

Use of Pain Control



Certain animal health practices and conditions are necessary for animal and human safety throughout their productive life. Providing treatment to manage pain during these times is an important aspect of care for dairy cattle. Farmers should discuss pain mitigation strategies with their veterinarians to ensure everything is being done to minimize pain throughout the life of each animal. This factsheet describes some of the most common animal health practices and conditions that are painful for dairy cattle.

Disbudding & Dehorning

Pain is prevented during this procedure with the use of local anesthesia (lidocaine). **Local anesthetic applied using a cornual nerve block (freezing injected behind the eye) reduces the pain associated with the application of a hot disbudding iron/caustic paste/Barnes type dehorner^{1,2}.** Because animals also experience pain shortly after disbudding once local anesthetic has worn off, longer-term pain management is also needed¹.

Longer-Term Pain Management

Because short-term pain management wears off, the combined use of local anesthetic with an NSAID (such as meloxicam or ketoprofen) is necessary. NSAIDs help manage pain for up to 24 hours after the procedure. **An NSAID administered at the time of disbudding will reduce stress, pressure sensitivity, and pain behaviours post-disbudding.**



Pain control (local anesthesia + NSAID) is important regardless of whether you are disbudding or dehorning with a hot iron or with caustic paste or with a Barnes type dehorner. This is required by proAction and is a good animal care practice

Mastitis

Mastitis causes significant pain, discomfort, and illness. The use of an anti-inflammatory medication, in conjunction with treatment when needed, can aid in alleviating pain, slow tissue damage, and minimize the effects of inflammation.

The use of NSAIDs for cows with clinical cases of mastitis has been shown to yield several positive results, including³:



Reduced clinical signs of depression



Decreased rectal temperature



Increased rumination



Increased eating time



Reduced pain sensitivity in the udder

These benefits can be seen over a longer period of time, even in mild cases of mastitis. In mild cases, the use of an NSAID paired with an antimicrobial when compared to antimicrobial therapy alone lead to³:



Reduced risk of culling



Reduced somatic cell counts



Increased cure rates



Increased reproductive performance



The provision of pain control for clinical mastitis cases can improve production, performance, and longevity!

Surgery

Surgeries performed by veterinarians, such as a C-section or correction of a displaced abomasum, are painful procedures. Local anesthetic (lidocaine) is administered by veterinarians to manage pain at the time of surgery, where it improves not only animal welfare, but also the ability of the practitioner that is performing the procedure to do so safely. The use of an NSAID can help to prevent long-term pain associated with surgery in the recovery period.

Studies have found that when an NSAID was administered, cows^{4,5}:



Flicked their tails less



Spent more time lying on the side where their incision was located



Increased their feed intake



The use of a local anesthetic together with an NSAID manages pain associated with surgery in dairy cattle well.

Calving

Dystocia, or a difficult or abnormal calving, can cause a significant amount of pain.

Pain control (i.e ketoprofen or meloxicam) administered at the time of calving to cows that experienced dystocia when compared to cows that had difficult calvings that did not receive it have been shown to^{6,7,8}:

- Increase activity
- Increase feed bunk visits and time spent feeding
- Increase 305 day milk yield
- Increase production of fat, protein, and lactose

The administration of the pain medication **flunixin meglumine** has **NOT been found to have positive effects**, and can increase the risk for retained placenta, decrease milk yield, and increase the risk of metritis when compared to animals that did not receive an anti-inflammatory⁹ as a method of pain control.



When managing pain surrounding calving, meloxicam and ketoprofen are good options; flunixin meglumine should be avoided.

Pain Management Applies to Calves Too!

Dystocia can cause injuries and pain in calves too. The use of NSAIDs has again been effective in mitigating the effects of parturition on calves (swollen tongues, broken ribs, etc.).

It is important to note that it may not be necessary to administer pain control to all calves after birth due to a variable response in growth. Calves born from an assisted calving that received an anti-inflammatory at birth were found to have increased weight gain. However, calves born from an unassisted calving that received an anti-inflammatory at birth were found to have lower weight gain compared to calves that did not receive one^{10,11}. Discuss pain control options for calves after difficult calvings (dystocia, or where assistance was provided) with your veterinarian.

The use of pain control in calves following a difficult calving has been shown to^{10,11}:

- Improve suckle reflex
- Increase vigour
- Improve milk consumption in the first 8 weeks of life
- Improve health status up to 6 weeks of age

Lameness

Lameness is another painful condition, where cattle alter their gait due to pain. Pain control (in the form of an NSAID) not only helps to reduce the pain and inflammation of lameness right away, it can also increase the chances of treatment success following lameness treatment¹².

Be sure to speak with your veterinarian about the pain management options that are right for your herd. They can help you develop the best protocols based on the procedure being performed and prescribe products that have science to back up their effectiveness.

References

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