

Assessment of Soil Quality Index of Alfisols under Integrated Nutrient Management in Rice-rice Cropping System of Southern Telangana Zone of Andhra Pradesh

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ABSTRACT

Soil quality assessment under integrated nutrient management in rice-rice cropping system in Alfisols of southern Telangana zone of Andhra Pradesh was attempted for two consecutive years during 2005-06 and 06-07. The quality of unfertilized soil was poor with soil quality index of 253 and relative soil quality index of 63% at the end of 2005. The corresponding values were 267 and 64 at the end of rabi 2006-07. It was categorized as class IV soil. The continuous application of recommended dose of fertilizers improved the soil quality index to 289 and relative soil quality index to 72% after *kharif* 2005. While these values enhanced to 297 and 73 at the end of *rabi* 2006-07. This treatment improved the soil to III category. The integrated nutrient management treatments further improved the soil quality index as well as relative soil quality index (RSQI) substantially. The soil category further improved to class II after *kharif* 2005 in response to the application of 50% recommended dose of NPK and the substitution of 50% N equivalent with FYM or glyricidia or by the application of 75% recommended dose of fertilizers and substitution of 25% N fertilizers with FYM in the *kharif* season.

Key words : Integrated Nutrient Management, Soil Quality Index, Alfisols.