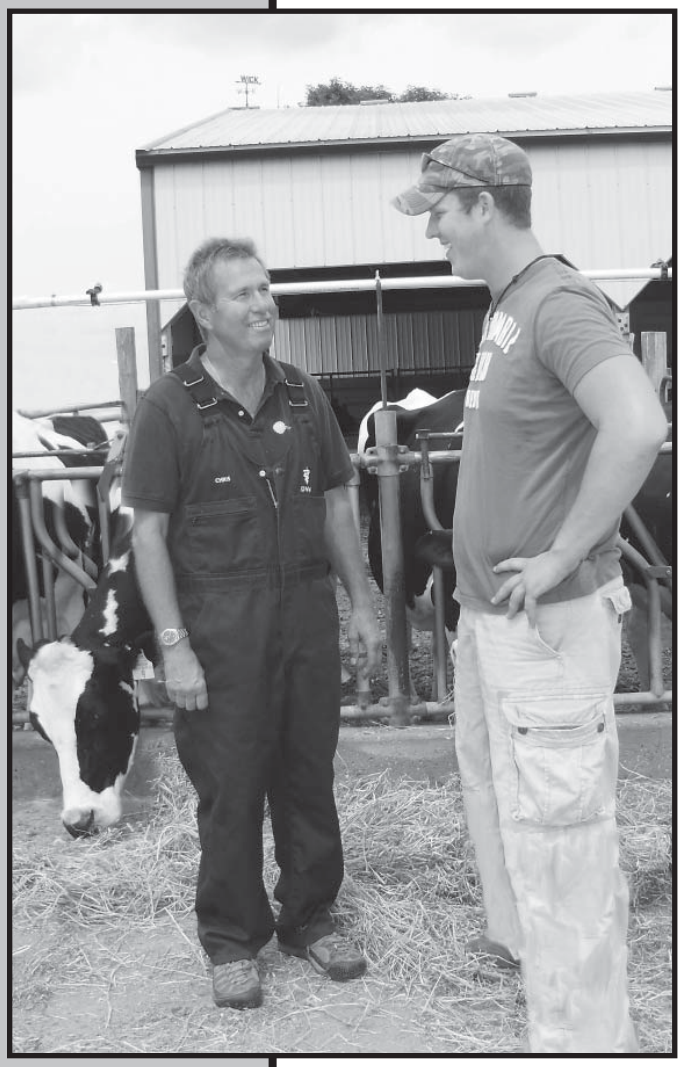

Handbook for Veterinarians and Dairy Producers

A guide to Johne's disease risk assessments and management plans for dairy herds

– 2011 edition –

Veterinary Services
APHIS • USDA

For use by veterinarians with dairy 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."*

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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.

The First Edition was designed and edited by these four individuals and reviewed and approved for distribution by the National Johne's Working Group (NJWG) and the Johne's Disease Committee of the United States Animal Health Association (USAHA):
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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 health and production problems brought to light by information on this page may already be addressed by the owner. The final Johne's disease management plan should blend in 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
1 = OK, low incidence, not a concern
2 = Moderate incidence, may be a concern
3 = Significant increase, unsatisfactory, needs attention

