Geophysical Research Abstracts, Vol. 7, 07505, 2005
SRef-ID: 1607-7962/gra/EGU05-A-07505

Relationship between organic carbon, phosphorus and potassium concentrations of runoff and its concentrations at the soil surface under simulated rainfall in Southern Brazil

I. Bertol (1), D. Leite (1), E. Vidal-Vázquez (2), L.F. Brignoni (1) and A. Paz-González (3)

(1) University of Santa Catarina State, Brazil, (2) University of Santiago de Compostela, Spain, (3) University of Corunna, Spain

a2ib@cav.udesc.br / Fax: 55-49-2212222 / Phone: 55-49-2212554

Water erosion transports organic carbon and nutrients from agricultural fields, which may induce soil losses at the origin and contamination abroad. The relationship between organic carbon, soluble phosphorus and exchangeable calcium on the 0-0.025 depth soil layer and their concentration in runoff and sediment under simulated rain was studied in a Typic Hapludox. Five different tillage treatments were studied. Phosphorus concentration in runoff water ranged between 0.05 mg dm^{-3} and 0.66 mg dm^{-3} and potassium concentration oscillated between 1.2 and 6.9 mg dm^{-3}. Soil losses were between 1.5 and 49.0 mg dm^{-3}.