

عنوان مقاله:

Investigation of the Effect of Compost Consumption on Residual Amount of Copper and Zinc in Soils and Evaluation of the Process of Changes in pH and EC

محل انتشار:

همایش بین المللی پژوهش های کاربردی در کشاورزی (سال: 1394)

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خلاصه مقاله:

Excess amounts of metals in soil can lead to greater absorption by plants. Adsorption of heavy metals by plants is affected by their concentration in the soil, their shape, physical and chemical properties of soil, plant nutrition and growth stage. The aim of this study was to investigate the effect of organic compost fertilizer on various forms of zinc and copper in soil and determine the amount of residual metals in soil and assessment of the process of changes in pH and EC in the drained water obtained from the soil column leaching. In this study, 4 treatments of compost and heavy metals (Zn, Cu) and 2 control treatments, one of them soil with compost and the other one soil without compost in a completely randomized design was prepared. After filling the soil columns, leaching tests were conducted during 25 days on alternate days. The obtained springlet water in each day was taken to the laboratory to determine pH and EC values. After leaching, fractional extraction of samples was conducted for better understanding of heavy elements bonding with different combinations. The results showed that leaching on pH and EC during twelve leaching was effective. pH and EC values on twelve leachings were significant at 1% level. After leaching, tests showed that only a small amount of copper and zinc in the soil column is transferred to drained water and the bulk of metals remained in phase.

کلمات کلیدی:

Compost, Copper (Cu), Zinc (Zn), fractional extraction

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