



**Research Paper**

# An economic analysis of effect of sewage water use for irrigation on soil properties, ground water, human health and quality of produce

■ V. S. RADHIKA AND G. N. KULKARNI

See end of the paper for authors' affiliations

Correspondence to :

**V.S. RADHIKA**

Department of  
Agricultural Economics,  
College of Agriculture,  
University of Agricultural  
Sciences, DHARWAD  
(KARNATAKA) INDIA  
Email: raduvs467@  
gmail.com

**ABSTRACT :** In agricultural practices, irrigation water quality is believed to affect the soil characteristics, crops production and management of water. Currently agricultural land has become a disposal site for waste water. For instance, the application of saline/sodic water results in the reduction of crop yield and deterioration of the physical/chemical properties of soil. Multistage random sampling technique was used. A total sample of 135 farmers were selected for collection of the required information for the study. The data collected were presented in tabular form to facilitate easy comparison. The soil properties and microbial population that is beneficial to the soil gets destroyed due to the deposition of chemicals, oils and acids contained in the sewage water. Farmers acknowledged the contamination of groundwater as evident through the tube well water colour and its turbidity. The incidence of health related problems such as diarrheal diseases, cholera, malaria and typhoid were more among the farmers of sewage water villages than among the farmers of fresh water village, resulting in an increased per capita health expenditure by sewage water village farmers. The farmers in the study area recognized lower keeping quality and poor taste in case of fruits and vegetables grown under sewage water than in fresh water condition. However, on the contrary the fruits and vegetables produced attracted a premium price for their bigger size, attractive and shining colour. Hence, there is an urgent need to plan strategies and provide thrust to the development of socially acceptable, economically viable and cost-effective waste water treatment systems to check from possible ill-effects on the environment, health and ground water.

**KEY WORDS :** Sewage water villages, Fresh water villages, Human health, Soil properties

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