IAFP Latino 2024
Simpósio Latinoamericano em Segurança dos Alimentos
Santos - SP - Brasil
11 a 14 Nov, 2024

EVALUATION OF BRUCELLA SPP. IN LIVER OF CATTLE INTENDED FOR SLAUGHTER IN THE STATE OF SÃO PAULO, BRAZIL USING qPCR TECHNIQUE

Leon Hardt Motta[1], Emanoelli Aparecida Rodrigues dos Santos[1,2], Evelyn Cristiane da Silva[1,2], Juliano Gonçalves Pereira[1], Mateus de Souza Ribeiro Mioni[3], Fábio Sossai Possebon[1,2]

[1.] SÃO PAULO STATE UNIVERSITY, SCHOOL OF VETERINARY MEDICINE AND ANIMAL SCIENCE, Botucatu/SP, Brazil
[2.] SÃO PAULO STATE UNIVERSITY, INSTITUTE FOR BIOTECHNOLOGY, Botucatu/SP, Brazil
[3.] SÃO PAULO STATE UNIVERSITY, SCHOOL OF AGRICULTURAL AND VETERINARY SCIENCE, Jaboticabal/ SP, Brazil

Beef is considered one of the most important foods for human consumption, and Brazil stands out as the holder of the largest global commercial cattle herd, with approximately 234.352 million head of cattle, resulting in high domestic consumption of this product. The export of agricultural products from Brazil is influenced by various factors such as volume, supply, production costs, and product quality, generating comparative advantages and competitiveness based on the productive capacity of specific regions compared to their competitors. In this context, institutions and industries seek to establish guidelines to control potential diseases transmitted by these products. Among potentially pathogenic microorganisms, we can mention bacteria of the genus *Brucella* spp. The aim of this study was to identify *Brucella* spp. in bovine livers destined for slaughter. Two hundred and fifty samples of bovine liver from slaughterhouses in the State of São Paulo (SP) were used. The 250 bovine liver samples were processed using the Easypure Blood Genomic DNA Kit (TransGen Biotech), according to the manufacturer\'s manual. The primers (Primer-F: 5’ TCAGGCGCTTATAACCGAAG 3’ and Primer-R: 5’ ATCTGCGCATAGGTCTGCTT 3’) for the qPCR reactions were used with the GoTaq qPCR master mix kit (Promega™) in a 22 µL reaction, with an annealing temperature of 58 °C. A pure *Brucella* sp. sample was used as a positive control, and *nuclease-free* water as a negative control. The reactions were conducted on the AriaMx equipment (Agilent), and amplification graphs and melting curves were evaluated to verify the presence or absence of targets in the samples. *Brucella* sp. was not detected in any of the analyzed samples. Given that this disease is part of the government\'s eradication program aimed at eliminating the circulation of the bacterium within national territory, efficient sanitary control in the field is necessary. Therefore, the results of this study reinforce that the procedures for eliminating these microorganisms are being properly followed.

Agradecimentos: São Paulo Research Foundation (FAPESP) – Process number 006121-0.