



# Johne's Watch

The latest information concerning Johne's Disease.

Vol 2 Issue 3

## Assessing the Risk of Johne's on Your Operation

**P**rioritization of Johne's disease in both the House and Senate versions of the 2002 Farm Bill is a good indication that the disease has been generally recognized as an important animal health issue. Evaluating where operations are most vulnerable to Johne's then becomes a critical step in designing and implementing an effective management plan. This issue of *Johne's Watch* outlines a basic risk analysis to assist in understanding what areas or management practices on your operation expose you to the greatest risk of introduction or spread of Johne's disease.

An important aspect of developing an effective disease control program is establishing what the plan objectives should be. Some common objectives of management programs include:

- Determining the disease status of the herd
- Preventing the introduction (further) into the herd
- Preventing further spread of the disease
- Reduction or elimination of infection from the herd
- Establishing a test negative status

The following questions provide an outline for evaluating areas of your operation that could potentially hinder your farms' biosecurity. While you can answer the questions below and consider potential management changes on your own, AntelBio encourages involvement of your veterinarian or other herd health professional. As you read through each question consider not only it's impact on biosecurity, but also what changes would need to be made in order to correct the situation. One of the keys to developing an effective plan is making sure the objectives are realistically (and economically) attainable.

### Calving Area

1. Is the calving area used for more than one cow?	Yes	No
2. Are calves born in areas that hold cows?	Yes	No
3. Do newborn calves stay with their dams after they are born?	Yes	No
4. Are calves allowed to nurse?	Yes	No
5. Is the calving area also used to hold or treat sick cows?	Yes	No
6. Is there manure build-up in the calving area?	Yes	No
7. Are cows' udders soiled with manure?	Yes	No

If you answered YES to two or more of these questions you have issues that need to be addressed in your calving area and should consider making management changes to reduce the risk of spreading Johne's and other diseases. Because a calf's immune system is most vulnerable at birth, a great amount of care needs to be taken to limit exposure to bacteria. With Johne's disease, bacteria are readily transferred from shedding adults to calves via fecal contamination. Management practices should focus on limiting or eliminating fecal contamination and cow – calf exposure time.

#### General Management Objective:

Keep the calving area clean and dry.

#### Recommended Procedures:

- Clip and/or clean udders before calving
- Remove calf immediately after birth if feasible
- Use area for calving only
- Use single-animal pens; assure adequate size area
- Always have adequate bedding
- Remove manure and bedding after each use
- In outdoor areas use adequate area and monitor use to minimize mud and manure accumulation



## Pre-Weaned Calves

1. Do you feed pooled colostrum from cows of unknown Johne's status?	Yes	No
2. Do you feed pooled, unpasteurized waste milk?	Yes	No
3. Are pre-weaned calves housed near adult cows?	Yes	No
4. Do pre-weaned calves have direct contact with cows?	Yes	No
5. Does manure from cows contaminate the milk, feed, water or housing area of pre-weaned calves?	Yes	No

If you answered YES to two or more of these questions you need to consider making management changes in how pre-weaned calves are fed and housed to reduce the risk of spreading Johne's. In animals infected with Johne's disease, Johne's causing bacteria is found in milk. For this reason feeding colostrum or unpasteurized waste milk from cows that could have Johne's increases the risk of transmission to calves.

### General Management Objective:

Avoid feeding infected colostrum and milk, and prevent contact with infectious material or environments.

### Recommended Procedures:

- Feed four quarts of colostrum from Johne's test-negative or low risk cows within six hours of birth
- Feed milk replacer rather than milk in herds suspected of harboring Johne's
- Prevent manure contamination of feed and water
- House calves in separate facility/location from cows
- Minimize manure transfer from cows to calves – feed calves first, separate equipment, clean boots, etc.

## Post-Weaned and Bred Heifers

1. Is manure spread on pasture and grazed/harvested in same season and fed to heifers?	Yes	No
2. Do heifers have direct contact with cows or their manure?	Yes	No
3. Do heifers share feed, water, housing or pasture with cows?	Yes	No
4. Does manure from cows contaminate the feed, water or housing area of heifers?	Yes	No
5. Does manure contaminate the feed equipment?	Yes	No

If you answered YES to two or more of these questions you need to consider making management changes in how heifers are handled to reduce the risk of spreading Johne's or other diseases. Though an animals' susceptibility to the Johne's causing bacteria decreases with age, fecal contamination remains an issue.

