

Valorization of Sawdust for the Treatment of Purified Water for Irrigation

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Abstract : The watering technique is essential to maintain a moist perimeter around the roots of the crop. This is the case with topical watering, where the soil around the root system can be kept permanently moist between the two extremes of water content. Moreover, one of the oldest methods used since Roman times throughout North Africa and the Near East was based on the repeated pouring of water into porous earthen vessels buried in the ground. In this context, these two techniques have been combined by replacing the earthen vase with plastic bottles filled with sand which release water through their perforated walls into the surrounding soil. The objective of this work is to first determine the purifying power of the activated sludge treatment plant of Toggourt and then that of the bottled Sawdust filter. For the station, the BOD purification rate was (96.5%), the COD purification rate was (87%) and suspended solids (90%). For the bottle, the BOD removal rate was (35%), and COD removal rate was (12.58%). This work falls within the framework of water saving, sustainable development and environmental protection, and also within the framework of agriculture.

Keywords : wastewater, sawdust, purification, irrigation, touggourt (Algeria)

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