

TITLE: PROFILE OF SUSCEPTIBILITY TO ANTIMICROBIALS OF *Salmonella* spp. ISOLATED FROM FISH FARM

AUTHORS: Araújo RP^{1,3}, Rocha, M P^{1,3}, Komori, HM³; Guimarães MB¹, Dantas FGS^{1,2}, Almeida-Apolonio, AA⁴, Castilho PF², Dias BB², Pinheiro WJC³, Oliveira KMP^{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.

ABSTRACT:

The isolation of *Salmonella* in fish farms has been of concern since it is one of the microorganisms most associated with Foodborne Diseases and is an important global public health problem. Strains of *Salmonella* spp. with resistance to antimicrobial drugs are widely diffused in developed and developing countries. Resistance to antimicrobial drugs is an almost inevitable consequence of the use of antibiotics in food producing animals, such drugs may be used therapeutically, prophylactically or for growth promotion (food additives) leading to an increase in resistant microorganisms that can be associated with infections. Thus, this study aimed to evaluate the resistance profile of *Salmonella* spp. isolated from fish farming in the region of Dourados, Mato Grosso do Sul. We evaluated the antimicrobial susceptibility profile of 101 *Salmonella* by the Kirby-Bauer disk-diffusion technique. Twelve antibiotics were used in the assay, and isolates that showed resistance to three or more antibiotics were classified as multiresistant. 99% of the isolates showed resistance to at least one antibiotic and 70.29% were multiresistant. The largest number of resistant isolates was for Sulfonamide (94.05%) and Trimethoprim (55.44%), whereas for Ciprofloxacin only 0.99% presented resistance, however, 43.56% presented intermediate resistance. It is important to emphasize the isolation of *Salmonella* that are exhibiting a decreased susceptibility to Ciprofloxacin, since fluoroquinolones are important in the treatment of serious infections caused by *Salmonella* spp. and the presence of resistant isolates in fish production may compromise the effectiveness of antimicrobials used for treating infections. Efforts are thus required to prevent the spread of antimicrobial resistance to reduce the risk to human, animal and environmental health.

Keywords: fish farm, antimicrobial resistance, Ciprofloxacin, one health.

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