



## Assessment of the irrigation quality of the admixture of reverse osmosis permeate and tertiary effluent

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### ABSTRACT

Conventional reverse osmosis (RO) treatment deprives reclaimed wastewater of nutrients and other essential elements for plant growth. One way to make the RO reclaimed wastewater suitable for agricultural irrigation purposes is to blend it with a tertiary effluent. This paper assesses the suitability of the quality of RO permeate and tertiary effluent admixture for agricultural irrigation, using the WHO guidelines for irrigation waters. Obtained results indicated that the admixture is suitable for agricultural irrigation, but with some restrictions. Unsuccessful attempt to predict the quality of the admixture, using only ideal mixing principles, confirmed that effluent storage reservoirs (ESRs) constitute a complex ecosystem.

*Keywords:* Wastewater; Reclamation; Reuse; Tertiary Effluent; RO Permeate; Irrigation water

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