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Effect of sewage on heavy metals accumulation and feeding worth of leek, bulbous and lettuce

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This research was conducted to study heavy metals accumulation in leek, bulbous and lettuce under irrigation with different concentrations of sewage in Talebabad (Varamin, Tehran) in 2005 on the base of completely randomized block design with 3 replications. The factor was different concentrations of sewage including aqueduct water, equal ratio of aqueduct water and net sewage and sewage. Plants were harvested in complete raping and dried in oven. Then heavy metals were measured by Atomic Absorption System. According to the results, heavy metals accumulation in leek and bulbous leaves were higher than standard limit (3-5 times) in net sewage treatment in the point of some metals such as Pb, Ni and Cr and, probably, affected growth and metabolism of leek and bulbous. So, feeding of them will be dangerous for humans. Heavy metals assembling in lettuce shoot were higher than standard limit (50%) in the point of Pb, Cr and Cd in net sewage treatment. Assembled quantities of them in net sewage treatment were higher (2-3 times) than aqueduct water. It is clear that Heavy metals assembling in lettuce shoot can cause some problems for consumers, especially humans. Also, assembled quantities in lettuce were lower than standard limit for domesticated animals. So, their feeding with remains of lettuce has no danger.

Keyword: Bulbous, Leek, Lettuce, Heavy Metals, Pollution, Sewage

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