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Best practices for dehorning

Making a commitment to regular calf dehorning with pain relief is best for calf welfare

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I WAS RECENTLY LOOKING at some producer information on-line that included a series of videos, one of which showed a large heifer being gouge dehorned. The video depicts a bawling animal restrained in a chute. Each horn is removed with a set of keystone (guillotine) dehorner, and then the heifer stands there while blood pours profusely out of each side of her head. It's disturbing, and I hate to see it done this way when it can be done so much better. Frankly, I think it's unfair to the animal.

Dehorning is a necessary safety procedure for the majority of dairy farms, meant to protect both people and other animals. However, there are good ways and there are bad ways to get this done. Undoubtedly it is a procedure that will produce pain, but our plan of how and when we get it done can make a big difference to the amount and duration of pain the animal experiences. As a veterinarian, I took an oath to relieve animal suffering. I feel this is one of many areas where I need to be conscious of upholding this oath. And I expect producers, as the caretakers of our animals, to uphold it as well; especially since this procedure is often done by the farm staff. I believe we need to respect our livestock, and our job of looking after them and dehorning is no exception.

Dehorning is a catch-all term for horn removal, but there are variations based on the stage of horn growth. Disbudding involves removal of the cells that produce horn tissue when the horn bud is not yet attached to the skull but rather free floating and movable under the skin. This is generally applied to calves under 8 weeks of age. Dehorning involves cutting out horns and horn producing tissue that has formed from a horn bud now attached to the skull. This is generally above two months of age. As the horn grows, the frontal sinus in the skull extends into the base of the horn. Horns in older calves have a large blood supply as well.

There are varying methods of dehorning and their use depends on the horn stage of growth. The most common method is hot iron dehorning, which involves heating an iron and placing it over the horn bud to destroy the horn producing cells and prevent further growth. Advantages to this method are that it is bloodless and a good option for calves until about 4 months of age. Disadvantages are that it is painful, and if the temperature of the iron is not high enough, it will be ineffective. Furthermore, if there is inappropriate restraint, it could pose a risk of injury to those involved.

Another option is caustic paste. This involves clipping the hair around the horn bud and applying a dehorning paste over the bud that will prevent horn growth. Advantages to this method are that it is bloodless and perhaps less painful to calves with low risk of injury to handlers. Disadvantages are that the site must be protected from moisture and contact with other animals after application and that it is only for very young calves with an unattached

horn bud.

All other options are for larger animals with more developed horn tissue. These should not be routine procedures and only used in special cases. Gouging involves slicing through the skin and under the horn to remove it. This method is painful and the advanced blood supply of the horn requires methods to control bleeding. Furthermore, contaminated, bloody equipment can share disease between animals. Exposure of the sinus beneath the horn makes the risk of infection high, and flies can lay eggs in the exposed sinuses.

So what does it take to do this the good way? Number one is timing. Dehorning calves at a young age avoids the challenges of more advanced horn development outlined above. The unattached horn bud is quickly and easily removed compared to the large developed horn. Young calves recover more quickly and have fewer complications compared to older animals. I can't stress enough the necessity of making regular timely dehorning a part of life. For some farms this means monthly, others with more calves might choose to do it more often. It involves diligence and organization.

The second element is doing what we can to mitigate the pain from the procedure. This often has two components -an anesthetic or local freezing to numb the area and an NSAID (a type of pain medication) to provide pain control in the hours following the procedure.

Using local freezing has many advantages. It is quick, producers can be trained to give the injection, and it is low cost. Furthermore, it reduces the need for physical restraint. The procedure involves blocking the corneal nerve, which supplies sensation to each horn. This is easily done in the area behind the eye. Many veterinarians train their clients in this technique. Lidocaine anaesthetic is a prescription drug and only available from a veterinarian. The anesthetic will wear off slowly over a period of about two to three hours. For this reason, we often precede the dehorning procedure with our second component, an anti-inflammatory injection to provide pain relief for the rest of the day. In Canada we are lucky to have several pain medications in the NSAID category approved for use in cattle. Choosing the best one for your farm should involve a discussion with your veterinarian on duration of action, route of administration and withdrawals to observe. Several research studies have shown calves that receive pain relief have a shorter return to normal behaviour, which includes eating and drinking. In special circumstances, a sedative drug might also be indicated but these can only be used by a veterinarian.

Some producers have little interest in being personally responsible for the job of dehorning. They may make arrangements to have their veterinarian do it as part of herd health or have a technician from the veterinary practice come out and look after getting calves done. This is a good option as it reduces calves falling through the cracks and not being dehorned until an older age when the procedure is more complicated. In this case, the producer only needs to arrange a regular schedule to get this done, and a system so that clinic staff knows where to find calves and keep track of who has been dehorned.

For others, they are keen to do it themselves but require training. Arranging a time to do this with your herd veterinarian is your best option. I've had the opportunity to train many producers and students in this area with great success. For some, learning to perform the nerve block injection is a little difficult at first, but quickly mastered after a few calves. Some individuals don't like to give needles, and this one can be a bit intimidating based on its location. But I'm always a little amazed to find a person who is unwilling to give a needle, but is willing to hold a calf down for a painful procedure. On some farms, I've found that one team member has no interest in dehorning but another doesn't find it a disagreeable job at all. Finding the best person for the job can make all the difference.

Most producers that learn to provide pain relief for dehorning would never go back. Sometimes we need to step back and look at ourselves with new eyes. How do others see

what we are doing? If someone that knew nothing about farming stopped by today, what would they think? What would they think of the gouging video? I think there's a better way, and we're responsible for making sure it gets done.