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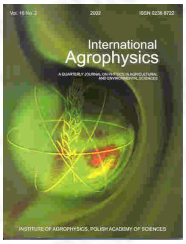

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Structure ability of fine textured red soils in north libya

(get PDF)

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abstract The aim of this work was to analyse structure resistance, capillary rise, mechanical strength and other physical properties in fine textured soil in North Libya. The examination of these characteristics was carried out on laboratory modelled soil aggregates (1 cm3 volume) with special methods developed in the Soil Science Department of the Agricultural University in Poznan. The samples were taken from red soils (Terra Rossa) occurring in the Cyreneica Region. All these soils belong to clayey textured group. Investigations have shown surprisingly low resistance to dynamic and static water action for dry aggregates and very high for moist ones. Percentage of Secondary aggregation* is very high, in most cases exceeds 80 % of total soil mass. The secondary microaggre-gates with diameter of 3-1 mm and 1-0.5 mm predominate. The maximum capillary water capacity of soil aggregate models in "free swelling* conditions is so high that it is incomparable to soil porosity.

keywords red soil, soil aggregates, water resistance.