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# ESTIMATION OF POTENTIALLY BIOAVAILABLE ORGANIC MATTER IN SOILS OF DIFFERENT GENESIS AS A CRITERION FOR THEIR ECOLOGICAL QUALITY

The content of hot-water extractible carbon ($C_{HWEOM}$) in soils of Upper Dniester alluvial plain was determined. The highest $C_{HWEOM}$ content in the upper 10-cm soil layer 345–380 mg·100 $g^{-1}$ was found in peat soils and the lowest (40–70) – in arable sod and meadow soils. The highest $C_{HWEOM}$ content in the soil profile was found in the lower peat horizons, where it reached 765 mg·100 $g^{-1}$.

In order to evaluate the lability of soil organic matter, except numbers of water-soluble fractions, it is important to take into account their share in the gross content of $C_{org}$. It is known that the carbon level of organic compounds in the solution after extraction with hot water varies widely enough, depending on the type of soil, the method of its use, natural conditions. The relative $C_{HWEOM}$ content in organic soils varies between 1,2–6,8 %, and in mineral ones – 3,4–14,2 %. For hot extraction with water the content of $C_{HWEOM}$ in soils exceeds the content of $C_{CWEOM}$ (cold extraction) in 2,0–3,7 times. The nature of the profile distributions of the content of $C_{HWEOM}$ and $C_{CWEOM}$ in soils is generally similar.

$C_{HWEOM}$ content characterizes the labile part of the SOM, it is easy to define, and is widely applied in the world soil science practice, which allows it to be recommended for monitoring changes in the soil ecological quality. The decrease in the $C_{HWEOM}$ quantity below the threshold level (<20 mg·100 $g^{-1}$) indicates the unbalanced processes of C-mineralization and C-immobilization, loss of trophic soil functions and the possibility of dehumification – disturbance of inert part of SOM (humus).