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Assessment of Quality of Effluent Waters and Studies on Spent Wash Usage for Irrigation in Clayey Soils of South Gujarat

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Rapid industrialization and urbanization has created serious problems of water pollution. However, industrial effluents are not always hazardous and can be used advantageously in agriculture. Keeping this in mind the present investigation was planned.

A survey study indicated that the waste water from paper mill, sugar factory and metal industry showed minimum pollution hazard and can safely be used for irrigation. In a pot study, sugarcane, sorghum, alfalfa and paragrass responded well to 25 times dilluted spent wash, while onion responded upto 50 times dilution. In all the cases major, secondary, micronutrient and heavy metal contents and uptake by different crops increased with increase in concentration of spent wash. Further, there was betterment in nutrient status and physical condition of soil.

In another pot study with sorghum and onion, 25 per cent of fertilizers could be saved when spent wash was used for irrigation. In the field trial, sugarcane did not respond to application of N, P and K when irrigated with 50 times dilluted spent wash in clayey soils of South Gujarat.

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