B-10 : FERTILITY STATUS OF RICE SOILS IN TWO IRRIGATION PROJECTS AND IN TRADIONALLY UTILIZED FIELDS

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Different land utilization practices may change the soil fertility over the years. Cultivation of rice under large irrigation projects against traditional procedures seems to introduce constraints such as salinity and deterioration of overall soil fertility.

This study was conducted to compare the present fertility status of some rice soils in southern Sri Lanka; i.e. between soils in irrigation projects and in traditional system. Composite surface soil samples were collected from Kirindi Oya and Udawalawe irrigation project areas and from traditionally cultivated fields under minor tanks. The physical and chemical parameters related to fertility were determined.

An overall degradation of fertility could be observed especially in soils of Kirindi Oya irrigation project. Increase of salinity levels and the decrease of organic matter contents were generally observable. Some soils of the Kirindi Oya project were in fact extremely saline. The soils under traditional way of use do not show any fertility deteriorations.

Hence, it seems worthwhile to launch appropriate measures to reduce these deteriorations in project areas and also to increase the yields in traditional farming by appropriate management practices.