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## Earthworm as bioindicator of soil pollution around Benghazi city, Libya

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**P**ollution of terrestrial ecosystem is a serious environmental problem worldwide. Earthworm is considered as a domain soil organism. It has been a recommended test species to evaluate soil contaminations in acute toxicity. Earthworm density and biomass are strongly influenced by pollution. In this study, mortality, biomass and cocoon number of *Eisenia fetida* were examined during 14 days of exposure to series percentage (100, 75, 50 and 25%) for each soil of (Bouatni, Hawari, Lowifia, and Jarotha) locations around Benghazi city, under control conditions. The locations' soil was mixed with artificial soil to get the desired percentages. Mortality of 100% was recorded in Bouatni soil. However, no mortality was observed elsewhere. No cocoon numbers were accounted in all locations at 100 and 75% as well as in Lowifia soil, 50%. However, cocoon number was significantly reduced in Bouatni, Hawari and Jarothaat to 50 and 25% compared to control. Interestingly, earthworms body weights were increased significantly, in all locations soil (25, 50, and 75%) compared to control earthworms. Our results had shown decrease in cocoon number which can lead to decline in earthworm populations and consequence to reduce soil fertility. This study was first investigation of contamination soils around Benghazi city by using biota as well as put more emphasis on using earthworm as bioindicator.

## **Biography**

Maher Haeba got master's degree in Zoology, then, he has got scholarship for Ph.D. in Czech Republic, completed his Ph.D. in 2008 from Masaryk University. Since that date, he is a staff member in Zoology department as a Lecturer of invertebrate's course. Recently, he has got assistant Professor position from Benghazi University, Faculty of Science. He is interested in soil toxicity by using earthworm and isopods as bioindicator. He has published more than 10 papers in reputed journals and has been in many international conferences on toxicology and a member of SEATC Europe since 2004.

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