HIGH SEROCONVERSION TO *MYCOPLASMA BOVIS* IN VEAL CALF FEEDLOTS IN BELGIUM

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**Introduction and objective:** *Mycoplasma bovis* has been reported as the most frequently isolated aetiological agent in bovine respiratory disease (BRD) outbreaks in veal calves. The degree and speed of spreading on 25 Belgian veal calf feedlots was investigated using paired serology.

**Material and methods:** From June to September 2009, 25 veal calf feedlots with a known history of BRD enrolled in the study. BRD usually occurred between 1 and 10 weeks after arrival of the 2-week old calves. On each feedlot, 10 randomly chosen indicator veal calves were monitored for *M. bovis*. Calves were sampled in the week after arrival (age 2-3 weeks), at the age of 3 months and prior to slaughter at the age of 6 months. The blood samples were analysed for *M. bovis* ELISA antibodies using a commercial kit (Elisa Kit Bio K 260, Bio-X, Belgium). The result is expressed as negative (S/P < 9.74), + (9.74 < S/P < 39.88), ++ (39.89 < S/P < 70.03), +++ (70.04 < S/P < 100.18), ++++ (100.19 < S/P < 130.34) and +++++ (S/P > 130.35).

**Results and discussion:** The overall mortality was 5.17%. Upon arrival, 90% of the calves had no *M. bovis* antibodies. Half way, only 14% of the calves were still seronegative whereas 31% was +, 37% was ++ and 18% was already ++++. Prior to slaughter, only 8% was seronegative, 30% was +, 40% was ++ and 22% was ++++.

The results demonstrate the high presence of the primary pathogen *M. bovis* on feedlots in Belgium. The presence of low antibody levels after arrival (+) in 10% of animals is assumed to be the result of the transfer of antibodies via maternal colostrum. A seroconversion (antibody response of ++ or ++++) was observed in 62% of the animals, suggesting that the animals were responding to an infection. On 15 feedlots, the seroconversion in >50% of the indicator calves had occurred within 3 months. However, on 7 farms the seroconversion only took place in >50% of the indicator calves during the second half of the feedlot period. Further research on e.g. animal husbandry, bacterial strain virulence and antibiotic treatment results is needed to explain this difference.

**Keywords:** *Mycoplasma bovis*, feedlot, ELISA, seroconversion