Geophysical Research Abstracts, Vol. 8, 00218, 2006

SRef-ID: 1607-7962/gra/EGU06-A-00218 © European Geosciences Union 2006



Zinc and copper mobility and its distribution among different pools in soil

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In order to get insight into the fate of applied zinc and copper in soil, their uptake by wheat, its distribution among different fractions in soil, and also its movement in soil, pot experiments as well as the laboratory experiments were conducted during 2004–2005. The pot experiment conducted in soil samples collected from 20 different regions of the country with 3 levels of zinc or copper in complete randomized design (CRD) with three replications. Fertilizers were applied as three levels of zinc or copper (0, 5, and 10 mg Zn or Cu kg⁻¹ as zinc sulphate or copper sulphate). To study the distribution of zinc and copper in various forms, sequential fractionation was used. In terms of the relative abundance of different Zn fractions in soil, sequence was: Water soluble < Exchangeable < Specifically adsorbed < Organic matter occluded < Residual fraction. The sequence for Cu was: Water soluble < Exchangeable < Organic matter occluded < Specifically adsorbed < Residual fraction. The availability of applied Zn and Cu reduced drastically after two months and there were no build-up of Zn and Cu in available form.