

The Alberta Dairy Hoof Health Project

On-farm Lameness Risk Assessment

Farm Name: _____

Owners Name: _____

Legal Land Description: Section _____ Township _____ Range _____ Meridian _____

or GPS Coordinates: Latitude _____ Longitude _____

Veterinarian: _____ Veterinarian Phone: (____) _____ - _____

Veterinarian e-mail: _____ Date of risk assessment (yy mm dd):

This risk assessment must be completed by the herd veterinarian during a farm visit in order to observe and clarify with the herd owner the management practices actually being used on the farm. This, along with use of the risk assessment user guide will assist the veterinarian in making a thorough and systematic assessment of on-farm facilities and management practices that may play a role in the development of injuries and hoof lesions causing lameness in the herd.

Scoring Summary

	Risk Scores for Lameness:	
	Non-Infectious Causes	Infectious Causes
Section 2: Farm Biosecurity Measures		____ / 21 points
Section 3: Animal-based Measures	____ / 15 points	____ / 9 points
Section 4: Pregnant Heifer Facilities	____ / 14 points	____ / 11 points
Section 5: Pregnant Heifer Management	____ / 15 points	____ / 15 points
Section 6: Dry Cow Facilities	____ / 27 points	____ / 20 points
Section 7: Dry Cow Management	____ / 12 points	____ / 12 points
Section 8: Lactating Cow Facilities	____ / 33 points	____ / 20 points
Section 9: Lactating Cow Management	____ / 16 points	____ / 25 points
Totals:	____ / 128 points	____ / 135 points

For research purposes, please mail or fax copies of all pages of this risk assessment, addressed to:
 Steve Mason, Project Manager, Alberta Dairy Lameness Reduction Initiative
 2508 Charlebois Drive NW, Calgary AB T2L 0T6, phone: (403)284-5484, e-mail: steve@agromedia.ca

Section 1: General Farm Information

- 1.1 Date of last Hoof Health risk assessment (leave blank if this is the first RA) (yy mm dd):
- 1.2 Type of housing for milking cows: Free stall Tie stall/Stanchion Loose Housing
- 1.3 Type of milking system: Tie stall / Pipeline Herringbone Parlour Parallel Parlour
 Rotary Parlour Tandem Parlour Robot Other _____
- 1.4 Number of: Lactating Cows: _____ Dry Cows: _____ Breeding Bulls: _____
 Pre-weaned Heifer Calves: _____ Weaned to First Calving Heifers: _____ Bull Calves: _____
- 1.5 Is this herd on DHI? Yes No If yes, record the herd DHI number _____
- 1.6 Average daily milk production per cow: _____ kg/cow/day
- 1.7 Does the farm have and regularly use its own trimming chute? Yes No
- 1.8 Which animals are hoof trimmed on a regular schedule? Pregnant Heifers Dry Cows
 Lactating Cows There is no regular trimming schedule
- 1.9 Who does the regular (scheduled) hoof trimming? Farm Staff Professional Trimmer
- 1.10 Who does the emergency hoof trimming? Farm Staff Professional Trimmer

Section 2. Farm Biosecurity Practices

- 2.1 In the past year, have external cattle been brought onto your farm?
 No Yes, from 1 source Yes, from multiple sources →
- 2.2 If external cattle have been brought onto your farm, were the source herds free of digital dermatitis?
 Yes No or don't know →
- 2.3 Do you require farm visitors to wear freshly-laundered, disposable or farm-supplied coveralls?
 Yes No →
- 2.4 Do you require farm visitors to disinfect their footwear when they arrive on your farm or to wear disposable or farm-supplied footwear?
 Yes No →
- 2.5 Are heifers (before first calving) ever exposed to manure from lactating or dry cows?
 No Yes →
- 2.6 Does your hoof trimmer clean his chute and tools before entering your premises?
 Yes Don't know No →
- 2.7 Are trimming tools disinfected after trimming each animal?
 Yes Don't know No →
- Total risk score for infectious causes of lameness based on farm biosecurity practices

Section 3: Animal-based Measures

From proAction Animal Care Assessment performed by third party on date (yy mm dd):

