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ABSTRACT BOOK

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Microbiological properties of Solonetz and Risky Solonetz Soils in Bafra Delta Plain, Turkey

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The objective of this research was to assess the variation of soil microbiological properties and the relationships among the soil microbiological, physical and chemical properties along soil profiles formed on Bafra Delta Plain formed by Kızılırmak River, Turkey. For this purpose, soil classification was performed for six profiles by taking soil samples along horizons and the soil physical, chemical and microbiological characteristics such as microbial biomass, microbial respiration were determined. According to the soil classification system, soils on research area were classified as SodicHaplustert, TypicCalcicquert, SodicCalcicustert, VerticHaplustept, TypicUstipsamment. The study represents that Na and ESP (exchangeable sodium percentage) contents increase in the lower soil layers for all soil profiles. Furthermore, it was determined that the microbiological properties of soil decreased with increasing soil depth and these decreases were significant statistically. As a result, the microbiological properties had significant positive correlations with organic matter, total N, available P and K contents in soil and significant negative correlations with exchangeable Na and ESP contents in soil.

Keywords: Soil, Sodium, ESP, microbial biomass, microbial respiration