



# Handbook for Veterinarians and Beef Producers

**A guide to Johne's disease  
risk assessments  
and management plans  
for beef herds  
– 2011 edition –**



**For use by veterinarians with beef clients  
to improve biosecurity and reduce pathogens**

**Approved for distribution and use by the United States  
Animal Health Association Johne's Committee  
and the National Johne's Working Group.**

**For explanations and/or instruction  
on how to complete this document, refer to the instruction handbook  
“How to Do Risk Assessments and Develop Management Plans  
for Johne's Disease, 2011.”**

## Acknowledgements

This Manual is an evolution from previous editions used to complete risk assessments and develop management plans to prevent or control Johne's disease in cattle herds for the Voluntary Bovine Johne's Disease Control Program.

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## Current Herd Health Status and Concerns (Filling out this page is optional)

Collecting this information will provide input that is important to consider when implementing the elements of the Johne's disease prevention or control plan. The format used shows the farm's performance-limiting health issues and the level of concern the owner has for them. Many of the potential health and production problems listed below may already be addressed by the owner. The final Johne's disease management plan should blend with these current performance-limiting health issues and concerns.

Fill in requested information, circle choice (Satisfactory/Unsatisfactory) or specify the incidence (or level of concern or priority) by checking U, 1, 2 or 3 in the box next to the specific disease.

**U** = Unknown incidence or concern

**2** = Moderate incidence, may be a concern

**1** = OK, low incidence, not a concern

**3** = Significant increase, unsatisfactory, needs attention

| <b>Suckling Calf Health and Disease</b>                    |              |                |   |   |
|--|--------------|----------------|---|---|
| Pre-wean mortality (Last 12 months)                        |              |                |   |   |
| Calf vigor   | Satisfactory | Unsatisfactory |   |   |
| Calf growth  | Satisfactory | Unsatisfactory |   |   |
| Scours   | U            | 1              | 2 | 3 |
| Pneumonia  | U            | 1              | 2 | 3 |
| Other  | U            | 1              | 2 | 3 |
| <b>Weaned Heifer and Bull Health and Disease</b>           |              |                |   |   |
| Growth   | Satisfactory | Unsatisfactory |   |   |
| Heifers age at 1st calving (months)                        |              |                |   |   |
| Breeding soundness (bulls)                                 | Satisfactory | Unsatisfactory |   |   |
| Breeding program (heifers)                                 | Satisfactory | Unsatisfactory |   |   |
| Pneumonia  | U            | 1              | 2 | 3 |
| Parasitism   | U            | 1              | 2 | 3 |
| Other  | U            | 1              | 2 | 3 |
| <b>Periparturient Disease in Cows and 1st Calf Heifers</b> |              |                |   |   |
| Grass Tetany   | U            | 1              | 2 | 3 |
| Retained Placenta  | U            | 1              | 2 | 3 |
| Dystocia Trauma  | U            | 1              | 2 | 3 |
| Prolapses (Specify type)                                   | U            | 1              | 2 | 3 |
| Other  | U            | 1              | 2 | 3 |
| <b>Culling Information and Incidence</b>                   |              |                |   |   |
| Overall cull rate  |              |                |   |   |
| Cull rate in 1st calf heifers                              |              |                |   |   |
| Age-related  | U            | 1              | 2 | 3 |
| Open   | U            | 1              | 2 | 3 |
| Injury-related   | U            | 1              | 2 | 3 |
| Low calf weaning weight                                    | U            | 1              | 2 | 3 |
| Complications from dystocia                                | U            | 1              | 2 | 3 |
| Other  | U            | 1              | 2 | 3 |
| <b>Infectious Disease</b>                                  |              |                |   |   |
| Calves weaned as % of bred cows and heifers                |              |                |   |   |
| Bred but open cows/heifers or Abortions/year               |              |                |   |   |
| Johne's disease  | U            | 1              | 2 | 3 |
| Bovine Viral Diarrhea                                      | U            | 1              | 2 | 3 |
| Clostridial infection                                      | U            | 1              | 2 | 3 |
| Campylobacteriosis   | U            | 1              | 2 | 3 |
| Trichomoniasis   | U            | 1              | 2 | 3 |
| Other  | U            | 1              | 2 | 3 |
| <b>Reproduction Performance</b>                            |              |                |   |   |
| Heat detection (If applicable)                             |              |                |   |   |
| Conception rate (If applicable)                            |              |                |   |   |
| Pregnancy rate   |              |                |   |   |
| Natural service    Artificial insemination    (Circle one) |              |                |   |   |
| Other related concerns                                     |              |                |   |   |

