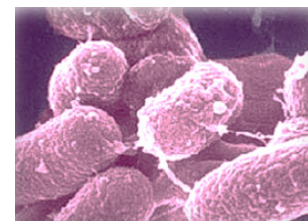


JOHNE'S DISEASE OVERVIEW



What is Johne's?

- Incurable wasting disease
- Infectious bacterial disease affecting the intestinal tract
- Bacteria is found in manure and manure-tainted food or water
 - Also transmitted by spreading manure on grazing fields, via run off, and through colostrum/milk from infected cows
- Caused by *Mycobacterium avium* subspecies *paratuberculosis* (MAP) - related to TB
- MAP resistant to most disinfectants
 - A Tuberculocidal disinfectant should be used on cleaned surfaces



How does it impact the herd?

- Johne's **costs producers \$24 per cow¹ annually**
- Current data suggests **MAP is present on 68% of U.S. farms¹**
- Decreased milk production
- Up to 1 in every 25 cows symptomatic
- Can live in the manure for over 1 year
- 1 in 10 animals passing through a livestock auction is infected

Symptoms of Johne's

- Two common clinical signs of Johne's disease: rapid weight loss and diarrhea.
- Animals become infected in the first few months of life, but signs of disease usually do not appear until the animals are adults.
- Despite continuing to eat well, MAP-infected adult cows become emaciated and weak.
- Since the signs of Johne's disease are similar to those for several other diseases, laboratory tests are needed to confirm a diagnosis.



Prevention²

- Do not introduce Johne's with purchased or leased animals.
 1. Try to purchase animals from a source herd free of Johne's disease, based on whole-herd testing.
 2. Second best is to work with producer who knows the level of Johne's disease in his or her herd and follows good infection control practices.
 3. Then, purchase animals from test-negative dams.
- Remember that Johne's disease is a herd problem, and that knowing the test status of numerous adults in the source herd will give you a much better sense of the risk of purchasing an infected animal than the one test result you might get on the one animal you wish to buy.
- Additional diagnostic tests are available – you can even test fecal material collected from the environment.

¹ USDA National Animal Health Monitoring Survey 1996

² University of Wisconsin-Madison, School of Veterinary Medicine, Johne's Information Center

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JOHNE'S DISEASE OVERVIEW



Management Strategies

- Goal is to prevent new infections, identify and remove infected cattle from herd
 - Keep young animals away from adult manure
 - Colostrum from Johne's negative dams
 - Not pooling colostrum from multiple dams
 - Thoroughly cleaning udders
- Not feeding pooled cow's milk whether treated or just out of bulk tank without pasteurization
- Participate in Johne's Disease Control Program
 - Only buy from Johne's "certified-free" herds or have new entries tested
- Based on prevalence, test all at Dry-Off

How to Test

- There are two basic testing strategies:
 - 1) Detect MAP bacteria in fecal samples through a diagnostic lab
 - 2) Detect an immune response (antibodies) to MAP using blood or milk samples
- Detecting MAP directly is the more accurate, but also a more expensive, diagnostic method
- Utilize an USDA approved Johne's Disease testing facility, like Animal Profiling International (API)
 - Milk-Individual or Bulk
 - Serum-Individual
- Run via ELISA test method¹
- Feces can be tested by culture or PCR (Polymerase chain reaction)



How to Control¹

Specific methods for MAP infection control depend on the animal species, the resources available, the goals of the animal enterprise and the methods of animal husbandry. All control approaches however, rely on two core strategies that must be employed at the same time:

Newborn animals must be protected from infection by being born and raised in a clean environment and fed milk and water free of MAP contamination. The primary source of MAP contamination is manure from an infected adult animal.

Adult animals infected with MAP must be identified using diagnostic tests and culled or managed to ensure no young animals are exposed to their milk or manure.

¹ University of Wisconsin-Madison, School of Veterinary Medicine, Johne's Information Center

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