

Herd Stratification to Reduce the Spread of Johne's Disease

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Introduction

Johne's disease (JD) is a chronic, progressive enteric disease of ruminants caused by infection with *Mycobacterium avium* subspecies *Paratuberculosis* (MAP). Johne's disease causes major economic losses to the cattle industry. There is an age susceptibility to JD with younger cattle being more susceptible. Calves are generally infected as neonates. After a prolonged incubation period of two to ten years, initial clinical signs may develop, including severe progressive diarrhea and gradual weight loss, despite the persistence of a normal appetite. Typically, the infection develops in the ileum and gradually spreads to regional lymph nodes and other viscera. Over time, cattle become lethargic, emaciated and, in the terminal stages of disease, exhibit cachexia and severe watery diarrhea. MAP survives in the soil and the cattle environment for extended periods of time. Environmental contamination contributes to the pathogen load and infection rate of neonatal calves. In an attempt to reduce the pathogen load that neonatal calves are exposed to, these two cow herds were stratified by age and stage of production.

Materials and Methods

Cattle flow through the production units and drainage were analyzed. The calving area and calf flow was altered to reduce contamination of the calving area by MAP.

Results

Culture results of the calving area and cow herd demonstrated reduced MAP contamination of the environment. It will be several years before a determination of any reduction in herd prevalence of MAP infection can be determined due to the extended incubation time of this disease.

Significance

Management of cattle flow and calving areas offer tools to reduce the herd prevalence of MAP infection.

Systematic Review of Johne's Disease Vaccination

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Introduction

Johne's disease (JD) is a major health concern for the cattle and small ruminant industries world wide. Vaccination against JD has been in use since 1926, but has been controversial. Our objective was to conduct a systematic review of JD vaccination and do a meta-analysis of the data.

Materials and Methods

Criteria for inclusion in the systematic review included: must be a randomized clinical trial, have a minimum of 10 animals, last for more than 30 days and had an outcome of at least one of the following: clinical disease, fecal shedding, or tissue culture or histology. Search methodology included using The History of Paratuber-