# MODIFYING THE PROPERTIES OF THE ZONAL SOILS USED IN AGRICULTURE OF MOLDOVA: MONITORING AND MANAGEMENT

**Tamara LEAH[1], Irina SENICOVSCAIA[1]**

e-mail: tamaraleah09@gmail.com

**Abstract**

The physical, chemical and biological properties of zonal soils located in different zones of the Republic of Moldova have been investigated with a view to control and improve the quality. Long arable soils with the normal profile (typical chernozem, leached chernozem and gray forest soil) were compared to the virgin soil and soil which was under long term fallow. The soils used long term in the agriculture process was characterized by unfavorable properties for crop growth. Degradation led to modifying the all physical, chemical and biological indexes in negative direction. The soils of natural ecosystems are characterized by favorable physical and chemical properties and are ideal standards in regard to the composition, biomass and activity of the biota. The long use of soils in agricultural production led to the imbalance between the processes of decomposition and humus formation and promoted the decrease of soil biota stability and degradation. The values of most soil indices decrease in the following sequence: virgin and fallow land → arable unfertilized land. Soil monitoring and management with the involvement of areas with natural vegetation in a crop rotation system created conditions for the improvement the soil fertility and biota's vital activity in the soil which degraded as a result of a long-term arable use.

**Key words**: agricultural management, chernozem, monitoring, soil properties, soil biota