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NITRATE CONTAMINATION IN THE PHREATIC AQUIFER OF AN AGROECOSYSTEM OF THE CHACOPAMPEANA PLAIN, CORDOBA, ARGENTINA

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ABSTRACT

The functionality and pollution potential of the agroecosystem of the Los Jagüeles basin were characterized and an initial spatial assessment of nitrate levels in the phreatic aquifer was made. This aquifer, used for many purposes, is made up of Quaternary materials of alluvial and aeolian origin. It has sodium bicarbonate and sodium sulfate-chloride waters and shows signs of degradation because of the presence of nitrate. Nitrate levels range from 1 to 70 ppm, and a connection between these values and the present use of soils and their derived pollution activities can be observed. The arrival of nitrates to the aquifer is influenced by many factors, such as lithology of the unsaturated zone, well depths, and soil types. Nevertheless, because of high variability in the basin, it was impossible to arrive at a definite relation between nitrate levels and two selected parameters, water depth and well age.

Reference: Cabrera, A. and M. Blarasin; Nitrate Contamination in the Phreatic Aquifer of an Agroecosystem of the Chacopampeana Plain, Cordoba, Argentina, Journal of Environmental Hydrology, Vol. 7, Paper 17, October 1999.

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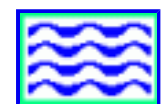
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