



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**Investigations on Soil Erodibility and Some Properties of the Soils Under
Different Land use Types in Sögütlüdere Creek Watershed Near Trabzon**

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Abstract: In this study, effects of different land use types on some soil properties in the Trabzon-Sögütlüdere watershed were studied. The study area, is located in the East Black Sea Region, 30 kilometers far from Trabzon. Soil samples evaluated in this research were taken from areas under three different land use types; forestland, rangeland and, cultivated land at different altitudes and physio-graphical conditions in such a way that they represent general conditions of the watershed area. Total of 83 soil profiles were determined, 48 in forestland areas, 21 in rangeland and 14 in cultivated areas for three soil depths (0-20 cm, 20-50 cm and >50 cm). As indicated below, on each soil sample, 20 soil properties were measured. Texture, soil fractions (<2 mm and >2 mm), amounts of root, dispersion ratio, colloid/moisture equivalent ratio, erosion ratio, soil moisture constants, water holding capacity, permeability, bulk density, soil particle density, porosity, loss on ignition, organic matter and pH. Concerning the data obtained from these properties statistical evaluations such as Analysis of Variance (ANOVA), Duncan's Multiple Range Test and Correlation Analysis were performed. Differences and relations among the properties were examined. The results of laboratory tests and statistical analyses obtained can be summarized as follows: i. Statistically significant differences exist in soil properties as a function of land use type and soil depth. ii. According to erodibility index (dispersion ratio, colloid/moisture equivalent ratio, erosion ratio) the study area soils were found susceptible to erosion. iii. However, dispersion ratios of forest soils were relatively less than those of range soils and cultivated land soils. Agricultural land soils had the highest dispersion ratios. According to these results, conversion of forest areas to range or cultivated lands increases the erodibility of soils.

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