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Commentary

# Effects of Trial Disposal in Saline Wastewater Pollutants of Industrial and Sludge Application

**Mamera Vantol***

*Department of Soil, University of the Free State, Bloemfontein, South Africa*

## DESCRIPTION

The increasing saltwater runoff from industry, oil and gas fields and seawater desalination plants produces the vast amounts of pollutants with undesirable effects in environment and human health. The proper disposal and treatment of these wastewaters is an ongoing problem, posing to significant technical and economic challenges. Many simple classification models are based upon practical experience and empirical formulas currently provide valuable guidance to land managers.

The sludge application was not an effective in increasing biomass yield, but the experiment was valuable in identifying that modest amounts of sludge were acceptable environmentally and did not compromise biomass production. We considered new sustainable strategies such as waste minimization and water reuse, zero liquid discharge, and resource recovery of brine wastewater.

The uptake of cadmium was detected in poplar biomass, but the amounts were small and insufficient for poplar to be used in phytoremediation of metal-contaminated land. Existing therapeutic approaches including membrane manipulation, thermal processes, chemical techniques, and biological methods are discussed.

The land application of Palm Oil Mill Effluent (POME) is envisaged as it is one of the disposal alternatives. The raw pome will readily cause clogging and waterlogging of soil and it kills vegetation on contact, but these problems can overcome by controlled application of small quantities. The application of innovative hybrid processes is a combination of two or more treatment methods that are aimed at reducing energy requirements and increasing in the process efficiency was also evaluated.

The silage effluent is a potent wastewater that can be produced when ensiling crops are at high Moisture Content (MC). The traditional disposal techniques, are mostly suffering from direct or indirect water/soil contamination, and those are not preferred longer.

It can cause fish-kills and eutrophication due to its high Biochemical Oxygen Demand (BOD) and nutrient content, respectively. The perspectives towards linking energy, of water and environment are also being explored, by integrating the renewable energy sources with energy-intensive salt treatment methods. Although being recognized as a concentrated wastewater it is one of the most importantly focused on production and prevention.

The effluent production models are available in limited ability inorder to predict, when the effluent will flow there and aimed to identify the effective reactive management options, such as containment and natural treatment systems. It has a high acidity making it corrosive to steel and damaging to concrete, which makes handling, storage and disposal a challenge.

The recommended limits of magnesium in irrigation water were exceeded; this will create an unfavorable soil condition as a result of high magnesium absorption. Both surface and sprinkler irrigation methods can be used with the water source. Total suspended solids and total solids values showed fairly high turbid water.

As a result, the several advanced treatment methods for the sustainable management of saline wastewater have been recently considered. In this context, a comprehensive and up-to-date overview of conventional methods and new technologies for disposal and treatment of saline wastewater is presented.

## CONCLUSION

The various approaches for modeling and predicting the soil impacts are involved in saline-drainage irrigation. A more complex mechanistic model was developed that successfully describes the movement of water and salt through soil given appropriate soil measurements as input parameters. The main current limitations are the availability of soil data at appropriate

**Correspondence to:** Mamera Vantol, Department of Soil, University of the Free State, Bloemfontein, South Africa, Email: vantol@fs.sa

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scales and understanding how changes in soil chemistry affect soil physical properties and subsequent soil behavior. In particular, critical zones above the soil surface or B-horizon where water movement is hindered in soda ash soils should be investigated.