

REUSE OF WASTEWATER IN AGRICULTURE, IRRIGATION, AND DOMESTIC USE: A BACKLOOK, AN AHEADLOOK, AND A FORWARDLOOK

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ABSTRACT

Due to population growth and the consolidation of existing states, freshwater resources are becoming increasingly scarce. When there is a shortage of fresh water, an important alternative water source that can be used in gardening is waste water. This is of critical relevance during drought. There have been multiple iterations of irrigation in both developing and developed countries that make use of wastewater. It is recommended that you refrain from utilising untreated rainwater for plant irrigation if at all possible. By implementing proper management practises, such as putting in place the required instruments for treating and watering the soil, it is possible to achieve various benefits while reducing hazards. By utilising these methods, we can achieve this state of equilibrium. The primary difficulties of wastewater irrigation were reviewed, as well as potential solutions that could be implemented in the future to improve wastewater irrigation systems worldwide. This article provides a concise history, overview, and outlook of wastewater reuse and recycling. These articles focus on innovative approaches to the treatment and monitoring of wastewater, such as electrolytic structures, reducing bio filters, membrane bioreactors, and disinfecting tools. Organic matter's impact on pathogen inactivation and nutrient removal are discussed, along with best management practices for biosolids. In sum, the methods presented in this Special Issue range from the most basic to the most advanced approaches to wastewater treatment and reuse.

KEYWORDS: Biosolids, Wastewater Treatment, Reuse and Recycling

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