

MANIFESTATIONS OF ANTROPO NATURAL ARIDIZATION IN THE AGROGENIC LAYER OF ARABLE CERNOZEMS: FACTORS, MECHANISMS

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Abstract

In the present research, anthropo-natural aridization is examined as a complex process manifested in reducing the available water reserves below the potential level within the respective climatic conditions of the region, reducing the biological productivity of ecological soil-plant systems, quantitative and qualitative changes at all hierarchical levels of structural-functional organization of the soil ecosystem materialized in changing the meaning and intensity of chernoziomic typogenetic processes, the involvement of anthropo-natural processes uncharacteristic of chernozemic pedogenesis and increasing the degree of inhomogeneity of the soil cover. In this context, anthropo-natural aridization is a process inherent in the use of chernozems in agriculture caused by the evolution of the pedogenetic environment under the unidirectional intercalated action of natural soil degradation processes (water and wind erosion, decay) and physical, physico-chemical and chemical degradation (disintegration-destructuring, compaction, degradation of the porous space, salinization, solonetization, etc.) in conditions of reducing the role of the biological factor and the process of humus formation and accumulation within the anthropogenic chernozemic process. The current trend of climatic conditions in the Pridanubian space, especially reducing the amount of atmospheric precipitation and changing their regime, increasing the frequency and intensity of droughts, increasing the average multiannual and warm temperatures are factors that intensify the effects of anthropo-natural aridization of arable chernozems.

Key words: natural aridization, natural-anthropogenic aridization, degradative processes, hydrophysical profiles
