



## ATLANTIC JOHNE'S DISEASE INITIATIVE

Atlantic Veterinary College  
University of Prince Edward Island  
550 University Ave  
Charlottetown, PE  
C1A 4P3

Fax: (902) 620-5191

Phone: (902) 566-0725

Website: [www.atlanticjohnes.ca](http://www.atlanticjohnes.ca)

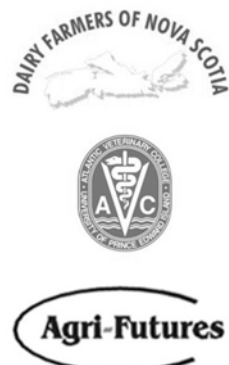


# Atlantic Johne's Disease Initiative

## Risk Assessment Workbook

### Environmental Culture Test Negative Farms

#### AJDI Partners





## Risk Assessment Workbook

### Environmental Culture **Test Negative** Farms

Farm Name: \_\_\_\_\_

Owners Name: \_\_\_\_\_

Veterinarian: \_\_\_\_\_

Date of assessment: dd/mm/yyyy Dairy Board # \_\_\_\_\_

**This Risk Assessment must be completed by an Atlantic Johne's Disease Initiative certified veterinarian during a farm site visit.**

**Scoring should be based on observed management practices, with clarifying information from the herd owner or manager.**

**A thorough assessment of risk practices, in conjunction with the herd environmental culture data, will aid the veterinarian in determining priority areas to controlling within herd and between herd spread of the Johne's bacterium.**

#### Scoring summary

Section 1: \_\_\_\_/60 points

Section 2: \_\_\_\_/75 points

Section 3: \_\_\_\_/65 points

Section 4: \_\_\_\_/40 points

Section 5: \_\_\_\_/30 points

Section 6: \_\_\_\_/30 points



## **Section 1: General Johne's and Biosecurity Questions**

### **1.1 What access do farm visitors have to cattle of any age on the farm?**

10
1

Visitors have unrestricted access to the cattle

Visitors do not have access to the cattle or are required to wear clean footwear and clothing

Comment: Controlled access to livestock is a cornerstone of infectious disease biosecurity

### **1.2 Have you ever had cows in your herd with clinical Johne's disease?**

10
5
1

Yes, JD has been observed in my herd

Don't know

No, Clinical JD has not been observed in my herd

Comment: Herds with a known history of clinical Johne's disease have high risk of still having the infection and require appropriate management to limit within herd spread.

### **1.3 Did you purchase animals in the last 5 years?**

30
20
7
1

Yes, from multiple herds

Yes, from two or less herds of unknown status

Yes, from two or less herds of known negative **herd** status

No animals have been purchased in the last 5 years

Comment: The introduction of infected animals from other infected herds is the way JD moves from herd to herd. Introducing animals from multiple herds is associated with both an increased risk of introducing MAP, as well as with having a higher percentage of the herd being test positive. If animals need to be purchased, buy from **low risk herds** (herds with a testing history). Tests of individual animals prior to purchase **do not** provide evidence of the infection status of that individual.

### **1.4 Are any animals from your herd directly commingled with adult animals from other herds OR is there potential for exposure to manure from other farms?**

10
1

Yes, herd members attend cattle shows **OR** are hauled in vehicles that are contaminated with manure from other farms **OR** manure handling equipment that animals have access to is shared between farms

No, herd members do not attend shows and are not exposed to manure from other herds

Comment: Both cattle and manure from other farms pose a high risk for introduction of the bacteria to the farm Risk associated with contract heifer rearing are addressed in a **different** question.

## **Section 2: Calving Area Risk Management**

### **2.1 How many cows are newborn calves exposed to in the calving area?**

10	More than 50% of the time there is more than one cow in the calving pen/area
7	Between 25 and 50% of the time there is more than one cow in the calving pen/area
4	Occasionally but <25% of the time there is more than one cow in the calving pen/area
1	There is never more than a single cow in the calving pen/area

Comment: This is a question to assess the number of cows (and the amount of cow manure) a newborn calf is likely exposed to in the calving area.

