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IMPACTS OF PRODUCTION AND STORING OF ORGANIC MANURE OVER THE QUALITY OF GROUNDWATER IN THE BASIN OF GERU RIVER FROM GALATY COUNTY

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Abstract

Water is the source of life and a high water quality leads to a harmonious development of the surrounding environment (biotic and abiotic) and of humans. When water is loaded with various chemicals due to erosion, corrosion and human activities, the pollution phenomenon appears, causing harmful effects over plant and animal organisms.

The presence in water of substances derived from agriculture or mismanagement of manure organic obtained from various species of domestic animals affects the environmental quality and human health through the development of different types of diseases of the digestive system, circulatory etc. This made all the administrative units in the study area to be declared as vulnerable to pollution by nitrates from agricultural sources. This study was conducted in the drainage basin of Geru River in Galati County and was focused on three periods (2011, 2012, 2013) for calculation of livestock and production of waste and nutrients sewage and in three periods (July 2012, July 2013, November 2013) for the monitoring of water quality. The results revealed that the production of nutrients does not generate a high pressure over land, but point pollution affected the aquifer on an extended area. Therefore, groundwater could have poor quality and it is not recommended for drinking in the villages where nitrate levels are very high. Our study showed that organic manure production was not large enough to put high pressure on agricultural land, but causes the increase in the amount of nitrate in the groundwater, as a result of manure mismanagement.

Key words: management, manure, nitrates, nitrites

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