Solar Ulcers & Their Prevention 2

Nial O'Boyle
Holstein Journal – December 2004, p86

Solar ulcers and their prevention

In the second of two articles, vet Nial O'Boyle looks at reducing the effects of solar ulcers. Born in Northern Ireland, Nial recently began work in Michigan on a 3,200 head dairy unit having previously worked in the UK at the Nantwich Veterinary Group

Cows spend a large amount of time standing and walking on concrete. As discussed in the previous article, the properties of concrete can act as a catalyst for lesions such as solar ulcers. In Sweden, the majority of cows are still milked in tie stalls. Modern tie-stalls have rubber mats and slats at the back, and it has been found that this has reduced the lameness problem considerably.

As they now make the transition from tie stalls to cubicles, the Swedes have brought this knowledge with them. Feed stalls are put in above the alley floor, the cows are standing on rubber whilst they eat and, as in the tie-stall system, they muck onto a slatted area, helping keep clean.

Rubber has got the advantage over concrete as it has 'give' or shock-absorbing qualities. A research group in Sweden looked at the way cows walk and rubber produced a much more natural gait than concrete. Lame cows improved their gait on rubber, compared to concrete. Perhaps rubber is enabling the load to be shared better between claws and cows can be more confident with their footing. Rubber can get slippery when wet, but grooving and indents on the underside (such as hexagonal patterns) can alleviate this. Toe overgrowth due to lack of wear does not seem to be the problem that was originally thought and the overgrowth at the sole does not seem to happen to the same extent as on concrete.

Initial trials are still underway over the long-term difference between concrete and rubber. Cows reportedly show more natural oestrus behaviour on rubber, I would imagine it is less painful to dismount and carry a cow on a softer surface. At the Nantwich Veterinary Practice, we saw a few cases of bulls who would not mount a cow on concrete, yet would immediately do so on grass. I have heard of units

that put down rubber strips and have the cows gather at these areas to display oestrus. The same group in Sweden has carried out many preference tests, with very obvious results. Where rubber strips are put down for walkways, the cows will wait to use the rubber areas. Laying down strips is an inexpensive option, these could be put along the feed barrier or collecting yard, where cows spend a long time standing.

The collecting yard is another source of problems. Cows spend a great deal of time standing and pushing away from bully cows or threats, or towards the centre of the herd. By doing this, they wear and stress areas of their feet unnaturally, which leads to problems like white line disease and excessive wear. Sharp turns out of the parlour and around corners in the cubicles will also lead to problems like these. Simple and cheap changes around the farm can help counteract this and it is an important consideration when planning new buildings.

Regular claw trimming has long been recognised as important for both curing and preventing new lesions. The effect of concrete means sole concavity is lost as soon as 50 days after housing. In order to prevent the cycle of overgrowth on concrete producing irreversible changes, it is vital to get on a regular trimming programme and keep to it. This will have an immediate effect and is much more beneficial than the sire effect. Members of NACFT (National Association of Cattle Foot Trimmers) possess the skill and equipment to enable this routine to pay for itself in decreased lameness cases.

As calving is a recognised danger time for lameness, each cow should ideally be trimmed just before drying off. If this is not practical, all cows should be done before the onset of housing and again in the early spring. Cows housed all year round should questionably be trimmed three times a year. Remember the overgrowth at the sole is unnoticeable unless the foot is picked up. Farm situations and environment should be taken into account when trimming, such as the amount walked, new abrasive concrete etc.

As heifers are susceptible to damaging their fat pads and replacing it with scar tissue, perhaps the worst thing we can do is calve them down and put them in with a herd of cows in heavily stacked cubicles. If practical, having fresh calved heifers in a group or better still on straw (or any soft flooring) for the first few months will help overcome this risk period. Heifers are known to stand for long periods when mixed with cows, as they often have to wait for cubicles and space at the feed barrier. It is important to remember that feet need time to get used to a new surface, so heifers coming off pasture should ideally be introduced to concrete before calving.

Records of lesions can point towards the risks and bottlenecks that are leading to a problem on a particular farm. No fertility or mastitis problems are investigated without consulting records. The amount

of recording producers have to do is a welfare problem in itself, but they are essential and ready made charts make it easier work.

Lameness has the disadvantage that no major drug companies have a vested interest. Admittedly, it is not a money- spinner for vets like mastitis and fertility work. However lameness is still a major reason for culling and a large welfare problem. The general public will not know or understand about fertility and mastitis problems but lameness is obvious to the layman. It is important that the vet, producer and professional trimmer or trained herdsman have a good working relationship and meet regularly to discuss and implement ways to reduce the problem.

Whilst in Sweden, I was impressed with not only the attention to flooring for the cows but also for the milker. Many parlours had rubber floors and some had raised non-fixed floors, which took the force away from your joints when you swivel around from side to side. It felt very comfortable and may help delay the inevitable arthritis for a bit longer!