3.1 % of assessed cattle scoring 'Requires Corrective Action' for Body Condition: _____ %

less than 5% 5% to 15% 16% to 25% more than 25% →

3.2 % of assessed cattle scoring 'Requires Corrective Action' for Hock Injuries: _____ %

less than 5% 5% to 15% 16% to 25% more than 25% →

3.3 % of assessed cattle scoring 'Requires Corrective Action' for Knee Injuries: _____ %

less than 5% 5% to 15% 16% to 25% more than 25% →

3.4 % of assessed cattle scoring 'Requires Corrective Action' or 'Monitor' for Lameness: _____ %

less than 5% 5% to 15% 16% to 25% more than 25% →

3.5 Are hoof trimming records kept?

Yes (answer questions 3.5a and 3.5b) No (go to section 4) →

3.5a Percentage of all cows trimmed in the past year that were treated for the following claw horn lesions:

Sole ulcer: _____ % Sole Hemorrhage: _____ % Toe Ulcer: _____ %

White Line Lesion: _____ % Total Claw Horn Lesions _____ %

Total Claw Horn Lesions:

less than 5% 5% to 15% 16% to 25% more than 25% →

3.5b Percentage of all cows trimmed in the past year that were treated for the following infectious claw lesions:

Digital Dermatitis: _____ % Interdigital Dermatitis: _____ %

Foot Rot: _____ % Total Infectious Claw Lesions _____ %

Total Infectious Claw Lesions:

less than 5% 5% to 15% 16% to 25% more than 25% →

Total risk score for non-infectious causes of lameness based on animal-based measures

Total risk score for infectious causes of lameness based on animal-based measures

Section 4: Facilities for Pregnant Heifers before First Calving

4.1 What type of facility are pregnant heifers housed in?

0 pasture, corral or loose housing (no stalls) 2 tie stalls or free stalls →

4.1a If loose housing (no stalls), what type of foundation (under bedding) are pregnant heifers housed on?

0 stone-free ground, sand, bedded pack or pasture 1 rubber
 2 concrete 3 rough frozen or stoney ground N not applicable →

4.2 On average, how deep is the bedding in loose housing areas or stalls?

0 pasture or more than 10 cm (4 in) 1 6 to 10 cm (2.5 to 4 in)
 2 2 to 5 cm (1 to 2 in) 3 less than 2 cm (1 in) →

4.3 How wet is the bedding and/or ground in the pregnant heifer facility?

0 dry 1 damp 2 moderately wet 3 very wet →

4.4 How slippery is the flooring or ground?

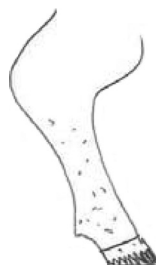
0 not at all 1 slightly 2 moderately 3 very →

4.5 Score the amount of dried manure on the outside of one hind leg of each of 10 heifers, referring to the sketches below:

Heifer	1	2	3	4	5	6	7	8	9	10	Total
Score	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Score 0



Score 1



Score 2



Score 3

0 total less than 5 1 total 6 to 10 2 total 11 to 20 3 total 21 to 30 →

4.6 Are pregnant heifers housed in loose housing (no stalls) moved to free-stalls or tie-stalls after calving (i.e., are they expected to immediately adapt to using stalls)?

0 No 3 Yes N not applicable →

Total risk score for non-infectious causes of lameness based on pregnant heifer facilities

Total risk score for infectious causes of lameness based on pregnant heifer facilities

Section 5: Management Practices for Pregnant Heifers before First Calving

5.1 What percentage of pregnant heifers have their hooves examined and/or trimmed before calving?

more than 80% 50 to 80% less than 50% 0% →

5.2 On average, how often are the hooves of a pregnant heifer examined and/or trimmed?

at least once, more than 1 month before calving

once, within 1 month of calving never →

5.3 How do you decide when to examine pregnant heifers for injuries or hoof lesions?

when limping or at scheduled exam only when an animal is seen to be limping

only at scheduled examination animals are never examined →

5.4 When cows are identified as lame or when a visible lesion is seen, when are they treated?

immediately within 1 week after detection

at next trimmer visit not treated →

5.5 Are dry cows and pregnant heifers housed together?

No Yes →

5.6 Are pregnant heifers introduced to higher dietary concentrate levels at least 2 weeks before calving to provide a smooth transition from close-up to lactation ration?