# Johne's Disease Beef Risk Assessment Form

Legal Entity Name/Herd Owner's Name \_\_\_\_\_

Veterinarian \_\_\_\_\_ Date \_\_\_\_\_

Herd Owner's Address \_\_\_\_\_

| Herd Management History  |  |   |                       |   |                 |       |              |
|--|--|---|-----------------------|---|-----------------|-------|--------------|
| Herd Status (circle one):<br>Unknown    Known +    Johne's Disease Program     |  |   |                       | Johne's disease vaccinating herd? (circle one)<br>No    Yes    If "yes," year started _____ |                 |       |              |
| If Johne's Disease Program, indicate level: 1 2 3 4 5 6                        |  |   |                       |   |                 |       |              |
| How long has the herd been here?   |  | What percent of the current herd was purchased? |                       | Animals other than cattle   |                 |       |              |
| Age/Source/Date of youngest clinical Johne's disease case                      |  |   |                       | Age/Source/Date of <u>first</u> clinical Johne's disease case                               |                 |       |              |
| Short-Term Goals   |  |   |                       | Long-Term Goals   |                 |       |              |
| If animals raised elsewhere and return, describe how biosecurity is maintained |  |   |                       |   |                 |       |              |
| Health prerequisites required for herd additions                               |  |   |                       |   |                 |       |              |
|  |  | Cows<br>(>36 mos.)                              | First-Calf<br>Heifers | Bred<br>Heifers   | Open<br>Heifers | Bulls | <b>Total</b> |
| Inventory  |  |   |                       |   |                 |       |              |
| Johne's disease clinical cases last 12 months                                  |  |   |                       |   |                 |       |              |
| Total number culled and died in last 12 months (any reason)                    |  |   |                       |   |                 |       |              |

Comments on clinical cases:

If renewal risk assessment & management plan (RAMP), what management changes have been made since last risk assessment?

| Low  | Moderate   | High   |
|--|--|--|
| <p>Place an X on the line above where you estimate the herd prevalence of Johne's disease might be.<br/>Consider number, age and timeframe of clinical cases for estimating prevalence of Johne's disease in the herd.<br/>You may also use information from boxes below to help estimate herd prevalence.</p> |  |  |
| <ul style="list-style-type: none"> <li>• No or rare clinical cases.</li> <li>• Clinical only in purchased animals.</li> <li>• ~&lt; 5% test prevalence mostly in older animals.</li> <li>• Excellent management and sanitation</li> </ul>  | <ul style="list-style-type: none"> <li>• Few clinical cases in home-reared animals.</li> <li>• Recent history of 2%-5% clinicals/year.</li> <li>• ~6%-19% test prevalence mixed group.</li> <li>• Management allowed for some contact of weaned young stock with manure or older animals.</li> </ul> | <ul style="list-style-type: none"> <li>• Frequent in home-reared animals.</li> <li>• Increasing clinical cases.</li> <li>• Decreasing age of clinicals.</li> <li>• ~&gt; 20% test prevalence mixed group.</li> <li>• Severe risks exist for contact of young stock with manure of mature animals.</li> </ul> |

## Risk Assessment Scores *(based on visual observation of each environment and owner responses)*

Estimate the risk for fecal/oral and colostrum/milk disease spread, or gap in farm's biosecurity, for each management practice. Follow the logical order. **Observe Proper Biosecurity!** Note how current management conditions differ from past. Ideally producer & veterinarian score risks independently, then compare and discuss relative importance in the development of a management plan. See Step 3 in the "How to Do" instructional handbook for guidelines to completing area risk assessments.

| <b>A. Calving Area Risk Factors</b><br>Write in herd score at right. 0 is lowest risk, 10 is highest risk.                              | <b>Max Score</b> | <b>Herd Score</b> | <b>Comments</b> |
|---|------------------|-------------------|-----------------|
| 1. Multiple animal use [Single use pen → Very crowded calving area]   | 10               |                   |                 |
| 2. Manure build up risk for calf ingestion [Clean dry → Dirty wet]  | 10               |                   |                 |
| 3. Manure soiled udders / legs [Never → Always]   | 10               |                   |                 |
| 4. Presence of Johne's disease clinicals / suspects [Never → Always]  | 10               |                   |                 |
| <b>Risk Sub-total</b>   | <b>40</b>        |                   |                 |
| Estimate risk of spreading Johne's disease (Please circle one): <b>Very Low</b> <b>Low</b> <b>Moderate</b> <b>High</b> <b>Very High</b> |                  |                   |                 |

