

NSAIDs offer pain relief and better long-term outcomes

# Reduce pain and reap gains

Pain management is becoming routine and is now the norm on most dairy units after, say, a difficult calving. And not only does it improve cow welfare, but it also has a positive effect on recovery rates. We spoke to two vets to find out more.

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**R**outine administration of pain relief to cows – be it for lameness, a difficult calving or a nasty bout of mastitis – not only has positive welfare implications, but it can also speed up recovery rates and limit the long-term impact of disease or injury.

The use of pain relief – typically non-steroidal anti-inflammatories (NSAIDs) – is much more routine than it was, say 10 years ago. “Twenty years ago, vets were almost apologetic when they administered a pain killer,” says vet Piers Pepperell, from Devon-based Mount Vets.

“Generic NSAIDs were not available then and the cost of using such drugs was much higher. But over the last decade, since the cost has fallen and the benefits are much more widely recognised, their use has become more prevalent and, in some cases, routine,” he adds.

“There was also a misconception that, since cows don’t readily show pain that they don’t feel it as much. Their physiology, as a ‘prey’ animal, means that they don’t readily show it. But we know that they certainly do feel pain.” Many producers will now readily reach

for the bottle of NSAID. “There’s been a change of mindset. Producers not only want to relieve any discomfort, but they also realise that the sooner a cow is back on her feet and eating and drinking, the quicker she’ll recover and the more likely she is to complete that lactation,” says Mr Pepperell.

The falling cost of NSAIDs – one shot providing more than 24 hours of relief costs less than £10 – has also played a role here. But improved awareness of pain – and the conditions that cause it – is the biggest driver, coupled with the longer-term benefits of reducing pain.

## Faster recovery

The benefits of using anti-inflammatories to treat cows with hoof lesions were highlighted in a recent lameness study, carried by researchers at the University of Nottingham. It found that cows with claw horn lesions – which were treated with a therapeutic trim, a foot block on the sound claw, and a three-day course



of the NSAID ketoprofen – were most likely to be ‘sound’ five weeks after treatment. This work suggests that cows benefit from NSAID treatment, in addition to therapeutic trimming and elevation of the diseased claw using a foot block, even when mildly lame.

“NSAIDs do speed up recovery, as well as improving cow welfare. So producers – and cows – win in both the short and long term,” adds Mr Pepperell.

NSAIDs work by reducing inflammation and swelling, which Somerset-based vet Michael Head, from Shepton Vet Group, says not only reduces pain but can also aid healing. “Blood flow to an injury or infected area is improved and swelling is reduced, because antibiotic treatment can reach its intended target.”

He says that pneumonia in calves is a good example of this. “An NSAID will help to reduce lung inflammation, as well as making the calf feel better. It also allows antibiotic treatment to penetrate the lungs. And blood flow is also better if you get a cow up and moving about. This will also allow her to eat and drink, which will also aid her recovery and prevent secondary ‘production’ diseases, such as LDAs.

“There are definitely other benefits to the cow’s health and productivity



*Piers Pepperell: “NSAIDs do help to speed up recovery after a difficult calving”*

that go beyond just making her more comfortable. Vets and producers know this, and that’s why NSAIDs are now used routinely.”

The type of NSAID required, and how often it should be administered, depends on the condition or disease being treated. A trial using Metacam to treat cows with acute mastitis in New Zealand, for example, showed a significant decrease in culling rate. “Long-term somatic cell count in treated animals was lower. And treated cows were less likely to be culled during that lactation,” says Mr Pepperell.

### **Transition period**

He believes that was because the NSAID was administered early in lactation, when some cows would still be a little sore after calving. “When the study was carried out in New Zealand, most cases of mastitis occurred within the 1st week of calving. Giving an NSAID at this stage of lactation would alleviate calving related pain which would have led her to eat and drink more. It serves to reduce discomfort at a difficult time in the cow’s production cycle and helps her through the transitional period. This may well have been the reason for the improvement in culling rates in the treated group.”

He adds that if cows eat well in the transition period then this can prevent other issues early in lactation, such as LDAs. “Rumen fill is better and she’s under less nutritional stress, so she’s better able to fight off infections such as mastitis. If you can get a freshly calved cow up and eating and drinking well then you’re half way towards her having a trouble-free and productive lactation.”

He says that after a difficult or assisted calving the cow is likely to have a much greater amount of internal bruising. “Whatever she’s experiencing, she won’t be herself. Even if she is physiologically designed to hide her pain, she will show indirect signs of it,” says Mr Pepperell.



*Michael Head: “Reducing inflammation increases blood flow and aids healing”*

So looking for cow signals is key. Is she standing to feed her calf and is she interested in the calf? Producers should practice caution here because cows have a strong maternal instinct and will still lick and nuzzle a new-born calf, even if they are in a lot of pain.

Cows also exhibit pain by grinding their teeth and their respiratory rate can be higher. They can also look tentative on their feet, keeping movement to a minimum, and they may also be bullied by other cows. “Their position in the herd’s pecking order will change, because the other cows pick up that she’s in pain and that she’s not a threat,” explains Mr Pepperell.

### **Thirty-second rule**

“Ask what’s typical for that cow. Just stand and look at her for 30 seconds – sounds like a short amount of time but it will feel longer. And anything that deviates from the norm probably means she’s in pain and will benefit from a dose of NSAID.

He says that, currently, around 50% of producers will routinely administer an NSAID after a difficult calving. If the vet is called out that rises to 100%. “Producers are experienced at calving; if they call the vet for assistance it means it’s extremely difficult and the vet will administer an NSAID routinely.”

Mr Pepperell and Mr Head would both like to see an NSAID used after every difficult calving.

“Welfare improvements aside, I think producers will see cows getting a better start their to their lactation and complete it with fewer, if any, problems,” says Mr Pepperell.

“Transition is a tricky time for a cow, even if she has a relatively easy calving an NSAID may well ease that transition, even if she is only a little sore after calving. Their use offers benefits both on welfare grounds and for a positive long-term outcome.” |

*Standard practice: most producers will now administer an NSAID to offer cows some pain relief after a difficult calving*