Yes No →

Total risk score for non-infectious causes of lameness based on pregnant heifer management

Total risk score for infectious causes of lameness based on pregnant heifer management

Section 6: Facilities for Dry Cows

6.1 What type of facility are dry cows housed in?

0 pasture, corral or loose housing (no stalls) 2 tie stalls or free stalls →

6.1a If loose housing (no stalls), what type of foundation (under bedding) are dry cows housed on?

0 stone-free ground, sand, bedded pack or pasture 1 rubber
 2 concrete 3 rough frozen or stoney ground N not applicable →

6.1b If loose housing (no stalls), how much resting space is provided for each dry cow?

0 more than 120 ft² (11.2 m²) 1 100 - 120 ft² (9.3 - 11.2 m²)
 2 less than 100 ft² (9.3m²) N not applicable →

6.1c If tie stalls or free stalls, what is the stall base (immediately under bedding)?

0 sand or soil 1 geotextile mattress or resilient mat (e.g., gel mat)
 2 hard rubber or waterbed 3 concrete N not applicable →

6.1d If free stalls, how do stall widths compare with the standards below?

0 equal to or greater than standard 3 less than standard
 N not applicable →

6.1e If free stalls, how do stall bed lengths compare with the standards below?

0 equal to or greater than standard 3 less than standard
 N not applicable →

Free Stall Dimension Standards

Measurement	Average Dry Cow Body Weight (lb/kg)				
	1000/454	1200/545	1400/636	1600/726	1800/817
	Dimension (inches/cm)				
Stall width (divider centre to centre)	44/112	46/117	48/122	50/127	54/137
Bed length (rear curb to brisket locator)	64/163	66/168	68/173	70/178	72/183

6.1f If free stalls, what is the stocking density for dry cows?

Total number of dry cows: _____ ÷ Total number of usable stalls _____
 = _____ dry cows per stall

0 less than 1 1 1 to 1.1 2 more than 1.1 to 1.2
 3 more than 1.2 N not applicable →

6.2 On average, how deep is the bedding in loose housing areas or stalls?

0 pasture or more than 10 cm (4 in) 1 6 to 10 cm (2.5 to 4 in)
 2 2 to 5 cm (1 to 2 in) 3 less than 2 cm (1 in) →

6.3 How wet is the bedding and/or ground in the dry cow facility?

0 dry 1 damp 2 moderately wet 3 very wet →

6.4 What type of floor surface is in the alleys in the dry cow facility?

0 stone-free ground, sand or bedded pack 1 rubber 2 concrete →

6.5 What type of floor surface is on animal side of dry cow feeders?

0 stone-free ground, sand or bedded pack 1 rubber 2 concrete →

6.6 How slippery is the flooring in dry cow traffic areas?

0 not at all 1 slightly 2 moderately 3 very →

6.7 How much feeder space is provided per dry cow?

6.7a If dry cows are at pasture: 0 pasture →

6.7b If dry cows are fed at a post and rail feeder:

Total linear feeder space: _____ cm ÷ Total number of dry cows _____ head
= _____ feeder space, cm/head

0 more than 60 1 46 to 60 2 30 to 45 3 less than 30 →

6.7c If dry cows are fed at headlocks:

Total number of dry cows _____ head ÷ Total number of headlocks _____
= _____ dry cows/headlock

0 less than 1.0 1 1.0 to 1.1 2 1.11 to 1.2 3 more than 1.2 →

6.8 Score the amount of dried manure on the outside of one hind leg of each of 10 dry cows, referring to the sketches below:

Dry Cow	1	2	3	4	5	6	7	8	9	10	Total
Score	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Score 0



Score 1



Score 2



Score 3

0 total less than 5 1 total 6 to 10 2 total 11 to 20 3 total 21 to 30 →

Total risk score for non-infectious causes of lameness based on dry cow facilities

Total risk score for infectious causes of lameness based on dry cow facilities

Section 7: Management Practices for Dry Cows

7.1 What percentage of dry cows have their hooves examined and/or trimmed just before dry-off or between dry-off and calving?

