



**PHYTOREMEDIATION POTENTIAL OF *Solanum melongena* L.
(EGGPLANT) ON SELENIUM AND ZINC
CONTAMINATED SOIL**

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ABSTRACT

The phytoremediation ability of eggplant (*Solanum melongena* L.) was evaluated by artificially contaminating eggplants with zinc and selenium in sandy loam soil. Three treatments were prepared: negative and high contamination level of concentration of two heavy metals namely selenium and zinc. The eggplants were contaminated for two months of cultivation. After contamination, the eggplants were harvested and dried, digested and were subjected to atomic absorption analysis. Results manifested that eggplant showed intolerance to 400 mg/kg of zinc or high levels of zinc contamination since most of the samples died. However, most of the zinc settled on the root system of the eggplant. In terms of height, it can be noted that eggplants subjected to high levels of zinc contamination showed signs of stunted growth while as for the case of the height of the eggplants treated with high levels of selenium, the height can be considered lower as compared to the acquired height of the eggplants under control treatment. The BCF of eggplants contaminated with zinc is lower as compared to the control treatment. On the other hand, eggplants exposed to high levels of selenium showed tolerance therefore may be considered phytoremediator. Selenium accumulated mostly in the leaves of the eggplant. The BCF of eggplants under the treatment also showed that it has a higher value than the control. In conclusion, eggplant is not an effective plant accumulator for high levels of zinc contamination but it is an effective phytoremediant against high levels of selenium contamination.



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