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Prolonged effects of irrigation with low quality water on soil biological characteristics

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Surface soil samples irrigated with low quality water, i.e., agricultural drainage water or treated sewage effluent for prolonged time between >35 to >85 years as well as control alluvial soil irrigated with Nile were collected. The microbiological characteristics of these soils were compared with the microbiological characters of a soil irrigated with Nile water collected from Tanash village. Results showed the microbial biomass represented by bacteria, fungi and *Azotobacter* was in general more or less the same in the different investigated soils. On the other hand, the new indicators of pathogenic bacteria (*Pseudomonas*) exhibited positive existence even in the soil irrigated with Nile. Data showed that the most important parameter indicating the bioactivity of a certain soil ecosystem, i.e., dehydrogenase activity was highest in soils irrigated with sewage effluents from either Abu-Rawash or Zeneen sewer plants being even higher than in the soil irrigated with Nile.

Biography

Mohamed Saber Ismaeil is currently working as Research Scientist at National Research Center, Egypt.

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