0 more than 80% 1 50 to 80% 2 less than 50% 3 0% →

7.2 How do you decide when to examine dry cows for injuries or hoof lesions?

0 when limping or at scheduled exam 1 only when an animal is seen to be limping

2 only at scheduled examination 3 animals are never examined →

7.3 When cows are identified as lame or when a visible lesion is seen, when are they treated?

0 immediately 1 within 1 week after detection

2 at next trimmer visit 3 not treated →

7.4 Do dry cows walk through a disinfectant foot bath at regular intervals (e.g., once a week)?

0 Yes 3 No →

7.5 Are dry cows introduced to higher dietary concentrate levels at least 2 weeks before calving to provide a smooth transition from close-up to lactation ration?

0 Yes 3 No →

Total risk score for non-infectious causes of lameness based on dry cow management

Total risk score for infectious causes of lameness based on dry cow management

Section 8: Facilities for Lactating Cows

8.1 What type of facility are lactating cows housed in?

pasture or loose housing (no stalls) tie stalls or free stalls →

8.1a If loose housing (no stalls), what type of foundation (under bedding) are lactating cows housed on?

stone-free ground, sand, bedded pack or pasture rubber
 concrete stoney ground N not applicable →

8.1b If loose housing (no stalls), how much resting space is provided for each cow?

more than 120 ft² (11.2 m²) 100 - 120 ft² (9.3 - 11.2 m²)
 less than 100 ft² (9.3m²) N not applicable →

8.1c If tie stalls or free stalls, what is the stall base (immediately under bedding)?

sand or soil geotextile mattress or resilient mat (e.g., gel mat)
 hard rubber or waterbed concrete N not applicable →

8.1d If free stalls, how do stall widths compare with the standards below?

equal to or greater than standard less than standard
 N not applicable →

8.1e If free stalls, how do stall bed lengths compare with the standards below?

equal to or greater than standard less than standard
 N not applicable →

Free Stall Dimension Standards

Measurement	Average Lactating Cow Body Weight (lb/kg)				
	1000/454	1200/545	1400/636	1600/726	1800/817
	Dimension (inches/cm)				
Stall width (divider centre to centre)	44/112	46/117	48/122	50/127	54/137
Bed length (rear curb to brisket locator)	64/163	66/168	68/173	70/178	72/183

8.1f If free stalls, what is the stocking density for lactating cows?

Total number of lactating cows: _____ ÷ Total number of usable stalls _____
 = _____ lactating cows per stall

less than 1 1 to 1.1 more than 1.1 to 1.2
 more than 1.2 N not applicable →

8.2 On average, how deep is the bedding in loose housing areas or stalls?

0 pasture or more than 10 cm (4 in) 1 6 to 10 cm (2.5 to 4 in)

2 2 to 5 cm (1 to 2 in) 3 less than 2 cm (1 in) →

□ □

8.3 How wet is the bedding in loose housing area or stalls?

0 dry 1 damp 2 moderately wet 3 very wet →

□

8.4 What type of floor surface is in animal alleys?

0 stone-free ground, sand or bedded pack 1 rubber 2 concrete →

□

8.5 What type of floor surface is on animal side of lactating cow feeders?

0 stone-free ground, sand or bedded pack 1 rubber 2 concrete →

□

8.6 What type of floor surface is in the pre-milking holding pen?

0 rubber 2 concrete N no holding pen →

□

8.7 What type of floor surface is in the area where cows are milked?

0 rubber 2 concrete or metal →

□

8.8 How slippery is the flooring in lactating cow traffic areas?

0 not at all 1 slightly 2 moderately 3 very →

□

8.9 Are cows required to make any sharp turns as they travel to or from milking or feeding?

0 No 2 Yes →

□

8.10 How much feeder space is provided per lactating cow?

8.10a If lactating cows are at pasture: 0 pasture →

□

8.10b If lactating cows are fed at a post and rail feeder:

Total linear feeder space: _____ cm ÷ Total number of dry cows _____ head
= _____ feeder space, cm/head

0 more than 60 1 46 to 60 2 30 to 45 3 less than 30 →

□

8.10c If lactating cows are fed at headlocks:

