



Effect of mismanagement at the state of organic matter in soil

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Organic matter is an essential part of the soil. It affects the physical, chemical, and biological properties of the soil. It is therefore necessary to maintain organic matter in the soil and its quality as the prevention of soil degradation. Loss of organic matter is in the Czech Republic threatened up to 45% of arable soil. The most important reason for the loss of organic matter in the soil is poor management, especially improper crop rotation, cultivation of erosion-prone crops where erosion takes away valuable topsoil with nutrients and organic matter.

The aim of our study was to verify the influence of inappropriate management on selected 5 plots in southern Moravia in the Czech Republic. It is the region with the highest incidence of water erosion in the Czech Republic. Were selected plots with significantly sloping, where corn was grown. Samples were taken in the autumn after the harvest, each of topsoil. The sampling sites were placed in positions on the slope where soil was not damaged by erosion, as well as the place greatest damage and the place where washed soil was accumulated.

Soil average humus content was for undamaged position on the slope 1.93% and 0.84 quality, the most heavily damaged part of the slope humus content dropped to 1.35% and its quality at only 0.56. In the case of position of accumulated soils was found the average amount of humus 1.70% and 0.90 quality. Humus content and its quality is statistically significantly influenced by water erosion ($\alpha = 0.05$).

The study showed that bad management, when there is not crop rotation adapted to the given conditions and not subjected to any suitable soil-protecting technologies, there is significant damage to soils, which shows mainly organic matter decline and a decline in its quality. Continuation of our study will verify the possibility of stabilization of soil organic matter and draft appropriate technologies.