

# COMPACTNESS OF THE SUBARABLE LAYER OF CHERNOZEM IN THE PRUT - JIJIA INTERFLUVIUM AREA ON THE LAND EXPLOITED BY S.C. AGROMIXT SPINENI S.R.L., IAȘI COUNTY

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## Abstract

Chernozems have been and will continue to be the main support for agricultural production. Chernisols, and in particular chernozems, are the primary favourable factor for the main crops in the area. The aim of the research is to determine the anthropogenic influence, through tillage, on some physical properties of the soil, namely the process of sudden increase of bulk density and decrease of macro porosity, observed in the field through the appearance of the hardpan sub-horizon located immediately below the classical tilled horizon - seedbed preparation-seeding-crop maintenance-harvesting. The climate is characterised by an average annual temperature of 9.5 °C and average annual precipitation of 544 mm. In June 2021 soil samples were collected from each soil pedogenetic horizon from representative locations along a depth of up to 100 cm. In agricultural practice, soil texture is considered to be a virtually unchangeable property or very difficult to change only under certain climatic conditions and over a long period of time, through migration and deposition of clay particles by eluviation and illuviation processes. Following laboratory analysis of the soil samples and processing of the data obtained, it was found that tillage did not contribute to soil texture change in the surface and underlying horizons. Knowledge of soil texture is particularly important as it influences most of the physical properties of the soil, such as plough resistance, porosity, water and air permeability, water holding capacity, etc.

**Key words:** texture, compactness, chernozem