

THE IMPORTANCE OF NSAIDS IN THE TREATMENT OF LAMENESS

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What are NSAIDs?

Non-steroidal anti-inflammatory drugs (NSAIDs) are drugs that reduce pain and decrease inflammation. They work by blocking the production of chemicals in the body that amplify the pain signals going to the brain, and that cause tissue swelling. There are a number of NSAIDs that are available to use in cows; common ones include ketoprofen and meloxicam. These NSAIDs are very beneficial in many situations when a cow has pain and inflammation, including when a cow is lame. NSAIDs have varying withdrawal periods; for example, meloxicam has a milk withdrawal period of 5 days (and 15 days for meat) whereas ketoprofen has no milk withdrawal period (and 4 days for meat if given intramuscularly, 1 day if given intravenously).

Are many Irish farmers using NSAIDs?

Despite their benefits, many Irish farmers are currently not using NSAIDs in lame cows. A recent Teagasc study, which involved a survey of 1,002 dairy farmers and 116 vets, reported that only 8% of farmers use NSAIDs as part of the treatment of severely lame cows, and only 3% use NSAIDs in the case of mild lameness. In Ireland, NSAIDs are classified as “prescription only” medicines; however, farmers can administer NSAIDs themselves to cows in line with the prescription obtained.

What are the effects of pain and inflammation resulting from lameness?

Lameness is a painful disease, and in many cases the pain is severe. We can see this when lame cows walk; it is too painful for them to bear their full bodyweight on the lame leg, so this is why they limp. This impacts their behaviour in a number of ways which have direct knock-on effects on their productivity:

- Many lame cows eat less as it is too painful to be on their feet for long periods of time to graze. This contributes to a loss in milk production: research has shown that lame cows produce less milk, and this reduction in milk production can begin as early as three months before the lameness is detected and can persist for up to 5 months post treatment.

- Lamé cows also display less oestrus behaviour (such as mounting) for the same reason, making it difficult for the farmer to detect when they are in heat. The pain and inflammation associated with lameness increase the stress hormones in the body, which can affect the reproductive hormones, making it harder for the cow to cycle normally and go back in calf.

Where do NSAIDs fit into the treatment of lame cows?

When a cow is lame, there are a number of options that can form part of her treatment. Treatment should include paring the horn of the affected hoof: to identify the lesion causing lameness, to correct the weight-bearing surface of the claw to ensure correct load-distribution, to remove any excess or underrun sole horn, or sometimes to open an abscess to allow it to drain. Treatment should also include resting the cow (not making her walk long distances). Often, placing a shoe or block on the non-affected claw is necessary to take the pressure off the sore claw. In other cases, a topical spray and a bandage might be needed in the case of digital dermatitis. Occasionally, the cow might need antibiotic treatment; for example, if a cow has a serious bacterial infection (e.g. foul-in-the-foot). In most cases, however, antibiotic treatment is not required, because most lameness is non-infectious (sole haemorrhages, ulcers and white line disease).

On the other hand, NSAIDs are of benefit in almost all cases of lameness. NSAIDs will reduce the pain and inflammation in the affected limb, which will make the cow feel a lot better. As a result, she will have an improved appetite and a better ability to perform all of her normal behaviours. NSAIDs allow a quicker recovery from lameness. A previous study in the UK found that if lame cows were treated with a 3 day course of NSAIDs in addition to a trim and a block on the affected claw, they were more likely to have recovered from lameness 5 weeks after treatment (56% of these cows recovered) than cows who got a trim but no NSAIDs (only 36% of these cows recovered). Reducing the time to recovery will clearly have direct improvements in terms of milk production and fertility.

As with all parts of lameness treatment, it is critical that NSAIDs are given early in the course of the disease to have the most beneficial effects. As part of the same UK research, it was found that if the NSAIDs (+ trim, + block) were given to cows that had been lame for more than 2 weeks, only 16% of them had recovered by 42 days, whereas if cows that had been lame for less than 2 weeks were given the same treatment (NSAIDs + trim + block), 85% of them recovered. Cows in the later stages of lameness have more pathological changes to the anatomy of the hoof, which means the NSAIDs are not as effective.

Your vet will be able to provide you with advice regarding the use of NSAIDs in your lame cows.

TAKE HOME MESSAGE

- ✓ All lame cows will benefit from NSAIDs as part of their treatment; to reduce their pain, to speed up their recovery, and to return them to normal milk production and fertility as quickly as possible.
- ✓ **REMEMBER:** treating lame cows with NSAIDs is only one part of the big picture of lameness control. Other key elements include prevention of lameness by preventing hoof damage through management of cows and the environment (please see other bulletins for further information)