

Lameness in Dairy Animals: Reading the Early Signs and Preventing the Second Injury

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Lameness is one of the most common health problems of dairy cattle and buffaloes, yet it is also one of the most tolerated. A slow walk, a shortened stride or a limb held away from the ground is often accepted as a passing complaint, and treatment is postponed until the animal refuses to stand. By that stage the loss is already substantial in terms of milk yield, body condition, breeding performance and treatment cost. This article explains how a farmer can recognise lameness at an early stage, what should be done during the first few hours after an injury, why the second injury is often more damaging than the first, and how simple corrections in flooring, grouping and handling protect the animal until the veterinarian arrives. The role of clinical examination and radiography in reaching a correct decision is also described.

Introduction

Walking is such an ordinary activity in a dairy shed that very few of us actually watch it. An animal that walks slowly, places one foot carefully, nods its head with every step or keeps its back slightly arched is telling us something. It is in pain. In cattle and buffaloes, pain is expressed quietly. There is no cry and no obvious struggle, so the change in gait is often the only message the animal can send. Lameness should never be accepted as a normal feature of a dairy farm. Like fever or a sudden drop in milk, it points towards an underlying problem, which may lie in the hoof, the skin, a tendon, a joint or a bone. Some of these heal with rest and simple care, while others become permanent if they are ignored for a few days. Since the farmer cannot tell the two apart from the outside, early attention is what protects the animal. The animal shown in Figure 1 was presented at a veterinary clinic with lameness of the hind limb. The posture in the photograph is typical. The affected limb bears less weight, the opposite limb carries the extra load, and the animal stands with a slightly humped back and a lowered head.

Why Lameness Deserves Immediate Attention

A lame animal eats less, simply because reaching the manger is painful. Reduced feed intake lowers milk yield and body condition within a few days. Standing and lying become uncomfortable, so rest is disturbed. Heat signs are expressed poorly, service is delayed and the calving interval widens. Repeated treatment, extra labour and premature culling add to the

cost. Studies from organised dairy herds have reported lameness in a large share of animals, and foot lesions have been recorded as an important reason for reduced productive life (Becker et al., 2014; Solano et al., 2016; Roche et al., 2024).



Fig. 1. A crossbred dairy cow presented at the veterinary clinic with lameness of the left hind limb. The animal rests the affected limb, transfers body weight to the sound side, and stands with a slightly arched back and lowered head carriage. Such changes in standing posture and weight distribution are usually the earliest visible signs of limb pain and can be noticed by the farmer inside the shed itself. (Photograph: Authors)

The financial loss is therefore not limited to the cost of medicines. It spreads across milk, reproduction and the working life of the animal. In pregnant and high-yielding animals, the loss is even greater, because these animals are already carrying a heavy physiological load.

The First Few Hours After an Injury

The way an injury is handled on the first day often decides how well it heals. Four simple actions are within the reach of every farmer.

1. Separate the animal from the herd

A lame animal in a crowded shed is pushed, chased and made to move again and again. Shift it quietly to a calm, shaded corner where feed and water are within easy reach. For a pregnant animal this step is particularly important, because a fall in a crowded group can create a fresh and more serious injury.

2. Do not test the animal by making it walk repeatedly

A very common practice is to drive the animal up and down to see whether it has improved. Every such round adds strain to an already damaged limb. One quiet observation of the gait is enough. After that, the animal should be allowed to rest and the veterinarian should be informed.

3. Make standing and lying down easier

A painful animal rises with difficulty. Give it enough space to move its head and forelimbs freely, because cattle need this room to get up. Provide a surface that offers grip. If the animal is unable to rise at all, veterinary help must be arranged without delay. Dragging or pulling by the limb or tail should be avoided completely, as it causes muscle and nerve damage.

4. Restrict movement of the injured part only under advice

If a fracture or a serious joint injury is suspected, the limb should be disturbed as little as possible until it is examined. A veterinarian may advise temporary support or a splint depending on the site of the injury. Bandaging done without guidance often does more harm than good, because a tight bandage cuts off the blood supply and an improper splint shifts pressure to the wrong point.

The Cycle That Turns a Small Injury into a Big One

One injury rarely stays alone. The sequence usually runs as follows:

Injury → pain → unequal weight bearing → unsteady movement → slipping → fresh injury
When one limb is painful, the animal shifts its weight to the remaining limbs, which were never meant to carry that load. On a wet or polished floor, it then loses balance, and the fall may damage a muscle, tendon, joint or bone that was healthy an hour earlier. The earlier this cycle is broken, the smaller the final damage. On the farm, the following order works well:

Separate the animal → restrict movement → correct the floor → bring feed and water close → call the veterinarian

Safe Housing: The Simplest Correction on Any Farm

Flooring is the cheapest and most neglected part of lameness control. A lame animal is already unsteady, and a smooth, wet or dung-covered concrete floor converts a minor problem into a major one within minutes. The following measures cost very little:

- Keep the resting area dry and clean, and drain water away from where animals stand.
- Provide bedding of straw, dry sand or any soft, non-slip material in the lying area.
- Where the floor is polished or worn smooth, prepare an earthen or kaccha area for the affected animal.
- Remove sharp stones, broken concrete, protruding nails and loose iron pieces from passages.
- Keep the path between the shed, the manger and the milking area short and free of slope wherever possible.

