

POSTER SESSION

Use of Mathematical Model to Study Tebuthiuron Leaching in Sandy Soil of a Recharge Area of Guarany Aquifer in Brazil

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ABSTRACT

Differences in the expected response of mathematical models on the herbicide leaching in the environment can occur due to the models and their limitations, mainly when using soil lysimeters for the study. Tebuthiuron is a herbicide used in sugarcane crop and is applied in the recharge area of the Guarany aquifer in Brazil, one of the largest in the world. This study was conducted to compare the leaching of the herbicide within lysimeters using sandy soils of the Espirado watershed in the recharge area from the region of Ribeirão Preto, SP. The traditional Attenuation Factor (AF) model was used at various soil layers, adding a Dispersion Factor (DF) to the model. The fitness of the model was good for the total amount of tebuthiuron leached, but not for its rate of leaching. The model overestimated the level of herbicide leaching at 100 days after application, but the final concentration leached with the water was as predicted by the model.

Keywords: Agriculture, Ground Water, Nonpoint Source Pollution, Solute Transport, Water Quality