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CHANGE OF HUMUS STATUS IN CASES OF INTENSIVE CULTIVATED SOIL

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ABSTRACT

To obtain objective data on the changes in the humus status of agrogray soil under the influence of various methods of intensive agriculture, a long - term (1990-2014) field experiment was conducted in the conditions of the Baikal forest-steppe. It was revealed that regardless of the usage practice of arable land (continuous fallow, grain - fallow and grain - row crop rotations), the humus content decreased. Its losses during fallowing and the studied crop rotations were correspondingly 21 and 15% of the initial content. The transformation trend of the system of humus substances in all the variants of the experiment was associated with a decrease in the carbon content in the labile (mobile fractions) and increase in the stable pool (immobile fractions). The humus depletion by the labile components with a decrease in its total content indicates the 'latent' degradation of the studied soil.

Key words: humus status; carbon pools; continuous fallow; crop rotations.