Regular attention to the hoof is equally important. Overgrown hooves change the way weight falls on the sole and invite injury, and timely trimming by a trained person has been reported to improve comfort and reduce lameness (Stoddard and Cramer, 2017).

Extra Care for Pregnant and Lactating Animals

A pregnant animal carries extra weight and finds it harder to rise, and in advanced pregnancy a heavy fall carries its own risks. A freshly calved or high-yielding animal that hesitates to walk visits the manger and water trough less often, so milk yield falls quickly. In such animals, preventing a second fall is as valuable as treating the first injury. Keep them in a less crowded, non-slippery area with feed and clean water within easy reach, watch them two or three times a day for changes in standing and walking, and call the veterinarian if the lameness is marked or does not improve.

Clinical Examination and the Value of Radiography

A veterinarian first identifies the affected limb and then locates the painful region by observing the gait and handling the limb carefully. Swelling, heat, an abnormal angle of a joint, a wound, a foul smell from the interdigital space or a soft fluctuating area all give useful information. External examination alone, however, cannot always separate a soft tissue swelling from a fracture or a joint injury, particularly around the hock and stifle where the muscle mass is thick. Radiography is used at this stage. Two views taken at right angles to each other are needed, because a fracture line or a displaced fragment may be hidden in a single view. The films in Figure 2 were taken from the animal shown in Figure 1 and cover the hock region of the left hind limb. Such films help the veterinarian decide between rest and medication, external support and surgery, and they allow the farmer to be told early how long the treatment is likely to take.



Fig. 2. Radiographs of the left hock (tarsal) region of the lame cow shown in Figure 1, with both projections recorded on a single film: (a) dorsoplantar view and (b) lateromedial view. Two views taken at right angles to each other are essential, since a fracture line, a small displaced fragment or an early joint change may not be visible in one projection. Radiography confirms whether the swelling of the limb involves only soft tissue or also the underlying bone and joint, and it guides the choice between conservative and surgical management. (Radiographs: Authors)

Practices That Delay Recovery

Some habits followed with good intention actually slow down healing or create new damage. These should be avoided:

- Forcing a painful animal to walk in order to test its progress.
- Dragging an animal that is unable to stand.
- Pulling or twisting the affected limb to straighten it.
- Applying kerosene, acid, engine oil, hot mustard oil or any unknown irritant on a wound.
- Giving pain killers, antibiotics or injections without veterinary advice.
- Tying a tight bandage or fixing a splint made of bamboo or wood without guidance.
- Keeping a severely lame animal on a wet or polished floor.
- Waiting for several days when the animal is unable to bear weight on the limb.

When Lameness Becomes an Emergency

Veterinary help should be sought on the same day if any of the following is seen:

- The animal cannot stand or cannot place any weight on the limb.
- There is sudden and marked swelling of a joint or the limb.
- The limb hangs loosely or bends at an unusual point, suggesting a fracture.
- There is a deep or open wound, or bleeding that does not stop.
- The animal grinds its teeth, refuses feed or shows other signs of severe pain.
- The animal falls repeatedly while trying to stand.
- The lameness worsens quickly over a day or two.
- A pregnant animal has had a heavy fall or a road injury.

A severely lame animal should never be left to recover on its own.

A Simple Reminder for the Farm

Four words are enough to remember the correct response to lameness: isolate, stabilise, support and inform.

- Isolate: move the injured animal away from the herd to a quiet place.
- Stabilise: stop unnecessary movement and prevent further slipping.
- Support: give a dry, non-slippery resting area with feed and water within reach.
- Inform: call the veterinarian for examination and treatment.

Conclusion

Lameness is not merely a difficulty in walking. It is a signal of pain that quietly reduces feed intake, milk yield, breeding efficiency and the working life of the animal, while raising the cost of keeping it. The message for the farming community is a simple one. Watch how your animals walk every day, and act on the very first change in gait or posture. When an injury does occur, separate the animal, keep it on a safe non-slip surface, avoid forcing it to move, and call the veterinarian early rather than after a week of home remedies. The first injury may be an accident. The second one, in most cases, can be prevented. Sound limbs make comfortable animals, and comfortable animals make a healthier and more profitable dairy farm.

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