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BIOACCUMULATION AND EFFECTS OF ALUMINIUM CONTENT IN ALLEATO 80 WG FUNGICIDE ON SOME LUMBRICIDAE SPECIES

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Abstract

The present study shows the results of the chronic test in evaluating the response of lumbricidae under the action of different concentrations of Alleato 80WG. The earthworm samples were taken from a plot of land cultivated with maize. Survival, biomass and aluminum content bioaccumulated in earthworms have been analyzed. Five replicates were carried out for each experiment. The survival rate showed maximum values (100%) for V5 (control sample), and (200 mg kg⁻¹) (p=1) for V4. The other three concentrations (V2=500 mg kg⁻¹; V3=400 mg kg⁻¹; V4=300 mg kg⁻¹) resulted in a significant decrease in survival compared to the control sample (V5). The trend line showed a significant decrease in survival with increasing concentration of toxic (R²=0.798; p<0.0001). All samples subjected to toxic indicated lower values of individual biomass (g). The aluminium amount was low in the underlayer/soil where earthworms were collected. The amount of aluminum bioaccumulated by earthworms increased with increasing the concentration of toxic (R²=0.839; p=0.029).

Key words: bioaccumulation, biomass, lumbricidae, survival

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