

PASSIVE TRANSFER OF MYCOPLASMA BOVIS-SPECIFIC ANTIBODIES IN CALVES  
BORN TO VACCINATED DAMS

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ABSTRACT

*Mycoplasma bovis* is a bacterial pathogen that has been shown to cause respiratory disease, mastitis, polyarthritis, keratoconjunctivitis, and other diseases in cattle worldwide. High costs associated with these diseases are attributed to treatment, culling, deaths, and purchase of replacement animals. Commercially available vaccinations are also available to producers and veterinarians to be used as an added preventative measure.

This research, consisting of two studies, evaluated antibody responses in late gestation dairy cattle given a commercially available *M. bovis* vaccination. Serum, colostrum, and milk antibodies were compared between cows receiving the vaccine and those not receiving the vaccine. The second study evaluated serum antibody response in female calves born to cows from the first study. These calves received colostrum from the cows to which they were born. Serum antibody responses were measured before ingestion of colostrum, after ingestion of colostrum, and 30 days of age.

Serum antibody responses against *M. bovis* in vaccinated cows were significantly greater than those of non-vaccinated cows at 3 weeks after first vaccination ( $P < 0.0001$ ) and at calving ( $P = 0.047$ ). Colostrum antibody response was also significantly higher in vaccinated cows than in non-vaccinated cows ( $P = 0.0106$ ). However, there was no difference noted in the serum antibody responses between female calves born to vaccinated cows and those born to non-vaccinated cows ( $P = 0.7864$ ).