



## Trace Elements Species in the Rhizosphere Soil

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Rhizosphere is a special zone of the system soil-plant, where the contact between plant roots and soil is the most active. The necessity of trace elements for plant growth is well known. The species of trace elements in soil provide their availability to plants. But the mechanisms of transformation of heavy metals species in Rhizosphere are not fully clear.

The Rhizosphere of wheat and barley, cultivated on castanes soils has been under investigation. The species of Cu, Zn, Pb and Cd extracted by three extragents (H<sub>2</sub>O, CH<sub>3</sub>COONH<sub>4</sub> and 1n. HCl) were determined in two zones of Rhizosphere and in the bulk soil. The soil samples characterized 7 stages of plant vegetation. The simultaneous analyze of plants was performed.

Difference between wheat and barley was not estimated. The most sufficient changes of the chemical state of Rizosphere have been estimated during the flowering and ear of the plants. It is the period of the most active assimilation of nutrition by plants. It is accompanied with the diffusion of organic substances from plant roots. Because of this pH level in the Rhizosphere increased from 7, 4 till 8,1. The content of available species increased more than two times. At the same time the sufficient transformation of more firmly tided species of heavy metals in Rhizosphere takes place. It is important from the ecological point of view that the extraplus and dangerous content of heavy metals available species can be formed in Rhizosphere where plant is preparing nutrient for their most convenient assimilation from soil.