### **2.2 What is the risk for calf exposure/ingestion of adult cow manure?**

10	Manure covering >50% of calving pen/area and bedding is wet
7	Visible manure covering 10- 50% of the bedding and bedding is wet
4	Visible manure covering 1-10% of the bedding
1	No visible manure, new bedding has been added, bedding is dry

Comment: Manure contamination is a major risk. Visibly score the bedding in the calving area and test the moisture by placing a paper towel on the bedding and leaning on it for 25 seconds.

### **2.3 To what degree is manure contamination evident on the cows in the calving/close-up area?**

10	Manure is present above the hocks AND is present on the teats or udder
7	Manure is present on hind legs up to the hocks OR is present on the surface of the teats
4	Manure is present on hind legs but not above dewclaws and not on teats or udder
1	The cows have no manure visible on hind legs, teats or udder

Comment: Hygiene score up to 4 cows currently in the calving area. If there are 2 or less, look at close up dry cows.

**2.4 To what extent is the calving area used for sick or lame cows?**

- 15 The calving area is used at least once every second week by non-calving cows OR is used at any time by known MAP positive cows.
- 9 The calving area is used at least once monthly by non-calving cows
- 5 The calving area is used occasionally (less than once a month) by non-calving cows
- 1 The calving area is NEVER, EVER, used by non-calving cows

Comment: Assesses the risk to calves posed by contamination of the calving area by a variety of compromised (sick or lame) cows.

**2.5 How often are calves born outside the designated calving area?**

- 10 In the past year, more than 10% of calves were born outside the designated calving area/pen
- 7 In the past year, 6 to 10% of calves were born outside the designated calving area/pen
- 4 In the past year, 1 to 5% of calves were born outside the designated calving area/pen
- 1 In the past year, no calves were born outside the designated calving area/pen

Comment: The calving area can be perfectly clean and well managed but it is important to find out what proportions of calves are truly born under these conditions. In larger herds, cows might be calving in the dry cow area because owners delay moving cows to the calving area (attempting “just in time” management).

**2.6 What is the likelihood that calves nurse their dams?**

- 10 More than 50% of newborn calves nurse; either the calves are left with cow more than 4 hours or the owner reports purposely leaving calves to nurse
- 7 Between 10 and 50% of newborn calves nurse the cow
- 4 Less than 10% of newborn calves nurse the cow
- 1 No calves born on this farm ever nurse the cow

Comments: Assesses the probability that the calf will ingest bacteria from the cows. How much attempt is there to prevent nursing?

**2.7 What is the duration of exposure of the newborn calf to the cow?**

- 10 Less than 10% of calves are removed from the dam within 30 minutes
- 7 Between 10 and 50% of calves are removed from the dam within 30 minutes
- 4 Between 50 and 90% of calves are removed from the dam within 30 minutes
- 1 More than 90% of calves are removed from the dam within 30 minutes

Comment: Assesses the duration of exposure of the calf to the cow environment or multiple cows.

### **Section 3: Pre-weaned Heifer Risk Management**

#### **3.1 Are any calves or replacement heifers of any age raised at a custom heifer rearing operation where they have contact with heifers or adult cows from other herds?**

10
5
1

Calves/heifers are exposed to adult cattle from other herds at these operations

Calves/heifers are exposed to pre-calving age cattle only from other herds at these operations

No, calves are raised on-site or in a facility that only rears calves from my farm

Comment: Cattle from other farms pose a high risk for introduction of the bacteria to susceptible youngstock.

#### **3.2 What is the source of colostrum fed to calves?**

10
5
1

Calves are fed pooled colostrum or colostrum from multiple cows

Calves are fed colostrum from a cow other than their dam

ALL calves are fed colostrum only from their mother or a single low risk donor cow

Comment: Colostrum can be a source of infection for calves if there are undetected shedding animals in the herd. For negative or low prevalence herds (environmental culture negative), the most practical risk control is to feed colostrum from one cow to one calf. Testing of the status of donor cows or dams should be within the **last year**.

#### **3.3 What is the source of the liquid diet fed to calves?**

10
7
4
1

Calves are fed bulk tank milk or pooled milk from several cows

Calves are fed whole milk from individual cows (not pooled) without selection

Calves are fed whole milk from individual cows (not pooled) and these cows are selected as low risk

Calves are fed milk replacer or pasteurized milk only

Comment: Milk can be a source of infection for calves if there are undetected shedding animals in the herd. Even for negative or low prevalence herds (environmental culture negative), the safest procedure from a risk control perspective is to feed pasteurized milk or milk replacer.