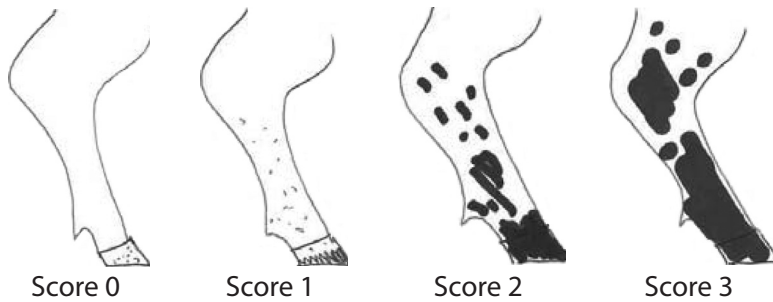
Total number of lactating cows _____ head ÷ Total number of headlocks _____
= _____ lactating cows/headlock

0 less than 1.0 1 1.0 to 1.1 2 1.11 to 1.2 3 more than 1.2 →

□

8.11 Score the amount of dried manure on the outside of one hind leg of each of 10 lactating cows, referring to the sketches below:

Cow	1	2	3	4	5	6	7	8	9	10	Total
Score	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>



total less than 5 total 6 to 10 total 11 to 20 total 21 to 30 →

Total risk score for non-infectious causes of lameness based on lactating cow facilities

Total risk score for infectious causes of lameness based on lactating cow facilities

Section 9: Management Practices for Lactating Cows

9.1 When are lactating cows examined for injuries or hoof lesions?

when limping or at scheduled exam only when an animal is seen to be limping
 only at scheduled examination animals are never examined →

9.2 When cows are identified as lame or when a lesion is found, when are they treated?

immediately within 1 week after detection
 at next trimmer visit not treated →

9.3 In the course of a year, how many times does each cow have her hooves examined and, if necessary, trimmed?

3 times twice once never →

9.4 Do lactating cows routinely walk through a footbath containing disinfectant solution?

Yes (answer questions 9.4a to 9.4f) No (go to question 9.5) →

9.4a Footbath length: 0 more than 3 m (10 ft) 1 2 to 3 m (6.5 to 10 ft) 2 less than 2 m (6.5 ft) →

9.4b Footbath liquid depth: 0 more than 10 cm (4 in) 1 6 to 10 cm (2.5 to 4 in) 2 less than 6 cm (2.5 in) →

9.4c Can cows step around the footbath to avoid immersion?
 0 No 1 Yes →

9.4d Do you rinse cows' feet before they enter a footbath?
 0 Yes 2 No →

9.4e How often does each cow walk through a footbath?
 0 more than 4 times/week 1 2 to 4 times/week
 2 from once/week to once/month 3 less than once per month →

9.4f How often do you depart from this schedule?
 0 never 1 seldom 2 sometimes 3 often →

9.4g How many cows pass through a footbath before you renew the treatment product?
 0 fewer than 100 1 100 to 200
 2 201 to 300 3 more than 300 →

9.5 On average, during the course of a day, how long are cows required to stand where they cannot lie down (e.g., pre-milking holding pen, lockups for preg checking, etc.)?
 0 30 minutes to 1 hour 1 1 to 2 hours
 2 2 to 3 hours 3 more than 3 hours N not applicable →

9.6 Do cows ever experience heat stress to the extent that they spend additional time standing to dissipate heat?
 0 No 2 Yes →

9.7 Are first-calf heifers mixed with older cows when they begin their lactations?
 0 no, first calf heifers are grouped separately 2 yes →

Total risk score for non-infectious causes of lameness based on lactating cow management

Total risk score for infectious causes of lameness based on lactating cow management

The Alberta Dairy Hoof Health Project

Lameness Reduction Management Plan

Farm Name: _____

Owners Name: _____

Veterinarian: _____

Date of on-farm lameness risk assessment and management reduction plan (yy mm dd):

At least one high priority facility improvement or management change to decrease the risk of lameness will be agreed to for implementation within the next year by the herd owner. If the owner wishes to further reduce the risk of lameness, up to three changes may be agreed upon. It is essential that the owner is willing and able to implement the proposed change(s).

Recommendation(s) for management and/or facility changes on this farm:

1.

2.

3.

Veterinarian's Signature

Owner's Signature