TITLE: ETIOLOGY OF BOVINE MASTITIS IN THE DAIRY REGION THE STATE OF ALAGOAS

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## ABSTRACT:

Mastitis corresponds to an inflammation of the mammary gland, usually as a consequence of microbial infection, which affects the milk quality and results in economic losses. Additionally, the infection of the mammary quarters in young cows contributes to the diminishment of the animal's productive life and increases the costs associated veterinary care and necessary pharmaceuticals. To analyze the etiology of bovine mastitis in the dairy basin of the Alagoas estate we selected four commercial farms, which milked two times per day, representing semi-intensive and extensive production. In order to assess for clinical and subclinical mastitis Tamis test and CMT were performed on a total of 867 cows in distinct lactation stages and milk samples were collected for microbiological analysis. Following sampling the flasks were refrigerated and transported to the laboratory where they were processed. From each milk sample an aliquot was plated onto 5% sheep blood agar, incubated at 37°C and checked for growth after 24, 48h and 72h. The morphology of the bacterial colonies; including type, size, color and hemolysis; were observed and registered. The observed clinical and sub-clinical mastitis indexes were 3.3% (116/3425) and 57.78% (1979/3425), respectively. Regarding CMT and microbiological screening, 42.03% (1391/3309) were positive for both; whereas 17.46% (578/3309) showed positive results in the microbiological analysis but negative CMT; 17.76% (588/3309) were positive for CMT and negative for microbiology and 22.72% (752/3309) were negative for both tests. Further microbiological analysis of the milk samples showed that Staphylococcus spp. and Corynebacterium spp. were the predominant genera, found in 37.43% (1298/3468) and 14.5% (503/3468) of the samples, respectively. Overall, the results demonstrated Staphylococcus spp. as the major bacterial contaminant present in the herds under analysis, pointing towards a need for more effective hygienic measures during milking procedures and emphasizing the necessity for mastitis monitorization in the milking parlour in order to improve milk quality.

Keywords: Mammary gland, microorganisms, milking parlour.