

عنوان مقاله:

Antibiotic resistance patterns of bacteria isolated from Clarias gariepinus farms in Kaduna state, Nigeria

محل انتشار:

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خلاصه مقاله:

Fish farming is increasing globally, with an increase in bacterial infections known to cause morbidity and varying mortality, affecting the productivity and profitability of aquaculture. The objective of this study was to determine the antibiotics susceptibility and multiple antibiotic resistance index of bacteria isolated from fish in some selected fish farms in Kaduna State to ten commonly used antibiotics using the Kirby-Bauer disc diffusion method. In total, ۸۴ bacteria were isolated from ۷۵ Clarias gariepinus in this study, belonging to ۱۲ genera. The antibiotic profile of the bacteria isolated displayed different sensitivity and resistance to the antibiotics used. The highest numbers of the Gram-positive (۵۹.۵%) and Gram-negative (۶۹%) bacteria, respectively, were sensitive to ciprofloxacin compared to the other antibiotics. All the bacterial isolates displayed varying diversity of multidrug-resistant patterns. A total of ۳۸ and ۴۱ different resistance patterns for Gram-positive and Gram-negative respectively were observed. The multiple antibiotic resistance (MAR) index analysis reveals that ۹۷.۳% of the bacteria had a high MAR index value (> ۰.۲). In conclusion, there is a diversity of bacteria organisms within the fish farms that are pathogenic to both fish and humans. Therefore, there is a need to implement optimal preventive management measures and control the use of antibiotics.

کلمات کلیدی:

Antimicrobials, aquaculture, health risk, multi drug resistance, pathogens

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