

WE-70**OCCURRENCE OF AGRICULTURAL PESTICIDES FROM SUGARCANE PLANTATIONS IN THE PASSOS RIVER, SOUTHERN REGION OF THE STATE OF PERNAMBUCO, BRAZIL: IMPACT ON WATER QUALITY IN SHRIMP FARMING ACTIVITIES**

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The southern portion of the state of Pernambuco in northeastern Brazil is home to large sugarcane plantations in the proximities of the Ariquindá, Sinos and Passos Rivers, which form the estuary of the Formoso River. This region is also home to intensive marine shrimp farming activities in the estuarine environment. Considering the traditional use of pesticides on sugarcane crops and the environmental risks associated with these compounds, the aim of the present study was to investigate the occurrence of pesticides in the Passos River, which is used to supply water to the shrimp nurseries. A total of 238 pesticides were analyzed using liquid chromatography coupled to mass spectrometry (LC-MS/MS). The study was conducted in February, March, June and July 2014. The herbicides Tebuthiuron and Diuron were found in the water of the Passos River and shrimp nurseries at concentrations ranging from 0.02 to 0.07 $\mu\text{g L}^{-1}$ and 0.02 to 0.17 $\mu\text{g L}^{-1}$, respectively. The detection of these herbicides in the water of the river and shrimp farming tanks, even at residual concentrations, could lead to the contamination of shrimp farmed in the estuary as well as perceptible ecological changes in the long term, such as a reduction in the biological potential of animal and plant species.

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References:

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