### 3.4 How often are calves fed non-saleable (high risk) milk?

- |    |  |
|----|--|
| 10 | Non-saleable milk is frequently fed (typically every week) to calves |
| 7  | Non-saleable milk is once or twice a month to calves                 |
| 4  | Non-saleable milk is rarely fed (less than monthly) to calves        |
| 1  | Non-saleable milk is never fed to calves                             |

Comment: Non-saleable milk is milk from treated, mastitic or fresh cows. Feeding milk from a variety of cows for convenience or from cows with other health problems increases MAP risk. Compromised and older animals may be more at risk of advanced JD and, therefore, shedding in their milk.

### 3.5 What is the risk that pre-weaned calves are exposed to cow manure?

- |    |   |
|----|---|
| 15 | Calves are housed near cows and there is direct exposure to manure  |
| 9  | Calves are in proximity to cows or cow traffic areas and occasional exposure to manure is likely                            |
| 5  | Calves are near cows but an effort is made to eliminate manure contact (boots are washed between cow and calf contact etc.) |
| 1  | Calf housing and feeding is remote from cows, cow manure and any cow movement areas   |

Comment: Young calves can ingest MAP from cow manure if cow manure contaminates bedding, alleyways, feed, and water or potentially from aerosols (if in very close proximity to infected cows). Proximity to cows is important. This includes milking cows but also dry cows and special needs (lame, sick) cows.

### 3.6 Is there exposure to manure by watering or feeding utensils?

- |    |  |
|----|--|
| 10 | Regardless of stated cleaning practises, manure from adult cows is clearly visible                                       |
| 7  | Regardless of stated cleaning practises, manure from any age animal is clearly visible                                   |
| 4  | Trace amounts of manure are visible OR mixing utensils/buckets are washed less frequently than daily but at least weekly |
| 1  | Mixing utensils and feed/water buckets are visibly clean and all are washed daily with soap or disinfectant              |

Comment: Calves can be directly exposed to MAP (and other pathogens) if feeding hygiene is not excellent. Using contaminated water for mixing milk replacer or for calf drinking can increase exposure to MAP, even when calves are separated from cows. Manure contamination from calves or cows indicates poor attention to overall hygiene.

**Section 4: Weaned Heifer to First Calving Risk Management**

**4.1 What is the risk that weaned calves or heifers are exposed to cow manure?**

- 10
- 7
- 4
- 1

Housed with cows or next to cows where direct contact always occurs  
Housed near cows, direct contact possible **OR** exposed to manure by run-off or splashing  
Housed near cows, no direct contact, no exposure to cow manure by run-off or splashing  
Never housed near cows, no direct contact or exposure to manure by run-off or splashing

Comments: Assess the various groups of heifers on the farm. If there are multiple groups of heifers, score the group where you think there is the highest risk for MAP exposure. This could be the youngest or a group with extensive adult cow exposure.

**4.2 What is the heifer environment like and is manure handling equipment used for feed or is feed shared between adults and heifers?**

- 10
- 7
- 4
- 1

Feeding equipment sometimes used for manure handling  
Feeding equipment never used for manure handling, but heifer feed bunks and waterers contaminated with heifer source manure  
Feeding equipment never used for manure handling, heifer feed bunks and waterers clean, BUT heifers fed left over feed from cows  
Feeding equipment never used for manure handling, heifer feed bunks and waterers clean, and left over feed from cows not fed to heifers

Comment: Heifers can be directly exposed to MAP if feeding hygiene is not excellent. Using equipment with potential for manure contamination indicates poor attention to overall hygiene

**4.3 To what extent are heifers exposed to manure on forage or pasture?**

- 10
- 5
- 1

Manure is spread on pasture on which heifers graze in the same year  
Manure is spread on land from which forage (non corn) is fed to heifers in the same year  
Manure is never spread on pasture on which heifers graze the same year or on land from which forage is fed to heifers in the same year

Comment: Heifers can be directly exposed to MAP from manure contamination from cows in either pasture (higher risk) or stored feeds (lower risk).



