Prevent, Control Johne's Disease

culling, and poor conditioning at culling. The loss was due to reduced milk production, early cull rate lost on average of $227 per cow. This while herds with a high Johne's disease clinical experience an average loss of $40 per cow in disease. The study determined that infected herds at least 10 percent of the herd infected with Johne's approximately 22 percent of U.S. dairy farms have of U.S. dairies, Dairy NAHMS '96, found that estimated to cost the U.S. dairy industry $200 million to $250 million annually. A national study Lost productivity due to Johne's disease is because of its resistance to heat, cold and drying. contaminated soil or water for more than a year outside the animal in nature, it can survive in contaminated feed and water sources. Infected animals can also shed the bacteria in their colostrum and milk, and infected dams can also pass the disease on to their offspring. 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 on to their offspring. MAP is an extremely hardy bacterium. Research shows that, while the bacterium cannot multiply in the body of an animal, it can survive when ingested. CONTAMINATION OF A CALF'S BODY-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.

**Management Risk Assessment**

A walk-through on your dairy 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.

**Maternity or 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 manure or MAP from mature cattle. Considerations include ground and pen surfaces, contaminated udders and teats, sucking colostrum from an infected cow or manure contamination of a calf’s body surfaces.

**Young 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 manure or MAP 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.

**Dairy Producers: Take Proactive Steps to Prevent, Control Johne’s Disease**

Lost productivity due to Johne’s disease is estimated to cost the U.S. dairy industry $200 million to $250 million annually. A national study of U.S. dairies, Dairy NAHMS '96, found that approximately 22 percent of U.S. dairy farms have at least 10 percent of the herd infected with Johne’s disease. The study determined that infected herds experience an average loss of $40 per cow in disease.  

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. 

**MATERNITY OR CALVING AREA**

**RISK FACTOR**

- Are calves allowed to nurse their dams?
- Are the udders of cows that are calving soiled with manure?
- Are high-risk Johne's cows and suspects in the calving area?
- Are sick cows kept in the calving area?
- Do newborn calves stay with their dams for more than 60 minutes?
- Are calves allowed to nurse their dams?
- Are multiple cows in the calving area at any one time?
- Is any individual calving pen or area used for additional calvings without being cleaned out between calvings?
- Do you feed calves raw waste milk other than milk replacer?
- Are calves fed unpasteurized milk and fed to calves?
- Are calves able to come in contact with cows or cow manure in their housing?
- Is colostrum from unknown Johne’s status fed to calves?
- Can a calf’s colostrum and/or milk be contaminated with manure at any time?
- Are calves fed colostrum from cows to feed calves without first cleaning the cows’ udder and teats?
- Can a calf’s colostrum or milk be contaminated with cow manure at any time?
- Are calves able to come in contact with cows or cow manure in their housing?
- Is any individual calving pen or area used for additional calvings without being cleaned out between calvings?
- Do newborn calves stay with their dams for more than 60 minutes?
- Are calves allowed to nurse their dams?
- Are multiple cows in the calving area at any one time?
- Is any individual calving pen or area used for additional calvings without being cleaned out between calvings?
- Do you feed calves raw waste milk other than milk replacer?
- Are calves fed unpasteurized milk and fed to calves?
- Are calves able to come in contact with cows or cow manure in their housing?
### Post-Weaned Heifer Group
Risk factors for this group, heifers up to 16 months of age, should be assessed for the potential of a calf to ingest manure or MAP from mature cattle. Considerations include ground and pen surfaces, water and/or feed.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Risk Factor</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Do heifers have contact with mature cows or their manure?</td>
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<td>Is it possible for manure from cows to contaminate the feed?</td>
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<td></td>
<td>Is it possible for manure from cows to contaminate the water used by heifers?</td>
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<td></td>
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<td>Do heifers share pasture with mature cattle?</td>
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<td>Is manure spread on pasture used by or fed to heifers?</td>
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</tbody>
</table>

### Cow Group
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.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Risk Factor</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Do cows have access to accumulated or stored manure?</td>
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<td>Is manure spread on pasture and grazed or fed the same season?</td>
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<td>Are cows showing chronic diarrhea and weight loss left in the general population without being tested for Johne’s?</td>
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### Bred Heifer Group
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.

<table>
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<tr>
<th>Yes</th>
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<tr>
<td></td>
<td></td>
<td>Do you purchase animals from herds of unknown Johne’s and health status?</td>
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<tr>
<td></td>
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<td>Do you lease or borrow any stock, including bulls from multiple sources or herds of unknown Johne’s and health status?</td>
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### General Management
Good management and hygiene of maternity areas, calves and heifers and clean feed and water are basic for Johne’s control plus help prevent 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 coccidiosis, 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.

### Helping Yourself
Any area marked “yes” on your checklist deserves attention as these practices are a risk for spreading Johne’s disease.

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