

Guidelines for Scoring Risk Factors for Dairy Herds

(adapted from "How to Do Risk Assessments and Management Plans for Johne's Disease")

Calving Area		Risk	
Risk Factors	Scoring Guidelines	Level	Score
Is the calving area used for more than one cow at a time?	No, calving occurs in a single-use pen.	Lowest	0-1
	Yes, there is a general maternity area with a low cow concentration.	Moderate	4-6
	Yes, there is a general maternity area with high cow concentration.	Highest	9-10
Is manure build-up in the maternity area a risk for calf ingestion?	No, the area is always clean and dry, with no manure visible.	Lowest	0-1
	Yes, there is minimal manure visible.	Moderate	4-6
	Yes, there is extensive manure contamination.	Highest	9-10
Are sick cows kept in, or adjacent to the maternity area?	Never or very rarely.	Lowest	0-1
	Yes, the hospital/sick pen is adjacent to the maternity area.	Moderate	4-6
	Yes, sick cows are often kept in the maternity area.	Highest	9-10
Are high risk, clinical or suspect JD cows kept in the maternity area?	Never or very rarely.	Lowest	0-1
	Yes, low risk suspects may be kept in or near the maternity area.	Moderate	4-6
	Yes high risk/clinical JD cases/suspects are kept in the maternity area.	Highest	9-10
Are calving cow's udders, legs and flanks soiled with manure?	No, 90% or more of the cows are clipped, clean and dry.	Lowest	0-1
	Yes, a moderate amount of manure is visible on 20-40% of the cows.	Moderate	4-6
	Yes, the majority of the cows have manure on udders, legs and flanks.	Highest	9-10
Are calves born outside of the designated maternity area?	Never or very rarely.	Lowest	0-1
	Yes, occurs in 15% - 25% of all calvings.	Moderate	4-6
	Yes, occurs more than 40% of the time.	Highest	9-10
How long do calves stay in the maternity area after birth?	Routinely less than 30 minutes.	Lowest	0-1
	Most calves stay 1-4 hrs.	Moderate	4-6
	Most calves stay more for more than 6 hrs.	Highest	9-10
Are calves able to nurse their dams or other cows?	Never or very rarely.	Lowest	0-1
	Yes, most calves are with their dam or other cows for 1-4 hrs.	Moderate	4-6
	Yes, most calves are with their dam or other cows for more than 6 hrs.	Highest	9-10

Additional factors which have the potential to result in calves being exposed to adult cow manure, include:

- * **Are calves moved from the maternity to calf housing area without being exposed to adult cow manure?**
- * **Are people and equipment manure-contaminated when working in maternity area?**

While these factors are not actually scored, they must be considered and addressed in the herd plan if necessary.

Pre-weaned Heifers		Risk	
Risk Factors	Scoring Guidelines	Level	Score
Is colostrum pooled from multiple cows and fed to calves?	Never, or only from cows with several negative JD tests.	Lowest	0-1
	Yes, from cows with a negative JD test or from a low risk group.	Moderate	4-6
	Yes, from cows with unknown JD status.	Highest	9-10
Is colostrum fed from individual cows to calves?	Yes, only from likely JD-negative dams to their own calves.	Lowest	0-1
	Yes, from a single cow with a negative JD test to several calves.	Moderate	4-6
	Yes, from cows with unknown JD status to several calves.	Highest	9-10
Is unpasteurized milk pooled and fed to calves?	No, or only from cows with several JD negative tests.	Lowest	0-1
	Yes, milk from cows with one negative JD test.	Moderate	4-6
	Yes, milk from cows with unknown JD status.	Highest	9-10
Can colostrum/milk/milk replacer be contaminated with cow manure?	Never or very rarely occurs.	Lowest	0-1
	Yes, may occur occasionally.	Moderate	4-6
	Yes, may occur frequently.	Highest	9-10
Can calf feed or water be contaminated with cow manure?	Never or very rarely occurs.	Lowest	0-1
	Yes, may occur occasionally from limited sources.	Moderate	4-6
	Yes, may occur frequently from multiple sources.	Highest	9-10
Are calves able to come in contact with cows or cow manure?	Never to very rarely occurs.	Lowest	0-1
	Yes, may occur occasionally.	Moderate	4-6
	Yes, may occur frequently.	Highest	9-10

