6th World Congress and Expo on **Applied Microbiology** & 8th Edition of International Conference on **Antibiotics, Antimicrobials & Resistance** 12th International Conference on **Allergy & Immunology** October 21-22, 2019 Rome, Italy

Influence of animal welfare on the microbiological quality of Bovine carcasses in a slaughterhouse in quito- Ecuador

Cevallos- Almeida, M1, Lema, L1, Lema, J1, Gómez, C1 and Estupiñán, P2

¹Laboratory of Bacteriology and Mycology, Faculty of Veterinary Medicine and Zootechnics, Central University of Ecuador, Ecuador ²Laboratory of Meat Quality, Faculty of Veterinary Medicine and Zootechnics, Central University of Ecuador, Ecuador

The microbiological quality of beef meat is influenced by several factors during the slaughter period. In Ecuador T there are not reports about animal welfare indicators in bovine slaughterhouses. The main objectives of this research were to determine the microbiological quality in three hundred sixty bovine carcasses slaughtered in the main slaughterhouse of Quito and establish the relationship between the pH measure, bacterial counts of mesophilic bacteria, Escherichia coli and presence of *Salmonella sp.* in carcasses with animal welfare indicators (slipping and falling, vocalizations, stunning, bruises). Two hundred thirty-seven bovine carcasses showed counts of *Escherichia coli* between 3 to 5.39 log10 CFU /cm2 (mean of 2.43 log10 CFU/cm2). Concerning mesophilic bacteria three hundred thirty-six carcasses showed counts between 4.10 to 6.43 log10 UFC/cm2 (mean of 5.32 log10 UFC/cm2). *Salmonella sp.* was isolated from eleven bovine carcasses. Regarding the animal welfare indicators relationship with the microbiological quality of carcasses; two main indicators showed association with counts of Escherichia coli (X squared p <0.05) with "slipping and falling" and *Salmonella sp.* isolation (X squared p <0.05) with "bruises" in carcasses.

Keywords: Bovine carcasses, Escherichia coli, Salmonella sp., microbiological quality, animal welfare.

Biography

Cevallos-Almeida M is from Faculty of Veterinary Medicine and Zootechnics, Central University of Ecuador, Quito, Ecuador.

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