PARASITOLOGICAL RESEARCH IN A BIOFERTILIZER LAGOON FROM THE ANAEROBIC BIODIGESTION OF BOVINE FAECES

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Brazil has the largest cattle commercial herd of in the world, with a system for raising dairy cattle in confinement, where there is greater concentration of animals and, consequently, a high production of cattle waste generated from the production. These wastes contain pollutants, which, when handled incorrectly, can cause serious environmental problems, in addition to enabling the spread of parasitic diseases in the herd. From this impasse, anaerobic bio-digestion in biodigesters emerges as a sustainable alternative for waste treatment arising from cattle raising, enabling the generation of high-energy (biogas) and nutritive (biofertilizer) by-products. The use of biofertilizers in agriculture promotes plant growth and protects the crop, but it may contain pathogens that have the capacity to cause infections in animals, and when this is irrigated in pastures, it ends up compromising the health of cattle. Thus, the present work had as general objective to perform the parasitological control of biofertilizer from the anaerobic decomposition of cattle manure using the direct microscopic method and the modified Bailenger method, which was standardized in the laboratory where the study was conducted. The biofertilizer samples analyzes performed by the direct method revealed the presence of *Toxocara vitulorum* eggs, while those performed by the modified Bailenger method did not identify evolutionary parasitic forms of bovine parasites. As for the preparation of the cattle manure sample processed by the modified Bailenger method, it was possible to identify *Oesophagostomum radiatum.* The standardization of the methodology modified by Bailenger had good sensitivity, reduced cost and easy execution. Both methods of analysis proved to be useful for carrying out parasitological monitoring of the biofertilizer studied in this work, but the direct microscopic method proved to be more efficient than the modified Bailenger method, providing faster results with greater precision.

Key-words: Biodigester; Renewable Energy; Parasitological Control; Bovine Helminths.