

Effect of Heavy Metal Pollution on Total Microbial Count and Seed Germination Ability of Soil

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Abstract: *A wide application of heavy metals in different human processes leads to its accumulation in environment. Atmospheric deposition of metals into soil ecosystem is majorly affecting the microbial count of soil and seed germination as well. In present study, soil samples were collected from metal polluted sites and agricultural fields to determine of heavy metal (Zn, Cu, Mn and Fe) content and total heterotrophic count of different soil samples. The microbial count, seed germination percentage and heavy metal concentration in agricultural field samples were found to be in permissible limit, while increased metal concentrations and lower bacterial count were observed in metal contaminated soil samples. Increasing heavy metal concentration found to be drastically affecting on total heterotrophic count of agricultural field soil samples, while high metal concentration tolerating bacterial count was found in metal contaminated soil samples. The study suggested that metal processing industries should accept new practices to avoid such metal incorporation in natural environment to save soil microbial diversity.*

Keywords: Heavy metal, Atmospheric deposition, Soil ecosystem, Total microbial count, Seed germination, Metal tolerating bacteria

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