



## Beef Producer: Take Proactive Steps to Prevent, Control Johne's Disease

Research shows that one out of 10 animals moving through livestock auction facilities has Johne's disease. Although most U.S. beef herds are not infected with Johne's disease, it is estimated that eight out of 100 U.S. herds may be infected with this devastating disease.

Johne's is a slow, progressive, contagious and untreatable bacterial disease that ordinarily infects calves but does not show clinical signs until animals are three or more years of age. Infected animals maintain a normal temperature but exhibit weight loss and diarrhea. In the later stages of the infection, animals can become weak.

If you have culled animals because of chronic diarrhea and weight loss, your herd is at greater risk of having Johne's. Johne's quietly robs your bottom line, as cows clinically infected with Johne's produce less milk resulting in lighter calves at weaning, and infected cows can be slower to breed back.

The most common method of infection is the ingestion of *Mycobacterium avium paratuberculosis* (MAP) bacteria via manure-contaminated udders, milk, water or feed. Infected animals shed large numbers of bacteria in their feces, leading to contamination of feed and water sources. Infected animals can also shed the bacteria in their colostrum and milk, and infected dams can also pass the disease *in utero* to their offspring.

MAP is an extremely hardy bacterium. Research shows that, while MAP cannot multiply outside the animal in nature, it can survive in contaminated soil or water for more than a year because of its resistance to heat, cold and drying.

Johne's disease must be managed as a herd problem and not treated as an individual cow disease. Research shows that diagnosis of one clinically-infected animal in a herd of 100 lactating cows implies that at least 25 other animals are infected, and less than eight of those can be detected by the tests currently available.

### Management Risk Assessment

A walk-through on your beef enterprise can help you identify practices that are a risk for spreading Johne's disease—as well as other fecal-oral and colostrum-milk transmitted pathogens.

#### Calving Area

Since calves are the most susceptible to infection, risk factors for the maternity or calving area should be assessed for the potential of a newborn to ingest MAP or manure from mature cattle. Considerations include ground and pen surfaces, contaminated udders and teats, suckling colostrum from an infected cow or manure contamination of a calf's body surfaces.



#### Yes No Risk Factor

- Are multiple cows in the calving area at a time?
- Is any individual calving pen used for additional calvings without being cleaned out between uses?
- Is manure allowed to build up in the calving area and pose a risk for calf ingestion?

- Is manure present on the udder of any heifer or cow calving?
- Are high-risk Johne's cows and suspects in the calving area?
- Are sick cows kept in the calving area?

#### Nursing Calves

Calves are the most susceptible to infection. As such, risk factors for this group should be assessed for the potential of a calf to ingest MAP or manure from mature cattle. Considerations include ground and pen surfaces and potentially contaminated colostrum, milk, water and/or feed. Consider all sources for potential manure contamination including colostrum or milk from infected cows, accidental contamination of any colostrum, milk, feed or pen surfaces from mature cattle, utensils, equipment, traffic splatter or people.



#### Yes No Risk Factor

- Are cow/calf pairs pastured with Johne's clinical or suspect cattle?
- Does manure build up in the pasture, posing a risk for calf ingestion?
- Can a calf's feed be contaminated with

- manure from cows or bulls at any time?
- Can a calf's water be contaminated with manure from cows or bulls at any time?
- Are sick calves kept with or near sick cows?

#### Weaned Calves

Risk factors for this group, which includes heifers up to 16 months of age, should be assessed for the potential of a calf to ingest MAP or manure from mature cattle. Considerations include ground and pen surfaces, water and/or feed.



#### Yes No Risk Factor

- Do weaned calves have contact with mature cattle or their manure?
- Is it possible for manure from cows or bulls to contaminate the feed?
- Is it possible for manure from cows or bulls to contaminate water sources?
- Do heifers or young bulls share pasture with mature cattle?
- Is manure spread on pasture then used by or fed to heifers?

## Bred Heifers, Yearling Bulls

Although this group of cattle is believed to be substantially less susceptible to Johne's than newborn calves, risk factors for this group deserve attention.



### Yes No Risk Factor

- Do heifers or yearling bulls have contact with mature cattle or their manure?
- Is it possible for manure from mature cattle to contaminate the feed?
- Is it possible for manure from mature cattle to contaminate the water?
- Do bred heifers or yearling bulls share pasture with mature cattle at any time?
- Is manure spread on pasture or forage then used by or fed to heifers?

## Cows

Even though cattle more than 24 months of age are believed to be less susceptible to Johne's, infected cattle may shed MAP and other pathogens in their feces and add significantly to the overall pathogen load in their environment. Ultimately, you should strive to reduce the pathogen load in the environment.

### Yes No Risk Factor

- Is it possible for feed to be contaminated with manure?
- Is manure contamination of the water possible?
- Do cows have access to accumulated or stored manure?
- Is manure spread on pasture or forage, then grazed or fed the same season?
- Are cows showing chronic diarrhea and weight loss left in the general population and not tested for Johne's?

## Additions & Replacement Groups



A key to Johne's prevention and control is to not introduce infected animals into the herd.

### Yes No Risk Factor

- Do you purchase replacement heifers, bulls or other beef animals from herds of unknown Johne's and health status?

- Do you lease or borrow any stock, including bulls, from multiple sources or herds of unknown Johne's and health status?



## General Management

### Yes No Risk Factor

- Do you use the same equipment to handle feed and manure?
- Do you prevent mature cow manure contamination of all feed and water, including standing run-off water?



## Helping Yourself

Any area marked "yes" on your checklist deserves attention as these practices are a risk for spreading Johne's disease.

Good management and hygiene of maternity areas, calves, heifers and young bulls and clean feed and water are basic for Johne's control plus help prevent the spread of other bacteria, viruses and intestinal parasites spread by fecal shedding.

- Johne's prevention will help to minimize calf diseases caused by *E. coli*, Salmonella, BVD, Rota and Corona viruses.
- Cleaning and clean environments promote the health of periparturient cows.
- Attention to keeping feed, water and facilities clean for growing animals can improve growth and help control coccidian, cryptosporidia and nematodes.

An ounce of prevention is worth MORE than a pound of cure when it comes to Johne's. Prevention at home is your best protection.

Your veterinarian can help you develop a Johne's disease prevention and control plan and can implement testing strategies to identify the most infectious animals.

To learn more about Johne's, visit [www.johnesdisease.org](http://www.johnesdisease.org).

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