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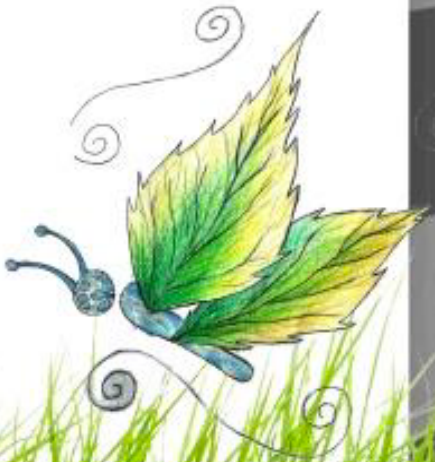
ABSTRACT BOOK



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Determination of the Effects of Humic Acid Applications on Heavy Metal Contents of Soil

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Introduction: Heavy metals, such as Cr, Ni, Pb, and Cd, could create problems in agriculture and environment. High levels of heavy metals are toxic for plants and threat the human health by entering the food chain.

Material and Methods: So, in this study, effects of different doses of humic acid applications on the soil heavy metals in wheat grown soils were determined. Wheat (*Triticum vulgare* L.) plants, 4 different doses of humic acid (0, 2, 4 and 8 L da^{-1}) 4 replicates were conducted in a total of 16 plots under field conditions. In the experiment, the rhizosphere zone soils that under-ground and above-ground parts of the wheat plants were taken and analyzed.

Results: In the results of the study, the plant can take up increasing doses of humic acid decreased that the amount of heavy metal that. The highest soil Cr, Ni, Pb, and Cd contents were determined to 0-2 L da^{-1} by the application of humic acid. At increasing doses after this humic acid application doses decreased significantly the amount of heavy metal that can be taken up by the plant, compare to control.

Discussion: The results were evaluated and humic acid applications significantly effects of soil and plant heavy metal contents and humic acids can be used as an important input for reduction of the availability of heavy metals.

Keywords: Humic acid, heavy metals, wheat, soil, ecology