Post-weaned Heifers		Risk	
Risk Factors	Scoring Guidelines	Level	Score
<i>Do heifers have contact with cows or cow manure?</i>	Never or very rarely occurs. Yes, may occur occasionally. Yes, occurs frequently.	Lowest Moderate Highest	0-1 3-4 6-7
<i>Can heifer feed become contaminated with cow manure?</i>	Never or very rarely occurs. Yes, may occur occasionally. Yes, occurs frequently and/or from multiple sources.	Lowest Moderate Highest	0-1 3-4 6-7
<i>Can heifer water sources be contaminated with cow manure?</i>	Never to very rarely occurs. Yes, may occur occasionally. Yes, may occur frequently from multiple sources.	Lowest Moderate Highest	0-1 3-4 6-7
<i>Do heifers share pasture with mature cows?</i>	Never to very rarely. Yes, may occur occasionally. Yes, may occur frequently.	Lowest Moderate Highest	0-1 3-4 6-7
<i>Is manure spread on forage which is grazed or fed in the same year?</i>	Never to very rarely occurs. Yes, may occur occasionally. Yes, occurs frequently.	Lowest Moderate Highest	0-1 3-4 6-7

Bred Heifers		Risk	
Risk Factors	Scoring Guidelines	Level	Score
<i>Do bred heifers have contact with cows or their manure?</i>	Never or very rarely occurs. Yes, may occur occasionally. Yes, occurs frequently.	Lowest Moderate Highest	0-1 2-3 4-5
<i>Can bred heifer feed become contaminated with cow manure?</i>	Never or very rarely occurs. Yes, may occur occasionally. Yes, occurs frequently and/or from multiple sources.	Lowest Moderate Highest	0-1 2-3 4-5
<i>Can bred heifer water sources be contaminated with cow manure?</i>	Never to very rarely occurs. Yes, may occur occasionally. Yes, may occur frequently from multiple sources.	Lowest Moderate Highest	0-1 2-3 4-5
<i>Do bred heifers share pasture with mature cattle?</i>	Never to very rarely. Yes, may occur occasionally. Yes, may occur frequently.	Lowest Moderate Highest	0-1 2-3 4-5
<i>Is manure spread on forage which is grazed or fed in the same year?</i>	Never to very rarely occurs. Yes, may occur occasionally. Yes, occurs frequently.	Lowest Moderate Highest	0-1 2-3 4-5

Mature Cows / Bulls		Risk	
Risk Factors	Scoring Guidelines	Level	Score
<i>Can cow feed become contaminated with manure?</i>	Never to very rarely occurs. Yes, may occur occasionally. Yes, may occur frequently and/or from multiple sources.	Lowest Moderate Highest	0-1 2 3-4
<i>Can cow/bull water sources be contaminated with cow manure?</i>	Never or very rarely occurs. Yes, may occur occasionally. Yes, occurs frequently and/or from multiple sources.	Lowest Moderate Highest	0-1 2 3-4
<i>Do cows have access to accumulated or stored manure?</i>	Never to very rarely occurs. Yes, may occur occasionally. Yes, frequently or always.	Lowest Moderate Highest	0-1 2 3-4
<i>Is manure spread on forage which is grazed or fed in the same year?</i>	Never to very rarely occurs. Yes, may occur occasionally. Yes, occurs frequently.	Lowest Moderate Highest	0-1 2 3-4

Additions / Replacements

All animals added to the herd (over at least the last 12 months) should be accounted for, possibly resulting in numerous in entries which are summed to arrive at a total risk score for this area. Even though it is not scored, a question should also be asked about **planned** additions and replacements from outside sources over the next 12 months. If the herd is truly closed this area is scored a "0". Do not forget about bulls, ET recipients, and other non-dairy cattle (and small ruminant) additions.

