Study heavy metals accumulation in soil under irrigation with different concentrations of sewage

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Nowadays, according to the dry climate of our country and water deficit for agriculture, we need to use every water sources such as sewage. But using sewage has some dangers such as the pollution resulting from heavy metals accumulation in soil and their effect on plants growth. This research was conducted to study heavy metals accumulation in soil under irrigation with different concentrations of sewage in Talebabad (Varanin, Tehran) in 2005 on the basis of a completely randomized block design with 3 replications. The factors were different concentrations of sewage including aqueduct water, equal ratio of aqueduct water and sewage and pure sewage. Samples were selected from 30cm depth of soil. Then heavy metals were measured by Atomic Absorption System. According to results, the effect of sewage was significant on some metals and their accumulation. Zn quantity increased more than 2 times at the end and the accumulation of Pb and Cd in soil decreased. Fe, Cr, Ni and Cd had no difference due to absorption by roots but Mn and Zn concentration increased due to irrigation by sewage. According to the results, although Mn and Zn concentration increased but it was under standard limits.

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