### General Management Objective:

Prevent exposure to infectious cattle and manure, and prevent manure contamination of feed, water and pastures.

### Recommended Procedures:

- House young stock in separate facility
- Do not commingle or allow direct contact with mature cattle or their manure
- Prevent traffic and waste runoff from cow areas to young stock areas
- Do not use common feeding areas or waterers for cows and young stock
- Use separate equipment to handle feed and manure
- Design and maintain feeders and waterers to prevent manure contamination
- Do not put young stock on pastures used by cows or where manure has been spread that season

## Mature Cattle and Purchased Animals

1. Do you have cattle of unknown Johne's test status on your operation?	Yes	No
2. Do you routinely, or have you ever, acquired animals of unknown origin (for example, from a sale yard)?	Yes	No
3. Have you ever purchased animals of unknown Johne's test status?	Yes	No
4. Have you ever purchased animals from a herd known to have Johne's disease?	Yes	No
5. Have you observed mature cows with Johne's symptoms?	Yes	No

If you answered YES to two or more of these questions you need to incorporate Johne's testing into your Johne's management program. Testing differentiates high and low risk animals, which assists in prioritizing key management decisions.

### General Management Objective:

Eliminate high-risk animals; manage test-positive animals to reduce risk of exposing susceptible young stock, and avoid purchasing Johne's infected cattle.

### Recommended Procedures:

- Segregate, test and cull all animals with clinical signs of Johne's as soon as possible
- Conduct a whole-herd test and manage Johne's test-positive animals to reduce contamination of facilities and surrounding environment
- Conduct fecal follow-up testing on ELISA positive animals to most effectively manage high-risk animals
- If pursuing an aggressive Johne's control program consider culling all calves from known Johne's infected cows
- Know identity, Johne's history and hygiene of herd(s) from which replacements, recipients and additions are purchased
- Avoid buying animals from herds with Johne's prevalence higher than your herd
- Test purchased animals (pre or post-purchase depending on age) and integrate into management plan based on test results

## Facilities and Environment

1. Does manure contaminate feeding areas or waterers?	Yes	No
2. Does manure contaminate feed storage or feeding equipment?	Yes	No
3. Is manure spread on pasture and grazed/harvested in same season and fed to animals?	Yes	No
4. Do animals have access to manure storage areas?	Yes	No
5. Do animals have access to standing water or waste runoff?	Yes	No
6. Do animals have access or commingle with animals of another species that can carry Johne's disease (for example, sheep, goats)?	Yes	No

If you answered YES to two or more of these questions you need to consider making management changes in how manure is handled to reduce the risk of spreading Johne's and other diseases among your herd.

### General Management Objective:

Minimize contamination of facilities and environment.

### Recommended Procedures:

- Keep facilities and environment free of manure build-up
- Haul and store manure away from feed, water and young animals
- Do not spread solid manure on grass plants and harvest in same growing season, if this is not possible do not feed to young stock
- Design and maintain feeders and waterers to prevent manure contamination
- Use troughs or fencing to restrict access to streams and ponds
- Divert manure runoff from water sources
- Evaluate Johne's risk in other animals besides cattle (other ruminant species)
- Consult veterinarian for effective facility disinfectants



# Johne's Watch

## Summary

After you have answered the questions, based on the areas that received the most YES's, you should have a better idea of where it's most important to tackle Johne's. Consider the recommended procedures listed when devising your Johne's control plan. Once you have developed a plan, it is recommended to step back and conduct a 'reality check', to ensure your plan is achievable and you are able to monitor progress. A successful plan should always:

- be comprehensive and effective enough to meet control goals (even if it has to be implemented in stages)
- be practical and feasible to implement
- be integrated with other farm management priorities and available resources
- be consistent with the farm's short and long-term business objectives
- be expected to evolve with time

Successful implementation of a Johne's management plan will not only reduce the economic losses associated with Johne's disease, but will also generally improve biosecurity on your operation, thereby helping you reduce the negative impact of other diseases. For more information on Johne's testing options and for assistance in developing a Johne's management plan visit with your veterinarian or contact AntelBio at 1.800.631.3510.

*Published by AntelBio, a complete Johne's disease testing center, October 2002. [www.antelbio.com](http://www.antelbio.com)*

---



Antel BioSystems, Inc.  
3655 Forest Road  
Lansing MI, 48910  
1.800.631.3510