083

ANTIBIOTIC USE PRACTICES AND ANTIMICROBIAL RESISTANCE IN SMALL-SCALE GOAT AND SHEEP FARMING

Antibiotic overuse in food-producing animals has been a major contributor to the emergence and progression of antibiotic resistance. Zoonotic transmission of antibiotic resistant bacteria is a public health burden with heavy clinical and economic implications. There are significant data gaps in agricultural antibiotic usage practices, notably in goat and sheep production. The aim of this study was to determine the use of antibiotics, record keeping practices and antimicrobial resistant profiles in goat and sheep farms. Questionnaire data on antibiotic use was collected by Qualtrics survey from approximately 151 farmers while environmental samples (soil, water, and manure) were collected from thirty-five (35) farms across Tennessee and Georgia. Descriptive analysis of data was performed by using SPSS and probit regression model was used to estimate the factors determining the producer's awareness on antimicrobial use. Antibiotic sensitivity of bacteria was performed using Kirby-Bauer disk diffusion method. About 80% of farmers used antibiotics with Oxytetracycline (31.3%), Penicillin G, (25.8%) and Florfenicol (17.5%) being the most frequently used. About 73.5% of respondents consulted veterinarian on needs basis while 11.9% never consulted. About 51.4% of the respondents kept up to date records of antibiotics use while 48.6 % did not. With a positive coefficient of 0.43, producers with prior BMP training were more aware of antibiotics overuse and development of antimicrobial resistance. *Escherichia coli, Shigella, Salmonella* and *Staphylococcus aureus* displayed resistance to ampicillin (28.5%, 0%, 37.8%, and 95%) and tetracycline (11.5%, 100%, 16% and 100%). Our findings show that zoonotic antimicrobial resistant pathogens are linked to small ruminants; hence it remains imperative that antibiotics are used prudently. This study also demonstrates the necessity for farmers to get training in best management and biosafety practices