#### 4.4 What is the overall heifer hygiene and cleanliness score?

10
7
4
1

Manure is present above the hocks/knees

Manure is present on hind or forelegs up to the hocks/knees OR is present on the flanks

Manure is present on hind or forelegs but not above dewclaws

Heifers have no manure visible on hind legs, forelegs or flanks

Comment: Like 3.1 hygiene score those heifers that you feel pose the greatest risk for exposure to MAP.

### **Section 5: Dry Cow Risk Management**

#### 5.1 To what degree are feed bunks and waterers contaminated with manure?

10
7
4
1

There is extensive manure contamination of in feed bunks and waterers

Manure is clearly visible OR feed bunks and waterers are cleaned less than once a month

Waterers and feed bunks have a trace amount of manure visible

Waterers and feed bunks are clean with no visible manure contamination

Comment: Overall assessment of dry cow housing hygiene.

#### 5.2 Is feeding equipment used to remove manure OR is manure spread on forage crop/pasture exposed to dry cows in the same year?

10
7
4
1

Feeding equipment is used to scrape/remove manure

Feeding equipment is never used to remove manure, but manure is spread on pasture

Feeding equipment is never used to remove manure and manure is not spread on pasture but is spread on cropland exposed to dry cows in the same year

Feeding equipment is never used to remove manure and manure is not spread on pasture OR cropland exposed to dry cows in the same year

Comment: MAP can be shared among mature animals if feeding hygiene is not excellent. Using equipment with potential for manure contamination from cows indicates poor attention to overall hygiene

**5.3 What is the overall dry cow hygiene and cleanliness score?**

- 10
- 7
- 4
- 1

Manure is present above the hocks/knees

Manure is present on hind or forelegs up to the hocks/knees OR is present on the flanks

Manure is present on hind or forelegs but not above dewclaws

Dry cows have no manure visible on hind legs, forelegs or flanks

Comment: Assesses the overall cleanliness of the dry cows

**Section 6: Lactating Cow Risk Management**

**6.1 To what degree are feed bunks and waterers contaminated with manure?**

- 10
- 7
- 4
- 1

There is extensive manure contamination of in mangers and water troughs

Manure is clearly visible OR mangers and water troughs are cleaned less than once a month

Water troughs and feed bunks have a trace amount of manure visible

Water troughs and feed bunks are clean with no visible manure contamination

Comment Overall assessment of lactating cow housing hygiene.

**6.2 Is feeding equipment used to remove manure OR is manure spread on forage crop/pasture exposed to lactating cows in the same year?**

- 10
- 7
- 4
- 1

Feeding equipment is used to scrape/remove manure

Feeding equipment is never used to remove manure but manure is spread on pasture

Feeding equipment is never used to remove manure and manure is not spread on pasture but is spread on cropland exposed to lactating cows in the same year

Feeding equipment is never used to remove manure and manure is not spread on pasture OR cropland exposed to lactating cows in the same year

Comment: MAP can be shared among mature animals if feeding hygiene is not excellent. Using equipment with potential for manure contamination from cows indicates poor attention to overall hygiene

### 6.3 What is the overall lactating cow hygiene and cleanliness score?

10
7
4
1

Manure is present above the hocks/knees

Manure is present on hind or forelegs up to the hocks/knees OR is present on the flanks

Manure is present on hind or forelegs but not above dewclaws

Lactating cows have no manure visible on hind legs, forelegs or flanks

Comment: Assesses the overall cleanliness of the lactating cows

## FINAL STEPS

1. Transfer the scores from each question in the workbook to the **Score Sheet**. This is a good opportunity to discuss the questions again with the producers and begin to build a consensus on action to be taken.
2. Based on the consensus developed with the producer during the review, write your **Management Plan**. It is expected that most recommendations will come from section 1, 2 or 3, because they are typical areas of high risk score and provide opportunity for rapid progress in John's control. Identify the target areas for action, for example 2.1 (calving pen use) and then choose the lowest score procedure from the workbook for the target area. If the lowest score procedure is not practical, choose the lowest score procedure for the target area that is feasible.
3. Both the veterinarian and the producer need to **sign** the Score Sheet and Management Plan. This is to insure that there is consensus on how to move forward. If either party is not comfortable with the goals for the next year then the management plan should be re-evaluated.
4. Return the **Workbook** and a copy of the **Management Plan** to the farmer.
5. Fax copies of the **Management Plan** and **Score Sheet** to the AJDI Co-ordinator at **902 620-5191**. The veterinarian should retain original Management Plans and Score Sheets for their records.

