

# Early detection key to lameness management

As cattle are housed for the winter the incidence of lameness tends to rise, which can affect not only the animal's welfare but productivity, as **Heather Briggs** reports

Lameness in dairy cattle can prove costly, warns livestock specialist Alex McPherson of Drove Veterinary Practice.

A working definition of lameness is any problem to a cow's foot or leg that causes the animal to change the way she walks.

There are two basic categories of lameness, bacterial and physical injury, although some cases bridge the two when a bacterial infection enters via an injury. The causes are often due to environmental factors that predispose the animals to the risks of injury and infection, notes Mr McPherson.

"As we go towards winter, when most herds are housed, the incidence of lameness tends to go up," he says. "Pinpointing the origin of your lameness problem can start by good record-keeping that helps you identify the type of lameness most often seen in your herd."

He recommends taking note of the dates the lameness is identified, which cow or cows are affected and their lactation stage, the exact condition detected, plus treatment given and results.

"Other useful information, such as the underfoot conditions in the area where the cattle were, can also help locate the causes and find solutions."

## COMMON CAUSES

Two of the more common causes of lameness are foot foul and digital dermatitis, which are usually caused by bacteria commonly found in soil and animal manure and can cause a necrotic infection between the toes.

"Walking round in wet, muddy conditions, or in slurry, softens the skin and makes it more vulnerable to breaching, which then makes it easier for the bacteria to enter.

"Digital dermatitis can interrupt hoof horn production which can provide bacterial entry into the digit and cause pedal osteitis," explains Mr McPherson.

He goes on to point out that slurry heel also tends to be caused under similar conditions, with the bacteria eating away at the base of the heel, causing deep erosions that might even pass through the



Cows bullied in the lying down area might not get a chance to rest their feet

## LAMENESS CAUSES

Common causes of cattle lameness include:

- Sole ulcers
- Laminitis
- White line disease
- Digital dermatitis
- Foul-in-the-foot, including 'super foul'
- Punctured sole
- Heel horn erosion
- Overgrown claws, especially the outer hind claws
- Leg injuries

horn and infect the heel bulbs.

When the cause of lameness is bacterial, the incorrect use of foot-baths can add to the problem, particularly if too many heavily soiled cattle pass through it or not enough chemical is used, he warns. "Rather than helping, you can cause digital dermatitis to spread through the herd if you don't pay attention to detail."

White line disease can be caused by frequent tight turns on hard ground, in addition to walking over cow tracks covered with sharp flints. "Coming out of the parlour the cows often have to pivot and turn on a hard surface, which is not good for their feet. But this is not the only reason, as when a ring feeder is used, the cows will often shuffle their feet and push to get the last bit of feed out, putting extra pressure on their front feet, which also can lead to cases of the disease."

Therefore, Mr McPherson emphasises, it is well worthwhile maintaining sound conditions

underfoot with minimal slurry contact and regular foot trimming and foot-bathing.

"There are numerous causes of cattle lameness and they often include a combination of poor quality floors in housing, poor cow tracks, cows being forced to stand for too long on hard surfaces, inadequately sized cubicles, ineffective foot trimming, poor nutrition and the often more obvious infectious diseases."

Laminitis can be caused by dietary problems such as too much concentrate being given in the parlour, resulting in transient acidosis.

"It's always a good idea to check with your vet to ensure you're not suddenly feeding higher protein to young heifers who are not used to it. In addition, if they are bullied in the lying down area, they might not get much chance to rest, so they will be on their feet for longer, compounding the risk of foot problems."

Sole ulcers can be caused by insufficient lying times due to poor cow comfort or overstocking. They are caused by bruising of the soft tissues between the wall of the claw and the pedal bone which leads to an interruption in horn production. Sole ulcer treatment requires careful trimming to dish out the horn around the ulcer and transfer the weight bearing to the other healthy claw. It is very difficult to get sole ulcers to fully resolve and will require frequent corrective foot trimming for the rest of their lives.

Depending upon the specific

problem causing the lameness and its severity, the condition may have a large impact on a cow's welfare as well as negatively affecting performance in terms of yield, fertility and longevity, Mr McPherson continues. "The key to improving your lameness problems is to detect it early and then treat it, following up with on-going monitoring of cow mobility scoring. This can help to reduce the duration of an individual cow's lameness and may even prevent others in the herd from suffering from the same condition.

"If you're seeing a trend of a particular lameness, you may need to dig deeper to find the underlying causes."

## MOBILITY SCORING

Mr McPherson adds that the regular mobility scoring method devised by DairyCo can help to discover lameness early on. "Having a fresh pair of eyes watching movement can often detect abnormalities of movement, and grade it accordingly. This should then be passed on to your vet or foot trimmer, so they can make any necessary corrections.

"If you see an increase in incidence of lameness, a good area to start is to assess potential causes."

As part of the farm routine, he recommends a preventative foot trimming programme and a regular mobility scoring assessment. However, foot trimming needs to be done by properly trained staff.

"Good stockmanship, such as letting the animals move at their own speed, can help to minimise problems, particularly where underfoot conditions are not ideal.

He notes that although good cow husbandry and sound nutrition can help ensure healthy horn on the feet, sometimes the problem can be genetic.

"You should be able to keep track of foot problems in your records, and if you see it passing down through the generations, it could be the result of a genetic disposition.

"Don't forget that good veterinary advice is always available and can help make a real difference."