

How Does Pain Affect Your Herd?



The Canadian dairy industry knows much more today than in the past about the impact that some of our management practices and common rearing conditions can have on animals. There is a better understanding now of potential pain mitigation strategies to prevent and treat it as well. **proAction® requires that all Canadian dairy farmers have a Standard Operating Procedure (SOP) for common animal health practices, such as disbudding and dehorning, branding (although very uncommon on Canadian dairy farms), and castration. Importantly, the use of pain management products are mandatory when carrying out these practices.** Extra teat removal does not require the use of pain control medication, but performing this procedure at the time of disbudding/dehorning ensures efficiency so that calves receive the benefit of pain control.



How Do We Know Animals are in Pain?

Cows that are in pain may not necessarily show a decrease in productivity, however, **this does NOT indicate that cattle are not in pain.** Some of the signs to look for are listed below.



Because cows are prey animals, their natural behaviour is to hide any signs of pain so they don't appear weak or easy targets for predators. However, science has helped us understand signs of pain and farmers have adopted ways to mitigate and control pain in animals for certain necessary procedures.

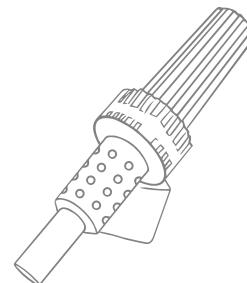
Many of the signs of pain are linked to changes in behaviour, such as a decreased intake of feed, or reduced grooming behaviour. If significant pain occurs, cattle will often appear dull and depressed, hold their heads low, and have little to no interest in their surroundings.

Some of the main areas of opportunity for pain management include:

- Disbudding and dehorning
- Surgical procedures
- Calving
- Mastitis
- Lameness

Disbudding and Dehorning

Disbudding and/or dehorning is a necessary procedure for the safety of farm personnel, and to prevent dairy cattle from harming one another.



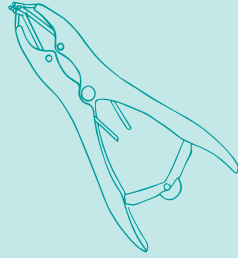
Some of the pain indicators that calves display after disbudding or dehorning without pain mitigation include¹:

- Head shaking
- Ear flicking
- Head rubbing
- Hind leg kicking at the dehorning site

There is clear scientific evidence that disbudding and dehorning negatively impacts animals when no pain control is provided, and the negative outcomes can persist for at least 24 hours following the procedure. Farmers often report that adding pain control into their disbudding/dehorning strategy has a significant impact on calf comfort. Because of this, the provision of local anesthesia with the use of a nonsteroidal anti-inflammatory medication for hot iron, caustic paste, and gouging disbudding/dehorning is a proAction® requirement.

Surgery

Surgery performed by veterinarians, whether it is to fix a displaced abomasum or birthing a calf via C-section, is painful. Veterinarians provide local anesthesia to animals that are undergoing a surgical procedure to prevent and control pain. It is important that cattle receive pain control medications at the time, and that their behaviour and comfort level is monitored afterward to ensure they are comfortable.



Cows that did not receive adequate pain control following a surgical procedure will²:



Move and eat less



Have lower rumination quality



Spend more time standing



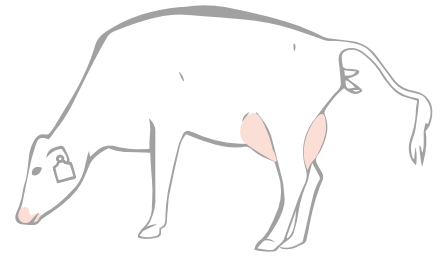
Lie less on the side of surgery



React to pressure at the surgical site

Calving

The calving process, especially when it is a difficult or abnormal process, can result in pain for both the calf and the cow. In the event that an animal requires assistance during calving (for instance: with twins, first-time calvers, very large fetus, improper fetal positioning), calves can suffer from broken ribs and internal damage, making them less vigorous and are slower to stand, walk, and suckle³. Be vigilant about looking for these signs in calves and administer pain control as directed by your veterinarian to ensure calves from tough calvings get off to a healthy start.



Because of this, calves born via a difficult calving are more likely to:



Have failed transfer of passive immunity



Be treated for disease



Die in the first 48 hours after birth

It is important to monitor cows after calving, particularly after a difficult calving. For cows, injuries such as bruising and tissue damage could occur due to calving difficulties, and administer pain control as directed by your veterinarian.

