

ANIMAL WELFARE ON ORGANIC FARMS FACT SHEET SERIES

IDENTIFYING LAMENESS IN DAIRY CATTLE

Produced in consultation with the ECOA Animal Welfare Task Force

THE PROBLEM

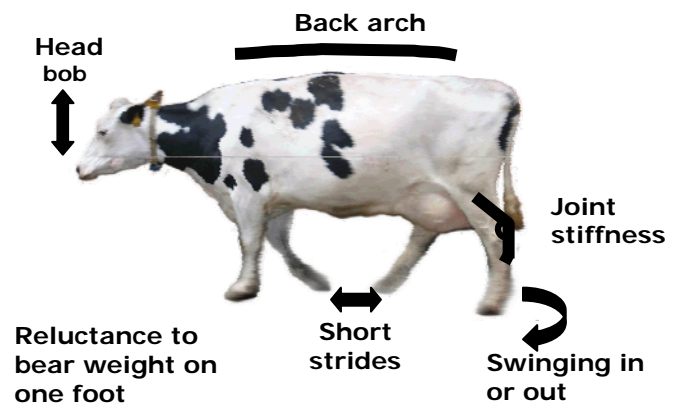
Lameness is considered a serious welfare problem for dairy cattle. Studies have shown that farmers have difficulty detecting animals in the early stages of lameness, and thus, the occurrence of lameness is often underestimated. Hoof problems are the typical cause of lameness, and these are often related to housing or other management factors. For instance, bare concrete floors cause excessive and uneven wear of the hoof, and diseases of the skin, such as dermatitis, are more common when cows have to walk on grooved or uneven concrete. Steep steps (more than 15cm), sloped walking surfaces, and wet, muddy flooring surfaces can also cause lameness. Lastly, any factor that contributes to cows standing longer on concrete and manure can increase their risk of lameness, such as uncomfortable lying surfaces due to insufficient bedding.

DETECTING LAMENESS

The reluctance to bear weight on one or more hooves is an obvious indicator of lameness, however, the signs are often more subtle.

Several scoring systems, designed to detect lameness early, have been developed based on observable changes in the way a dairy cow walks. These are usually based on a 5 point scoring system ranging from sound to severely lame. Indicators of lameness include: back arching, legs swinging in and out, short strides, jerky head bobbing, joint stiffness and reluctance to bear weight on one or more hooves. Observers assign a score to a cow after watching them walk on a level, non-slippery, hard surface from the side and from behind.

The following image shows examples of behaviours to monitor as a cow is standing or walking to assess whether she is lame or not:



1 = "Sound" – a cow that is not lame will walk with a smooth and fluid motion with a straight back, even weight bearing and no unevenness or awkwardness of gait.

2 = "Imperfect Locomotion" – a cow with slightly uneven gait, and slight stiffness in her joints. This score is not considered lame.

3 = "Mildly Lame" – a cow with an obviously arched back when walking, some swinging in and out with the hind limbs, or a slight limp in one limb.

ACTION: Keep an eye on these cows, as they are at risk for more severe lameness.

4 = "Moderately lame" – a cow that is moderately lame obviously favors one limb and walks with a limp. These cows also have an arched back when standing and walking, a jerky head bob, and stiff joints.

ACTION: it is advised that you have a professional hoof-trimmer see these cows immediately.

5 = "Severely lame" – cows that have extreme difficulty in rising and walking, extreme arched position, very jerky head bob, joint stiffness and noticeable weight loss are very lame cows.

ACTION: it is advised that you have a hoof-trimmer or a veterinarian experienced in lameness see these cows immediately.

IDENTIFYING HOOF INJURIES

Regular hoof trimming provides an opportunity to check for hoof disorders which commonly cause lameness, such as:

Less severe:

- 1) Elongated or cracked hoofs
- 2) Hemorrhaging or bruising of the sole
- 3) Heel erosion

Requires immediate treatment/attention:

- 1) Ulcer in the sole
- 2) Ulcer in the whiteline ("whiteline disease")
- 3) Foot rot, swelling to fetlock, foul odour, separation of claws
- 4) Digital dermatitis ("strawberry heel wart")



Whiteline disease



Digital Dermatitis



Sole Ulcer



Foot rot

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MANAGING LAMENESS

Good record keeping of lameness and hoof injuries is critical!

Recording the occurrence of lameness will help determine the extent of the problem in your herd and provide clues as to the underlying cause. A professional hoof-trimmer should see your cows at least once a year (for instance, when cows are dried off), and cases of lameness should be treated immediately. A lameness prevention program developed in consultation with your nutritionist, veterinarian and hoof trimmer is also highly advised. Examples of management practices that might cause lameness:

- 1) **Overstocking** at the feed bunk or lying stalls can increase the time that cows stand in manure.
- 2) **Uncomfortable lying surfaces** or inadequate bedding can increase standing time.
- 3) **Improper foot-bathing** can help diseases spread between cows in your herd.
- 4) **Long, rocky pathways** between pasture and the milking parlor can cause hoof injuries.
- 5) **Concrete flooring** is a known risk factor, particularly when cows are forced to stand for long periods of time (e.g. waiting to be milked).

RESOURCES

Rushen, J., de Passillé, A. M., von Keyserlingk, M., Weary, D. M. 2008. *The Welfare of Cattle*. Springer, Dordrecht, The Netherlands.

"Firm Steps: Identifying Lameness in Dairy Cattle", a CD-ROM aimed at producers, educators and veterinarians and produced by Alberta Agriculture and Food. \$20 for 2 CDS from www.agriculture.gov.ab.ca/publications

<http://www.cattle-lameness.org.uk/index.php> The Healthy Feet Project from the University of Bristol, UK, contains a wealth of practical information to assist producers in addressing lameness in dairy cows including videos clips showing different degrees of lameness and record keeping sheets for identifying hoof problems.

For more information:

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