Public Abstract
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Title: Passive transfer of *Mycoplasma bovis*-specific antibodies in calves born to vaccinated dams

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. Prevention of *M. bovis* associated diseases include sound management practices similar to those used by beef and dairy cattle managers to prevent other causes of respiratory disease and mastitis. Commercially available vaccinations are also available to producers and veterinarians to be used as an added preventative measure. Efficacies of these vaccines are still being evaluated.

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 and colostrum antibody responses against *M. bovis* in vaccinated cows were significantly greater than those of non-vaccinated cows. 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.

Future studies in this area of research are planned. Female calves born to vaccinated cows and non-vaccinated cows will be challenged with varying levels of *M. bovis* to evaluate differences in actual disease rates.