Some of the long term impacts that occur include⁴:



Reduced milk production



Reduced fertility



Increased culling and veterinary costs



Some of these effects can be present for up to 2 weeks after the procedure. Inadequate pain control can prolong recovery times, therefore pain management after surgery is critical.

Providing cows that have experienced a difficult calving with pain control medication is a good animal welfare practice. Be sure to monitor calving animals closely and provide calving interventions as required to reduce the risk of injury to both the calf and the cow.

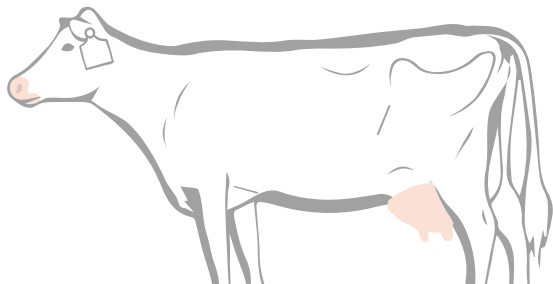
Mastitis

Mastitis is not only a common disease that farmers deal with that has a significant economic impact, but is also painful for the cow. It is important for farmers to identify and treat mastitis (if needed) as soon as possible, especially in severe cases to reduce tissue inflammation.



Specific signs of pain or discomfort that occur when cows are experiencing clinical mastitis include⁵:

- Reduced activity
- Altered gait
- Depressed appearance
- Weight loss



Mastitis causes significant tissue inflammation which can cause discomfort. The use of a nonsteroidal anti-inflammatory medication can address this. Consult with your veterinarian about introducing the use of pain control in your mastitis treatment protocols.



References

1. Costa, J.H.C., M.C. Cantor, N.A. Adderley, and H.W. Neave. 2019. Key animal welfare issues in commercially raised dairy calves: social environment, nutrition, and painful procedures. *Can J Anim Sci.*
2. Kolkman, I., S. Aerts, H. Vervaecke, J. Vicca, J. Vandeloock, A. De Kruif, G. Opsomer, and D. Lips. 2010. Assessment of differences in some indicators of pain in double muscled Belgian Blue cows following naturally calving vs caesarean section. *Reproduction in domestic animals.* 45:160-167.
3. Barrier, A.C., E. Ruelle, M.J. Haskell, and C.M. Dwyer. 2012. Effect of a difficult calving on the vigour of the calf, the onset of maternal behaviour, and some behavioural indicators of pain in the dam. *Prev Vet Med.* 103:248-256.
4. Mee, J.F. 2008. Prevalence and risk factors for dystocia in dairy cattle: A review.
5. Leslie, K.E., and C.S. Petersson-Wolfe. 2012. Assessment and management of pain in dairy cows with clinical mastitis. *Vet Clin NA Food Anim. Prac.* 28:289-305.

Lameness

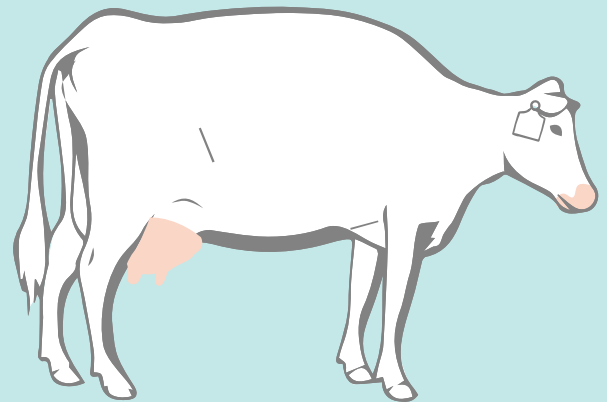
Lameness is a painful condition that results in cows changing their gait due to pain resulting from infections and lesions that are primarily in their hooves.



Specific signs of pain and discomfort include⁶:

- Reluctance to bear weight
- Reduced willingness to walk
- Changes in the animal's stride
- Changes in claw placement

These signs of pain can be identified using the lameness scoring system implemented by proAction[®]. Cows with a score of 3 or more in the walking gait score, or cows with 2 or more behavioural indicators of lameness in the tie-stall scoring system require additional attention, whether they are monitored, housed separately, or treated for lameness.



6. Shearer, J.K., M.L. Stock, S.R. Van Amstel, and J.F. Coetzee. (2013). Assessment and management of pain associated with lameness in cattle. *Vet Clin NA: Food Anim Prac.* 29:135-136.



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