This risk assessment tool is based on the Canadian Voluntary John's Disease Prevention and Control Program. Elements of the Ontario John's Education and Management Assistance Program and Alberta John's Disease Initiative risk assessment tools have been incorporated into this document.

## Johne's Disease Management Plan EC Negative Herd

Farm Name: \_\_\_\_\_

Owners Name: \_\_\_\_\_

Veterinarian: \_\_\_\_\_

Date of assessment: dd/mm/yyyy Dairy Board # \_\_\_\_\_

Based on the farm **risk assessment** and what can be **practically achieved** in the next 12 months, identify (circle) 3 priority areas for Johne's disease control. If the lowest score procedure from the workbook (below) is not feasible, write in an achievable goal. Choose a **maximum of 3 goal activities** for the entire farm in the next 12 months and **Rank** in the sidebar

### 1. General Johne's and Biosecurity

- 1.1 Visitors do not have access to the cattle or are required to wear clean footwear and clothing
- 1.2 Not applicable as recommendation
- 1.3. Animals are not purchased (the herd is closed)
- 1.4 Herd members do not leave the farm and return (e.g. attend shows) and are not exposed to manure from other herds

Comments

### 2. Calving Area Risk Management

- 2.1 There is never more than a single cow in the calving pen/area
- 2.2 No visible manure, new bedding has been added, bedding is dry in calving area
- 2.3 The calving cows have no manure visible on hind legs, teats or udder
- 2.4 The calving area is NEVER, EVER, used by non-calving cows
- 2.5 No calves are born outside the designated calving area/pen
- 2.6 No calves ever nurse the cow
- 2.7 More than 90% of calves are removed from the dam within 30 minutes

Comments

### 3. Pre-Weaned Heifer Risk Management

- 3.1 Calves are raised on-site or in a facility that only rears calves from my farm
- 3.2 Calves are fed colostrum only from their mother or a single low risk donor cow
- 3.3 Calves are fed milk replacer or pasteurized milk only
- 3.4 Non-saleable milk is never fed to calves
- 3.5 Calf housing and feeding is remote from cows, cow manure and any cow movement areas
- 3.6 Mixing utensils and feed/water buckets are visibly clean and all are washed daily with soap or disinfectant

Comments

<b>Rank</b> <b>max 3</b> <b>Total</b>
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**Rank  
max 3  
Total**

**4. Weaned Heifer to First Calving Risk Management**

- 4.1 Weaned heifers are not housed near cows and there is no exposure to adult cow manure
- 4.2 Weaned heifer feeding equipment never used for manure handling, heifer bunks and waters clean, and left over feed from cows not feed to heifers
- 4.3 Manure is never spread on pasture on which heifers graze the same year or on land from which forage is fed to heifers in the same year
- 4.4 Heifers have no manure visible on hind legs, forelegs or flanks

Comments

**5. Dry Cow Risk Management**

- 5.1 Dry cow water troughs and feed bunks are clean with no visible manure contamination
- 5.2 Feeding equipment is never used to remove manure, and manure is not spread on pasture OR cropland exposed to dry cows in the same year
- 5.3 Dry cows have no manure visible on hind legs, forelegs or flanks

Comments

**6. Lactating Cow Risk Management**

- 6.1 Lactating cow water troughs and feed bunks are clean with no visible manure contamination
- 6.2 Feeding equipment is never used to remove manure and manure is not spread on pasture OR cropland exposed to lactating cows in the same year
- 6.3 Lactating cows have no manure visible on hind legs, forelegs or flanks

Comments

Overall Comments

\_\_\_\_\_  
Veterinarian Signature

\_\_\_\_\_  
Producer Signature

**When complete fax to  
902 620 5191**

