THE ROLE OF MYCOPLASMA SPP IN BOVINE RESPIRATORY DISEASE COMPLEX IN FEEDLOT CATTLE IN SOUTH AFRICA

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Bovine respiratory disease complex (BRD) consists of a largely single clinical entity of bronchopneumonia that is usually associated with the assembly of large numbers of especially weaner-cattle into a feedlot environment. It has a multifactorial aetiology and develops as a result of complex interactions between environmental factors, host or animal factors and pathogens, which include bacteria, viruses and mycoplasmas. The presence of Mycoplasma spp. have been shown to increase the severity of respiratory disease, but their role in BRD complex as a primary or secondary pathogen remains controversial. The aim of the study was to identify the isolation rates of Mycoplasma spp. in feedlot cattle in South Africa. Transtracheal aspirate samples were collected from 713 clinically affected animals and 33 healthy animals from more than 25 feedlots throughout South Africa during the period 2000 to 2006. According to the literature, mycoplasmas are isolated from 25% to 80% of pneumonic lungs and 5% to 10% in healthy feedlot cattle. In this study the average isolation rate in affected animals was 62.4% and 22.6% from healthy cattle. Conclusion of the study was that there is a statistically significant (p< 0.001 and OR=4.61, with a CI of 3.25-6.54) association between Mycoplasma isolation and respiratory disease in feedlot cattle in South Africa. A fairly consistent finding was that 11.3% of samples (range 6.9 to 17.5%) Mycoplasma spp. were isolated without other primary respiratory bacteria being present. M. bovis is considered as being the most invasive and destructive of the species isolated from the bovine lung and was the most common specie that could be identified in this study.