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Abstract
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ACCUMULATION OF ZN AND CU BY CEREAL AND LEGUMINOUS VEGETATION UNDER AGROCHEMICAL IMPROVEMENT OF NATURAL FODDER LANDS OF THE RIGHT BANK FOREST STEPPE OF UKRAINE

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ABSTRACT

The article is devoted to the study of the translocation of heavy metals-trace elements (Zn, Cu) in the cereal-legume vegetation of natural fodder lands during their surface improvement (milling with the introduction of sugar-juice defecation sludge, NPK fertilizers) and root improvement (plowing the soil with the introduction of sugar-juice defecation sludge and NPK fertilizers). Based on the analysis of literary sources, it was established that as a result of man-made activities, the condition of fodder lands is deteriorating due to the ingress of toxicants, in particular, heavy metals. The research was conducted in the conditions of natural fodder grounds of the Right Bank Forest Steppe of Ukraine during 2017-2019. The determination of heavy metals in soils and plant material was carried out in the laboratory by the atomic absorption method. The hazard ratio of heavy metals in soils and biodiversity and the accumulation ratio of heavy metals were determined. It was established that in cereal and leguminous vegetation during the three years of vegetation of natural fodder lands in the zone of their local pollution due to surface improvement, the concentration of Zn increased from 1.01 times to 1.07 times, Cu - from 1.01 times to 1.02 times, while with root improvement, the concentration decreased for Zn content from 1.1 times to 1.25 times, and for Cu content - from 1.02 times to 1.55 times. At the same time, a tendency towards a decrease in the hazard coefficients and the accumulation of Zn and Cu in cereal-legume vegetation was noted with the root improvement of natural fodder soils compared to surface ones.

Keywords: heavy metals, natural fodder grounds, danger factor, accumulation factor, concentration, vegetation.