RESISTANCE PROFILE OF PATHOGENIC BACTERIA IN GOAT AND SHEEP FECAL SAMPLES FROM TENNESSEE AND GEORGIA

The emerging resistance in zoonotic pathogens is a major threat to animal production and to animal and human health. The developing small-scale goat and sheep farm is heavily affected by this issue. Therefore, in this study, we will investigate the prevalence of important pathogens in fecal samples from goat and sheep in Tennessee and Georgia and identify the resistance pattern to different classes of antibiotics including some medically important antibiotics. Fecal samples were collected from goat and sheep and transferred to Food Safety and Microbiology Lab at TSU. Pathogens of interest: *E. coli, Salmonella, Shigella, Staphylococcus aureus* and *Staphylococcus saprophyticus* were isolated using selective media. The presumptive isolates were subjected to molecular confirmation using Polymerase Chain Reaction (PCR). The confirmed isolates were subjected to 8 different antibiotics for Antimicrobial Susceptibility Testing (AST) using Kirby-Bauer Disk Diffusion method. Of all samples tested, *E. coli* (94.2%) was the most prevalent followed by *S. saprophyticus* (90.5%), *S. aureus* (80.4%), *Shigella* (34.7%) and *Salmonella* (5.8%). All the isolates of *E. coli* resistant to Erythromycin and Cephalothin. High resistance was also seen in *S. aureus*, *S. saprophyticus*, *Shigella*, and *Salmonella.* Resistance from goats can transfer to the environment and humans.