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G.V. Shipkova, T.M. Minkina, Yu.A. Fedorov, L.Yu. Goncharova, A.K.
Sherstnev, S.S. Mandzhieva

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Accumulation and Distribution Features of Micro- and Macroelements in Luvisols of Plain and Mountainous Regions

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G.V. Shipkova, T.M. Minkina, L. Yu. Goncharova, A.K. Sherstnev, S.S. Mandzhieva

Southern Federal University, Academy of biology and biotechnology of D.I. Ivanovsky, 344090, Rostov-on-Don, Stachki avenue, 194/1, Russia

Shipkova G.V.

The Institute of Arid Zones of Southern Scientific Center of Russian Academy of Sciences, 344006, Rostov-on-Don, Chehova Street, 41, Russia

Yu.A. Fedorov

Southern Federal University, Institute of Earth Sciences, 344090 Rostov-on-Don, Zorge street, 40, Russia

Corresponding author: Galina V. Shipkova Tel: +79081789182 e-mail: galina_shipkova@mail.ru

Abstract

The accumulation and distribution of macro- and microelements in the profile of Luvisols within natural reserves of different regions developed under plain and mountain pedogenesis conditions have been studied. Common features of the accumulation and distribution of macroelements in the studied soils have been revealed. The contents of microelements, Fe and Al in Luvisols of the Caucasian Reserve were higher than in the same soils of the Polistovsky Reserve. This is related to different soil textures and different contents of microelements in the parent rock. The highest accumulation of microelements in the C horizons of plain regions or the BMC horizons of mountainous regions is typical of Luvisols. The effect of relief on the content of microelements in Luvisols of mountainous regions has been revealed. Data obtained for the contents of Ni, Cu, Zn, As, Pb, Sr, Co, V, Fe, and Mn in Luvisols of the Polistovsky and Caucasian reserves can be used in the determination of regional background contents of heavy metals and monitoring of these territories.

Keywords: Luvisols, texture, distribution, content, microelements, macroelements

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