| <b>B. Nursing Calf Risk Factors</b><br>Write in herd score at right. 0 is lowest risk, 10 is highest risk.                              | <b>Max Score</b> | <b>Herd Score</b> | <b>Comments</b> |
|---|------------------|-------------------|-----------------|
| 1. Cow/calf pairs kept with Johne's disease clinical or suspect animals [Never → Frequently]  | 10               |                   |                 |
| 2. Manure build up risk for calf ingestion [Clean dry → High manure load]   | 10               |                   |                 |
| 3. Possible manure contamination of water: by cows, traffic splatter, equipment or people. [Never → Frequently]                         | 10               |                   |                 |
| 4. Possible manure contamination of feed: by cows, traffic splatter, equipment or people. [Never → Frequently]                          | 10               |                   |                 |
| 5. Calves exposed to sick cows [Never → Frequently]   | 10               |                   |                 |
| <b>Risk Sub-total</b>   | <b>50</b>        |                   |                 |
| Estimate risk of spreading Johne's disease (Please circle one): <b>Very Low</b> <b>Low</b> <b>Moderate</b> <b>High</b> <b>Very High</b> |                  |                   |                 |

| <b>C. Weaned Heifers and Bull Calves Risk Factors</b><br>Write in herd score at right. 0 is lowest risk, 7 is highest risk.             | <b>Max Score</b> | <b>Herd Score</b> | <b>Comments</b> |
|---|------------------|-------------------|-----------------|
| 1. Direct contact with cows or their manure. [Never → Frequently]   | 7                |                   |                 |
| 2. Possible manure contamination of feed: stored feed, equipment, from cows, traffic splatter, people or runoff. [Never → Frequently]   | 7                |                   |                 |
| 3. Potential for contamination of water: shared with or by cows, traffic splatter, runoff or people. [Never → Frequently]               | 7                |                   |                 |
| 4. Share pasture with cows/bulls [Never → Frequently]   | 7                |                   |                 |
| 5. Manure spread on forage grazed/harvested same season. [Never → Frequently]   | 7                |                   |                 |
| <b>Risk Sub-total</b>   | <b>35</b>        |                   |                 |
| Estimate risk of spreading Johne's disease (Please circle one): <b>Very Low</b> <b>Low</b> <b>Moderate</b> <b>High</b> <b>Very High</b> |                  |                   |                 |

## Johne's Disease Beef Risk Assessment Form - *Continued*

| <b>D. Bred Heifer and Yearling Bull Risk Factors</b><br>Write in herd score at right. 0 is lowest risk, 5 is highest risk.              | Max Score | Herd Score | Comments |
|---|-----------|------------|----------|
| 1. Direct contact with cows or their manure. [Never → Frequently]   | 5         |            |          |
| 2. Possible manure contamination of feed: stored feed, equipment, cows, traffic splatter, people or runoff. [Never → Frequently]        | 5         |            |          |
| 3. Possible manure contamination of water sources: shared with cows, by cows, traffic splatter, runoff or people. [Never → Frequently]  | 5         |            |          |
| 4. Share pasture with cows/bulls [Never → Frequently]   | 5         |            |          |
| 5. Manure spread on forage grazed/harvested same season. [Never → Frequently]   | 5         |            |          |
| <b>Risk Sub-total</b>   | <b>25</b> |            |          |
| Estimate risk of spreading Johne's disease (Please circle one): <b>Very Low</b> <b>Low</b> <b>Moderate</b> <b>High</b> <b>Very High</b> |           |            |          |

| <b>E. Cow and Bull Risk Factors</b><br>Write in herd score at right. 0 is lowest risk, 4 is highest risk.                                | Max Score | Herd Score | Comments |
|--|-----------|------------|----------|
| 1. Possible cow manure contamination of feed: when fed or stored, by equipment, traffic splatter, runoff or people. [Never → Frequently] | 4         |            |          |
| 2. Possible manure contamination of water: by cows, traffic splatter, runoff, people. [Never → Frequently]                               | 4         |            |          |
| 3. Direct access to accumulated or stored manure. [Never → Frequently]   | 4         |            |          |
| 4. Manure spread on forage grazed or harvested the same season. [As above]   | 4         |            |          |
| <b>Risk Sub-total</b>  | <b>16</b> |            |          |
| Estimate risk of spreading Johne's disease (Please circle one): <b>Low</b> <b>Moderate</b> <b>High</b>                                   |           |            |          |

