



Long-term Effect of Cropping Systems on Fe and Mn Fractions in Alluvial Soils of North-West India

Gurpreet Singh, S.S. Dhaliwal*, U.S. Sadana and S.S. Walia

Department of Soil Science, Punjab Agricultural University, Ludhiana- 141004

**E-mail: ssdhalwal@pau.edu*

Abstract: The present research study has been conducted with a prime objective to investigate the chemical fractions of Fe and Mn under 10 cropping systems in alluvial soils of Punjab. Surface (0-15 cm) soil samples were collected from an ongoing field experiment (in progress since 2000) with 10 cropping systems at Research Farm of Department of Agronomy, Punjab Agricultural University, Ludhiana. These soil samples were analyzed for total Fe, and Mn and their chemical fractions using atomic absorption spectrophotometer (Varion AAS-FS 240 Model). Among chemical fractions, higher levels of Fe and Mn (WSEX and SpAd) were reported in the rice-wheat cropping system. Among fractions, SpAd, held on organic sites, oxide bound and amorphous fractions of Fe and Mn contributed towards plant available (water soluble and exchangeable) fraction.

Key Words: Cropping systems, Fe and Mn Alluvial soils
