Adsorption Characteristics of Atrazine in a Sandy Loamy Soil. (S01-mao061817-Poster)

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Abstract:

It is of importance to characterize the adsorption process of atrazine for sustainable agriculture and the environment. The objective of this paper is to estimate the retardation factor of atrazine in a sandy loam soil using various methods. First the retardation factor was determined based on the adsorption isotherm using the batch and flow equilibrium procedure. We also calculated the retardation factor using an optimization method by solving the convection-dispersion equation inversely. In addition, we evaluated the distribution coefficient and retardation factor from the organic carbon distribution coefficient estimated through the physical and chemical properties of atrazine. The different methods gave significantly different values of the retardation factor. It seems that the simple and conventional batch-equilibrium method provided better and reliable results of the retardation factor.

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