| <b>F. Sources of Additions and Replacements*</b><br>Circle the number in each row that reflects management in the past 12 months. Include bulls, ET recipients, other non-dairy cattle and small ruminant additions on the property. Maximum score is 60. | Number of Animals |      |       |       |     |
|---|-------------------|------|-------|-------|-----|
|   | 1-5               | 6-12 | 13-20 | 21-50 | >50 |
| 1. Get additions or replacements from Level 3-6 classified herds  | 0                 | 2    | 4     | 6     | 8   |
| 2. Get additions or replacements from Level 1-2 classified herds  | 10                | 11   | 12    | 13    | 14  |
| 3. From single source non-tested or non-program herds   | 20                | 22   | 23    | 26    | 28  |
| 4. From multiple sources non-tested or non-program herds or markets   | 30                | 34   | 36    | 38    | 40  |
| Estimate risk of spreading Johne's disease (Please circle one): <b>Very Low</b> <b>Low</b> <b>Moderate</b> <b>High</b> <b>Very High</b>   |                   |      |       |       |     |
| <b>Comments– Include information about planned additions and replacements from outside sources over the next 12 months.</b>   |                   |      |       |       |     |
|   |                   |      |       |       |     |

*\* If the herd is truly closed, this area is given a score of "0".*

### Risk Assessment Summary

Completing this table is optional. However, calculating the herd scores for each area as a percent of the area's maximum score and as a percent of the herd's total score will highlight the top risk areas to address in the farm plan.

| Risk Factor Areas          | Maximum Score | Your Herd Score | Each Area Herd Score/<br>Each Area Maximum Score (%) | Each Area Herd Score/<br>Your Total Herd Score (%) |
|----------------------------|---------------|-----------------|--|--|
| Calving Area               | 40            |                 |  |  |
| Pre-weaned calves          | 50            |                 |  |  |
| Post-weaned calves         | 35            |                 |  |  |
| Bred heifers & yrlg. bulls | 25            |                 |  |  |
| Cows & bulls               | 16            |                 |  |  |
| Additions/Replacements     | 60            |                 |  |  |
| <b>Total</b>               | <b>226</b>    |                 |  |  |

## Management Recommendations for Your Farm (Based on the score sheet on the previous pages).

A '✓' in a box indicates a change or a reminder is suggested.

| A. Calving area |   |
|-----------------|---|
|                 | Consider individual calving pens. Properly managed calving pens are ideal. Keep clean and put one cow in at a time. |
|                 | Focus on keeping other adult manure away from the calves.   |
|                 | If individual calving pens are not available, be sure to keep the calving area as clean and dry as possible.        |
|                 | Do not use calving pens for sick cows, Johne's disease positive cows or cows sick with Johne's disease.             |
|                 | Place calf & its mother into as clean as possible cow/calf area, soon after birth. The sooner the better.           |
|                 | Other calving area comments:  |

| B. Nursing calves |  |
|-------------------|--|
|                   | Do not feed pooled colostrum or milk. Consider pasteurization if you must feed whole milk. |
|                   | Limit the calf's contact with other adult manure.  |
|                   | Keep the cow's udder as clean as possible.   |
|                   | Other nursing calf comments:   |

| C. Weaned heifers & bull calves |  |
|---------------------------------|--|
|                                 | Minimize any contact with adult animals and their manure (including any manure run off).     |
|                                 | Avoid & minimize adult manure on buckets, skid loaders, tractors, tires and other equipment. |
|                                 | Other weaned heifers & bull comments:  |

| D. Bred heifers & young bulls |   |
|-------------------------------|---|
|                               | Keep these animals separate from the adult animals for as long as possible.     |
|                               | Avoid spreading manure on pasture or hay ground, especially in the same season. |
|                               | Other bred heifer & young bull comments:  |



## Management Recommendations for Your Farm - *Continued*

| E. Cows & bulls |  |
|-----------------|--|
|                 | Avoid spreading manure on hay ground or pastures, especially in the same season. |
|                 | Identify and manage any test-positive cows until they can be sold.               |
|                 | Other cow & bull comments:   |

| F. Replacements & Additions |  |
|-----------------------------|--|
|                             | Be sure to purchase replacements from herds where the Johne's disease status is known. |
|                             | Be aware of management practices and manure exposure when using a heifer raiser.       |
|                             | Other replacement comments:  |

| Testing strategy: |
|-------------------|
|                   |
| General comments: |
|                   |

Veterinarian's Signature \_\_\_\_\_ Date \_\_\_\_\_

Clinic Name and Address \_\_\_\_\_  
 \_\_\_\_\_

Herd Owner's Signature \_\_\_\_\_ Date \_\_\_\_\_

***Please provide your client with a copy of this Risk Assessment and Herd Management Plan, keep a copy for your files, then mail or fax a copy to your State Designated Johne's Disease Coordinator.***