and N transformations, microbial activities and their diversity and soil physical properties, depending on the other crop in rotation with rice. This paper aims to compare the soil quality indicators of *Vertisols* of central plains of Chhattisgarh under rice-wheat and rice-chickpea cropping systems. The results indicated that among the cropping systems, soil physical, chemical and biological properties were found to be varying significantly. Accordingly, it is concluded that soil quality indicators were registered better rice-chickpea cropping system (RC and RL) than that of soils under rice-wheat.

Key words : Soil quality, *Vertisols*, Wheat, Chickpea

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