Calf Feeding Practices									
Average hours to first colostrum					Total number of colostrum feedings				
Amount of first colostrum fed					Feed unpasteurized milk, pasteurized milk, milk replacer (circle)				
Colostrum source — Individual Pooled									
Calf Disease Incidence or Level of Concern									
Protocol for keeping feed and feeding equipment sanitary									
Pre-wean mortality (Last 12 mo.)					Scours	U	1	2	3
Calf vigor	Satisfactory	Unsatisfactory			Pneumonia	U	1	2	3
Calf growth	Satisfactory	Unsatisfactory			Other	U	1	2	3
Heifer Disease Incidence or Level of Concern									
Heifer growth	Poor	Good			Pneumonia	U	1	2	3
Age at freshening					Digital dermatitis	U	1	2	3
Breeding program	Satisfactory	Unsatisfactory			Coccidiosis	U	1	2	3
Milk Quality and Udder Health									
Bulk tank SCC					Number of mastitis cases per month				
Bacteria count/ SPC					Recent culture & sensitivity results				
Reproduction Program									
Heat detection rate					Herd average DIM				
Conception rate					Abortions/year (% herd)				
Pregnancy rate					Embryonic loss				
Method of insemination									
Lameness Incidence or Level of Concern									
Foot trimming schedule									
% of cows with obvious lameness					Abscesses	U	1	2	3
Digital dermatitis	U	1	2	3	Foot rot	U	1	2	3
Laminitis	U	1	2	3	Other	U	1	2	3
Infectious Disease Incidence									
Johne's disease	U	1	2	3	BLV	U	1	2	3
Salmonellosis	U	1	2	3	Clostridial disease	U	1	2	3
Neosporosis	U	1	2	3	Leptospirosis	U	1	2	3
BVD	U	1	2	3	Other	U	1	2	3
Respiratory disease	U	1	2	3					
Metabolic Disease Incidence (Fresh cows last 6 months)									
Milk fever	U	1	2	3	DAs	U	1	2	3
Retained placentas	U	1	2	3	Acidosis	U	1	2	3
Ketosis	U	1	2	3	Stillborn / Dystocia cases	U	1	2	3
Mastitis	U	1	2	3	Other	U	1	2	3
Metritis	U	1	2	3					
Culling Incidence									
Cull Rate % last 6 months					Reproduction	U	1	2	3
< 60 DIM	U	1	2	3	Lameness	U	1	2	3
Deaths	U	1	2	3	Low production	U	1	2	3
Mastitis	U	1	2	3	Other	U	1	2	3

Johne's Disease Dairy Risk Assessment Form

Legal Entity Name/Herd Owner's Name _____

Veterinarian _____ Date _____

Herd Owner's Address _____

Herd Management History		
Herd Status (circle one): Unknown Known + Johne's Disease Program If Johne's Disease Program, indicate level: 1 2 3 4 5 6		Johne's disease vaccinating herd? (circle one) No Yes If "yes," year started _____
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		

	Lactating Cows/Heifers	Dry Cows	Bred Heifers	Open/Growing Heifers	Bulls	**Total**
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**

Place an X on the line above where you estimate the herd prevalence of Johne's disease might be.
Consider number, age and timeframe of clinical cases for estimating prevalence of Johne's disease in the herd.
You may also use information from boxes below to help estimate herd prevalence.

Low	**Moderate**	**High**
• No or rare clinical cases. • Clinical only in purchased animals. • ~< 5% test prevalence mostly in older animals. • Excellent management and sanitation	• Few clinical cases in home-reared animals. • Recent history of 2%-5% clinicals/year. • ~6%-19% test prevalence mixed group. • Management allowed for some contact of weaned young stock with manure or older animals.	• Frequent in home-reared animals. • Increasing clinical cases. • Decreasing age of clinicals. • ~> 20% test prevalence mixed group. • Severe risks exist for contact of young stock with manure of mature animals.

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.

A. Calving Area Risk Factors Write in herd score at right. 0 is lowest risk, 10 is highest risk.	**Max Score**	**Herd Score**	**Comments**
1. Multiple animal use [Single pen → Dense crowded group]	10		
2. Manure build-up risk for calf ingestion [Clean dry → Dirty wet]	10		
3. Area also used for sick cows [Never → Always]	10		
4. Presence of JD clinicals / suspects [Never → Always]	10		
5. Manure soiled udders / legs [Never → Always]	10		
6. Calves born in other cow areas [Never → Always]	10		
7. Time calves stay with dam [<30 minutes → >24 hours]	10		
8. Calves nurse dam [Never → Most or all]	10		
Risk Sub-total	**80**		
Estimate risk of spreading Johne's disease (Please circle one): **Very Low Low Moderate High Very High**			

