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Livestock Health Series

Johne's Disease

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Johne's (pronounced "Yo-nees") disease is a chronic, incurable, contagious infection of the intestinal tract. This disease is caused by the bacterium *Mycobacterium avium* subspecies *paratuberculosis* and is named after the German veterinarian who first discovered it in 1895.

This bacteria is extremely resistant and can survive in the environment (soil, pasture, etc.) for periods longer than one year. Infection usually occurs in young animals, but symptoms of the disease do not develop until animals are older than 18 months.

Calves typically become infected when they nurse udders that are contaminated with the bacteria or if they are housed in contaminated pens/pastures. A herd can be exposed when a nonsymptomatic infected cow is purchased and brought onto a farm. The nonsymptomatic cow will shed the infectious organism and contaminate the pastures. Eventually, the carrier cow will show symptoms of the disease, but other animals in the herd will have been exposed by then.

The prevalence of this disease in the U.S. cattle population ranges from 8 percent in beef cattle to 22 percent in dairy cattle. Other ruminants such as sheep, goats, deer and bison can also be infected by this bacteria. The potential for wildlife to serve as a significant infection source is undetermined.

The most common signs associated with Johne's disease are severe diarrhea and rapid weight loss, leading to drastic performance loss and lowered milk yields. Infected animals continue to have good appetites, but they tend to "waste away" because the bacteria affect the lining of the small intestine. This colonization of bacteria leads to very poor absorption of nutrients, diarrhea, slow emaciation and eventually death.

Johne's disease can be detected in a couple of ways. First, a blood test can be used to screen potential carriers for antibodies to the bacteria before allowing the cattle to mingle with the rest of herd. If cattle are symptomatic, the bacteria can be detected in feces or tissue by PCR or culture.

Currently, there is no cure or satisfactory treatment for this disease. The best way to control this disease is to purchase animals from a certified Johne's-negative herd. Otherwise, have new animals tested and quarantine for at least 30 days prior to introducing to the rest of the herd. If Johne's disease is suspected in the herd, it is best to consult with a veterinarian for an action plan.

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