Geophysical Research Abstracts,
Vol. 11, EGU2009-3256, 2009
EGU General Assembly 2009

Simple experimental procedure for determining WEPP erodibility parameters

D. Norton
(norton@purdue.edu)

The Water Erosion Prediction Project (WEPP) model was developed in the USA as a process based model to simulate fluvial erosion on hillslopes. Fundamental to the model is the separation of soil erodibility into terms of interrill and rill susceptibility to erosion. Rill erosion is further devided into terms describing a critical flow compnent and a rate component based on differences in soil cohesion and transportability. The difficulty in the use of the WEPP model to other areas has been the lack of information on the erodibility parameters rquired by the model. In this presentation, a simple experimental procedure that can be performed both in the field and the laboratory will be decribed. It should be noted that the procedure requires a rainfall simulator and flowing water and is best performed under field conditions. The procedure since it is simple, can be performed with sufficient replications to provide the statistical confidence required. From many years of conducting these , experiments, it must be cautioned that this procedure provides erodibility parameters for a given soil condition and additional measurements on the soil condition are necessary before any extrapolation of these data may be made to other field condtions. This procedure will help with the expanded use of the WEPP model to areas where data on soil erodibility are lacking.