

TITLE: EVALUATION OF ANTIBIOTICS FOR THE CONTROL OF BACTERIA IN PISCICULTURES IN THE REGION OF DOURADOS, MS.

AUTHORS: Araújo, R.P.^{1,3}, Guimarães, M.B.¹, Minillo, A.³, Soares, R.S.⁵, Dantas, F.G.S.^{1,2}, Almeida-Apolonio, A.A.⁴, Galvão, F.O.², Oliveira K.M.P.^{1,2}.

INSTITUTION: ¹Faculty of Biological and Environmental Sciences, Federal University of Grande Dourados, Mato Grosso do Sul, Brazil. ²Faculty of Health Sciences, Federal University of Grande Dourados, Mato Grosso do Sul, Brazil. ³Faculty of Environmental Science and Technology, Federal University of Grande Dourados, Mato Grosso do Sul, Brazil. ⁴Faculty of Medicine, Federal University of Mato Grosso do Sul, Mato Grosso do Sul, Brazil. ⁵University Center of Grande Dourados, Mato Grosso do Sul, Brazil

ABSTRACT:

The fish farming represents one of the economic activities with significant expansion in the country in recent years. During production, antibiotics are used to promote growth, prevent and control disease, but its inadequate use may lead to the selection of resistant and multiresistant microorganisms, compromising the management and representing a dangerous situation for public health, aggravating the clinical state. Thus, the present study had the objective to evaluate the effectiveness of some antibiotics for the control of bacteria present in samples of water and sediment of two fishery properties in the region of Dourados, Mato Grosso do Sul. The study was performed by the antimicrobial susceptibility technique by agar-dilution where five antibiotics were supplemented on Mueller-Hinton ágar (Sulfamethoxazole, Florfenicol, Tetracycline, Oxytetracycline, Norfloxacin) and a commercial mixture (Tetracycline, Sulphadiazine and Trimethoprim), commonly used in fish production. Most of bacteria were isolated from the sediment sample. Regarding antibiotics, it was possible to isolate the largest number of bacteria in the medium containing the antibiotic Sulfamethoxazole and the medium supplemented with the commercial mixture had the lowest microbial growth. The data demonstrate that the use of only one antibiotic have not the effectiveness to inhibit the growth of bacteria present in water and fish sediment. The commercial mixture was more effective in the control of microorganisms in fish farms, demonstrating that it is necessary to use a combination therapy to control diseases that imply the productivity of the system. Therefore, the inconsequential use of antibiotics leads to the presence of resistant bacteria in food production that may compromise the treatment of foodborne diseases.

Keywords: pisciculture, agar-dilution, antibiotics

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