B. Pre-Weaned Heifer Risk Factors Write in herd score at right. 0 is lowest risk, 10 is highest risk.	**Max Score**	**Herd Score**	**Comments**
1. Fed pooled colostrum [Never or JD negative → High risk cows]	10		
2. Fed colostrum from individual cow to several calves [As 1. above]	10		
3. Fed unpasteurized pooled milk [JD negative cows → High risk cows]	10		
4. Possible manure contamination of colostrum or milk: at harvest, utensils, traffic or people [None any source → Frequent many sources]	10		
5. Possible manure contamination of calf feed or water: by cows, traffic splatter, equipment or people [As 4. above]	10		
6. Direct cow contact or potential manure contamination of calf pen by cows, traffic splatter, equipment or people [As 4. above]	10		
Risk Sub-total	**60**		
Estimate risk of spreading Johne's disease (Please circle one): **Very Low Low Moderate High Very High**			

Johne's Disease Dairy Risk Assessment Form - *Continued*

C. Post-Weaned Heifer Risk Factors Write in herd score at right. 0 is lowest risk, 7 is highest risk.	**Max Score**	**Herd Score**	**Comments**
1. Direct cow contact or pen contamination with cows' manure [None → Always]	7		
2. Possible manure contamination of feed: refused cow ration, stored feed, equipment, cows, traffic splatter, people or runoff [Never → Frequently]	7		
3. Potential for contamination of supplied or natural water: shared with cows, traffic splatter, runoff or people [Never → Frequently]	7		
4. Share pasture with cows [Never → Frequently]	7		
5. Manure spread on forage and fed same season [Never → Frequently]	7		
Risk Sub-total	**35**		
Estimate risk of spreading Johne's disease (Please circle one): **Very Low** **Low** **Moderate** **High** **Very High**			

D. Bred Heifer Risk Factors Write in herd score at right. 0 is lowest risk, 5 is highest risk.	**Max Score**	**Herd Score**	**Comments**
1. Direct cow contact or pen contamination with cows' manure. [None → Always]	5		
2. Possible manure contamination of feed: refused cow ration, 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 [Never → Frequently]	5		
5. Manure spread on forage and fed same season. [Never→ Frequently]	5		
Risk Sub-total	**25**		
Estimate risk of spreading Johne's disease (Please circle one): **Very Low** **Low** **Moderate** **High** **Very High**			

E. Cow and Bull Risk Factors 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 or people. [Never → Frequently]	4		
3. Direct access to accumulated or stored manure. [Never → Frequently]	4		
4. Manure spread on forage and fed the same season. [Never → Frequently]	4		
Risk Sub-total	**16**		
Estimate risk of spreading Johne's disease (Please circle one): **Low** **Moderate** **High**			

Johne's Disease Dairy Risk Assessment Form - *Continued*

F. Sources of Additions and Replacements* 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. Maimum 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): **Very Low Low Moderate High Very High**					
Comments– Include information about planned additions and replacements from outside sources over the next 12 months.					

** 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/ Each Area Maximum Score (%)**	**Each Area Herd Score/ Your Total Herd Score (%)**
A. Calving Area	80			
B. Pre-weaned heifers	60			
C. Post-weaned heifers	35			
D. Bred heifers	25			
E. Cows and bulls	16			
F. Additions/Replacements	60			
Total	**276**			

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.
	Remove calves from cows and cow area as soon after birth as possible. *The sooner the better.*
	Other calving area comments:

B. Pre-weaned heifer calves	
	Do not feed pooled colostrum or milk. *Consider pasteurization if you must feed whole milk.*
	Limit or avoid any contact with adult cows or cow manure.
	Wear clean overalls & boots and use clean equipment when working with or feeding calves.
	Other pre-weaned heifer comments:

C. Post-weaned heifers:	
	Minimize any contact with adult cows or cow manure (including any manure run off that may go into heifer pens).
	Avoid & minimize cow manure on buckets, skid loaders, tractors, tires and other equipment.
	Other post-weaned comments:

D. Bred heifers	
	Keep bred heifers separate from cows for as long as possible.
	Avoid feeding heifers refused (weigh back) feed from cows.
	Other bred heifer 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. Don't feed their colostrum to heifer calves.
	Other cow & bull comments:

F. Replacements & Additions	
	Be sure to purchase replacements from herds where the Johne's 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.

For additional Information, please contact:

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