



Johne's Factsheet

Healthy Cows, Quality Milk!

FACTSHEET 05-002

Johne's Disease - Best Management Strategies

Dr. Jocelyn Jansen and Dr. Ann Godkin, Veterinary Scientists, OMAF

Johne's Disease (JD) is a contagious, progressive bacterial infection that causes abnormal thickening of the lining of the intestinal tract in infected animals restricting the absorption of nutrients. Clinical signs of animals infected with JD are long lasting diarrhea and extreme weight loss despite the animal having a good appetite.

THE BASICS TO PREVENTION

The spread of Johne's Disease (JD) can be prevented in herds if we remember the following points:

- The bacteria causing JD is mainly spread through manure.
- An infected cow can shed billions of organisms into the environment for years prior to showing any clinical signs of the disease.
- Calves are the most easily infected.
- A small amount of manure is all it takes to infect a calf.
- Only 1-5% of infected cows in a herd will show clinical signs of the disease (signs of illness). The rest of the infected animals will appear healthy ("tip of the iceberg").
- Tests for JD do not detect animals in the early stages of infection.
- Eliminating JD from a herd takes a long-term commitment (at least 5-7 years). Animal purchases must be very limited so that no new infected animals are added.
- Keeping the infection out of your herd is always cheaper than trying to control the disease once it is present.
- Management changes implemented to decrease the risk of JD will also reduce the risk of other calf diseases (calf scour viruses, E. coli, Salmonella) and improve overall calf health.

DEVELOPING A PREVENTION STRATEGY



JD is a complex disease and test result interpretation is difficult. Producers need to work with their herd veterinarian to develop a prevention program that is right for their herd.

At the outset of developing a prevention program a risk assessment is completed. Based on the issues identified a farm specific program will be developed and implemented. This program is reviewed annually to assess herd progress and make necessary changes.

Prevent JD from entering via purchased animals

Prevent infected animals from entering the herd by:

- Maintaining a closed herd
 - introduce genetics only by the use of frozen semen
 - If it is necessary to purchase animals, you should:
- Know the history of the herd you are buying from
 - buyer beware applies to JD as not all herds are aware of their JD status
 - ask about history or suspicion of JD
- Pre-test mature cow purchases
 - there is the potential for infected animals to test negative but this is better than testing heifers (who rarely test positive even if infected) or doing nothing
- Buy from test negative herds
 - pick herds who have a health status the same or better than your herd
- Pre-test 30 animals from the herd of origin to estimate their infection status
 - select second lactation or older animals to test

Prevent the spread of JD to calves

Decrease the exposure of newborns to contaminated manure in the maternity area by:

- Having dedicated maternity pens that are separate from hospital pens and keeping the pens clean, dry and very well-bedded
 - if you kneel on bedding and your knee is wet after 25 seconds, add more bedding
 - reduce the rate of manure contamination by keeping cow numbers low in the pens
 - consider all manure infective and remove it ASAP
- Bedding routinely between calvings
 - remove old and/or wet bedding before re-bedding

Continued on Back

- iii) Never allowing animals suspected of having JD (ill, test positive or suspect animals) in the calving area

Prevent ingestion of manure by calves in the maternity area by:

- i) Removing calves from the pen within 30 minutes of birth
 - move them to an area that has never held cows
- ii) Not letting the calf search for the udder or nursing
- iii) Clipping and cleaning (with soap, water and drying) the cow's udder and teats prior to calving

Feed colostrum unlikely to contain the JD bacteria by:

- i) Feeding only the colostrum from a single cow to a single calf
 - do not feed pooled colostrums
- ii) Feeding colostrum from test-negative cows
 - set up a bank of frozen colostrum collected from recent test negative animals
- iii) Preventing manure contamination of colostrum during collection by utensils, hands and/or during storage

Feed milk unlikely to contain the JD bacteria by:

- i) Feeding only milk from recent test-negative cows to calves
- ii) Substituting a good quality milk replacer for whole milk
- iii) Pasteurizing milk on-farm

Decrease exposure of calves to manure in calf housing area by:

- i) Housing calves in a facility or location separate from cows or older heifers
- ii) Separating calves located in the same facility as cows by distance (buffer zone)
- iii) Not allowing runoff from manure or pens to enter the calf area
- iv) Not allowing any contact with manure or manure storage
- v) Not entering the calf area after walking through cow manure wear clean boots and use clean equipment before entering the calf area
- vi) Preventing manure contamination of feed by splattering from cows or equipment

Prevent infection among replacement animals

Raise uninfected replacements by:

- i) Not keeping replacement heifers from dams showing clinical signs of Johne's disease
- ii) Aggressively managing replacements born to test positive cows by removing the calf within 30 minutes of birth and feeding low-risk colostrum
- iii) Raising heifers off-site at a heifer raising facility

- iv) Not raising replacements from a herd with a high prevalence of JD until the level of disease in the mature cows has declined to a level decided upon by the owner and the herd veterinarian

Prevent exposure to infected animals and manure by:

- i) Housing replacements in separate facility or by separating them from the cows by distance within the same barn
- ii) Locating replacements upstream of manure runoff
- iii) Not co-mingling replacements with adults (such as bred heifers with dry cows)

Prevent contamination of feed with the JD bacteria by:

- i) Using separate equipment for feeding and manure handling
- ii) Not using common mangers/bunks for replacements and mature animals
- iii) Not walking through feed areas/mangers with dirty boots
- iv) Cleaning manure out of mangers/bunks
- v) Keeping animals out of mangers/bunks
- vi) Not allowing heifers to graze a pasture the same season after manure application

Prevent contamination of water with the JD bacteria by:

- i) Not using common waterers for replacements and mature animals
- ii) Cleaning manure out of waterers
- iii) Preventing manure build-up around waterers
- iv) Preventing access to natural water or wet areas that collect manure or runoff from cows

Prevent the spread of JD due to infected mature animals

Eliminate high-risk animals by:

- i) Separating and culling clinical animals as soon as possible
 - sell to slaughter

Manage JD test positive animals (infected but not showing signs of illness) by:

- i) Visibly identifying test positive animals
- ii) Targeting to cull animals when economically feasible
- iii) Designating cows as Do Not Breed
- iv) Grouping cows in high prevalence herds according to test results
 - keep test positives separate from test negative or low risk cows
- v) Keeping clinical, test positive or suspect animals off pasture

Additional Johne's Disease Resources

- Your Herd Veterinarian
- Your Provincial Extension Veterinarian(s)
- Johne's information web site: www.johnes.org
- Dr. Jocelyn Jansen
OMAF Veterinary Science
(519) 846-3414
- Dr. Steve Hendrick
Western College of Veterinary Medicine
(306) 966-7062

Funding Provided in Part By:

