

SOIL HEALTH ISSUES OF ARABLE TYPICAL CHERNOZEMS OF MOLDOVA

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Abstract

Involvement of soils in agriculture is always associated with changes in natural factors of soil formation and their combination with a complex of agricultural factors. This phenomenon leads to changes, as a rule in the negative direction, in the soil health.

The research was conducted on arable typical chernozems in the North of Moldova. It was established a decline of structure quality in the arable soil in comparison with the grass fallow variant. The content of blocky elements is within 40-60%. The decline in soil structure led to the loss of soil resistance to compaction in the arable layer. The bulk density of recently plowed layer varies between 1.20-1.35 g/cm³, while of the former arable layer is 1.40-1.50 g/cm³. It is clearly pronounced the process of humus loss in the arable chernozems. The average humus content in the layer 0-25 cm reduced by 2.03-2.20% or 33-35 percent in comparison with the soil under grass fallow. As a negative phenomenon was recorded a significant decrease in reserves of nutrients in the soil.

Key words: soil structure, humus content, bulk density, soil health
