REPRESENTATIVENESS OF SOIL STUDIES FOR REGISTRATION IN BRAZIL PURPOSES: THE ISSUE OF SOIL TEMPERATURE.

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Among the different factors that influence the agrochemical dynamics in the environment, temperature is one of the most important, because it interferes in abiotic processes such as hydrolysis, and also in biotic processes such as biodegradation [1]. Generally speaking, under higher temperatures, biotic and abiotic processes are catalyzed, and thus significantly impact the environmental dynamics of agrochemicals. In Brazil, the legislation requires that studies of environmental fate of agrochemicals for registration purposes (biodegradation, absorption and mobility) are carried out with Brazilian soils. This requirement appears quite coherent, if one considers that physical, chemical, and biological characteristics considerably vary according to the different agricultural soils used in the worldwide agriculture. These studies are carried out at 20^{o}C, according to the methodology established by the Organization for Economic Co-operation and Development [2], based on the warm-weather countries. Taking the aforementioned into account. The purpose of this work is to survey the soil temperatures of different regions with eminent agricultural ability and distributed throughout the Brazilian territory. Soil temperature data were obtained along the Instituto Nacional de Meteorologia (INMET) database – Meteorological Data Storage Section. The values presented herein express the arithmetic average of an historical series ranging from January 1998 to December 2008. The chosen locations for the survey were: Barreiras/BA, Guarulhos/SP, Passo Fundo/RS, Belém/PA, Rondonópolis/MT, Campo Grande/MS and Rio Verde/GO. The average general temperature, calculated from the annual average temperatures of each location was 27.7^{o}C. Annual average temperatures of each location ranged from 22.6°C to 30.6^{o}C. Apart from Passo Fundo and Guarulhos, no other locations presented monthly temperature lower than 20.0^{o}C, even during winter months. Based on the results obtained from this survey, one notices that despite the soil studies for registration purposes in Brazil to be carried out with typical Brazilian soils, the representativeness of these studies is impaired when soil's average temperatures of the main agricultural locations of the Brazilian territory are not taken into account.

REFERENCES

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