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Categorization of Biosolids, a Vital Biological Resource for Sustainable Agriculture

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Abstract : Biosolids are by-products of municipal and industrial wastewater treatment process. The generation of the biosolids is increasing at an alarming rate due to the implementation of strict environmental legislation to improve the quality of discharges from wastewater treatment plant. As such, proper management and safe disposal of sewage sludge have become a worldwide topic of research. Biosolids, rich in organic matter and essential micro and macronutrients; can be used as a soil conditioner, to cut fertilizer costs and create favorable conditions for vegetation. However, it also contains pathogens and heavy metals which are undesirable as they are harmful to both humans and the environment. Therefore, for safe utilization of biosolids for land application purposes, categorization of the contaminant and pathogen is mandatory. In this context, biosolids collected from a wastewater treatment plant in Maharashtra are utilized to determine its physical, chemical and microbiological attributes. This study would ascertain, if the use of these materials from the specific site, are suitable for agriculture. Further, efforts have also been made to present the internationally acceptable legal standards and guidelines for biosolids management or application.

Keywords : biosolids, sewage, heavy metal, sustainable agriculture
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