

DIVERSITY AND ANTI-MICROBIAL RESISTANCE PROFILES OF SELECTED BACTERIAL SPECIES IN  
CHICKEN DROPPINGS FROM A POULTRY FARM IN JUJA FARM

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**Abstract**

Indigenous chicken production in most African countries including Kenya is traditionally based on free feed resources available in the surrounding environment. There is high risk of zoonosis that could be an important source of enteric pathogens that can be transmitted to humans via horizontal gene transfer. The chicken that are considered healthy apparently can shed enteric pathogens that are associated with antimicrobial resistance. The purpose of this study was to isolate and characterize the diverse bacteria present in chicken droppings and to evaluate their antimicrobial resistance this was achieved by collecting chicken droppings from a poultry farm in Juja followed by culturing and sub-culturing to obtain diverse bacteria colonies. Characterization of these bacteria was done using gram staining and various biochemical tests. Antibiotic susceptibility test was carried out in order to evaluate the antimicrobial resistant profiles of the diverse bacteria present in the chicken droppings. Five antibiotics belonging to different classes were used namely; tetracycline, amoxicillin norfloxacin, erythromycin and cefotaxime were used. Salmonella spp, E. coli, Campylobacter, Klebsiella, Staphylococcus and Bacillus spp were the most dominant bacteria isolated the chicken droppings. The isolated bacteria were resistant to different classes of antibiotics such as oxytetracycline (30µg class tetracycline), norfloxacin class (10µg class quinolone) cefotaxime(25µg class cephalosporin) and erythromycin(25µg class macrolide). This study provides meaningful information and foundation on diverse bacteria present in chicken droppings and their resistance profiles, in order to understand consequences of sub-therapeutic use of antibiotics for growth promotion rather than treatment.