Pain has been defined as an unpleasant, sensory experience representing awareness by the animal of damage or threat to its tissues (although there might not be any damage) that elicits protective actions, and results in learned avoidance. Pain is a complex experience, dependent not only on the severity of the stimulus and the degree of tissue or nerve damage, but also on previous pain experiences.

Pain may be acute, chronic, localised, generalised, physical, emotional, adaptive and maladaptive. An individual may experience several types of pain at the same time. The presence of pain can generally be more reliably identified than the intensity of pain. Pain may also involve fear and lead to the anticipation of more pain causing anxiety - use of electric goads during handling/loading animals would be a good example.

Pain in farm animals is typically assessed by changes in general body functions, such as reduced food intake, decreased production and lameness; physiological response (e.g. increased heart rate); and include:

- Dull, depressed, lethargic demeanour
- Isolation, failure to graze with others in group
- Expiratory grunt, teeth grinding
- Inappetence, decreased rumination
- Increased respiratory rate
- Increased vocalisation
- Increased sensitivity (hyperalgesia)
- Attention/licking at site of wound/lesion
- Pain associated with the locomotor system will be seen as lameness but many of the clinical indicators listed above will also be present, such as failure to graze with the cows in the group, reduced feeding times, increased lying, reduced grooming and increased respiratory rate when attempting to walk.

In addition to the obvious welfare implications, pain reduces animal performance, whether milk yield or growth rate, and thereby reduces farm income. Diseases and injuries causing pain must be prevented wherever possible and this is the goal of all farmers and their veterinary surgeons.

The severity of disease and associated pain should be recognized as a function of duration and intensity on an individual basis, and prevalence on a flock/ herd basis. Of the 5 freedoms the freedom from pain, injury or disease by prevention or rapid diagnosis and treatment is perhaps the most challenging for stockpersons, farmers and their veterinary surgeons.

Inflammation induces alterations in pain information processing, which may have serious long-term consequences for the animal’s well-being. Hyperalgesia - exaggerated responses to noxious stimuli are common features of inflammatory pain. A “hyperalgesic”, state results in a response to an unpleasant stimulus at a level which would not affect “normal” individuals. A good example is that the animal kicks vigorously when the affected foot is gently palpated/ trimmed. Allodynia - the perception of innocuous stimuli as noxious. An example is that the animal’s affected foot does not contact the ground when the animal is walking.

Continued
In farm practice in the UK, NSAIDs are commonly used to treat the pain associated with a wide range of infectious conditions including mastitis, respiratory disease, lameness and joint infections. We routinely use NSAIDs before surgical procedures such as a caesarean operation or left displaced abomasum surgery. Many vets and farmers will administer NSAIDs after a difficult calving. NSAIDs are particularly effective in reducing acute pain associated with castration and disbudding/dehorning. Where appropriate course of antibiotic therapy may be essential to treat disease and remove the source of inflammation and pain. Prompt treatment of disease returns the animal to normal more quickly with increased production and profitability. Treatment of pain is a clear win-win situation with advantages for the animal and the farmer in terms of reduced loss of production/performance.

Since many causes of pain in animals can arise from diseases which are preventable by vaccination, vaccination should be major component of the farm’s herd and flock health programmes and is a cost-effective means of preventing disease such as pneumonia and the pain associated with that disease. Many causes of pain can arise from the housing conditions in which we keep our stock, particularly dairy cattle. Many physical injuries are caused by inadequate numbers of comfortable cubicles, narrow passages with tight turns and slippery floors. Speak to your vet for more advice on how to improve pain management in your livestock.

Jonny Duncan has returned from a 10-day trip to the Midwestern States of America, and here is a brief outline of the experience he gained.

‘Visiting large dairies in Iowa, South Dakota, Minnesota, Indiana and Michigan, has given important first-hand experience of the processes involved in running large high-production herds. It has highlighted the key elements these businesses focus on, to ensure longevity and maintain profitability, within a fluctuating global market. Over the course of the visit, I shadowed Nial O’Boyle, a familiar veterinarian to the Congleton area of the Willows Vet Group, and a leading veterinary advisor in the US for both the 60,000 cows he is affiliated with directly, and also further afield, troubleshooting for other US dairy businesses.

Daily, we visited herds ranging from 1500 cows to 8300 cows, with a range of management strategies in place, depending on the breed of cow, and current feed/management strategies in place, depending on the breed of cow, and current feed/milk price. However, as expected, the common theme was housing 365 days a year, and optimising efficiency, with some achieving this better than others! The American approach to many aspects of dairy farming is very translatable to farms here in the UK, whether they are large or small herds, with high or low inputs and outputs. In particular, their attitude to staff management, use of genomics and IT software complimented the highly commercial industry they are in. Importantly, there were also aspects which did not translate well, but could be significant in the future, as some milk buyers begin to pay more for solids than pure liquid. There is no ‘blueprint’ for dairy farming across the pond, there are many different strategies for producing a profitable ‘hundredweight’ of milk.’

We hope to share the knowledge and experience gained, in further newsletters and with an evening meeting in the near future.

FOR HIRE

Portable Cattle Handling Systems

The practice now have available a number of portable cattle handling systems which may be hired by clients to facilitate jobs such as TB testing, vaccination or worming groups of cattle where safe and adequate facilities are not available. The systems comprise of an IAE crush with locking yoke and back gate, each crush has 10 x 8ft hurdles and pins to make a holding pen or race as required. For larger groups of cattle a second pallet of 18 gates is available to increase holding capacity. The system can be hired at a cost of £300 per week with £200 re-credited to account on return of cleaned and disinfected equipment. Whilst on hire all insurance of the equipment is the responsibility of the client, the systems can be temporarily added to farm policy at negligible cost. A flatbed trailer with 3.5t capacity is required to transport the system as well as a forklift or similar for unloading/loading on site. The practice may be able to assist with delivery at cost if required.

For more information please contact Owen Tunney or Darrell Irwin.

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