



## CHEMICAL PASTE DISBUDDING FACT SHEET

### A Fact Sheet for the Canadian Beef Industry

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#### Purpose of Disbudding

All breeds of cattle are either naturally horned or polled (without horns). Horns start off as horn buds, which are really a bundle of horn-producing cells that have yet to attach to the skull. Horn buds attach to the skull around 2 to 3 months of age, depending on the breed.

Disbudding is the removal of these horn buds. Removing the horns from cattle decreases the danger to farm personnel and other cattle, which can bruise carcasses and damage hides [1].

Disbudding is usually achieved by the application of a chemical paste or by a hot iron to burn the horn producing cells. Removing the horn buds before they attach to the skull results in less pain to the calf and less risk of infection. Therefore, it is recommended that calves should be disbudded within 2 weeks of age [2]. The National Farm Animal Care Council (**NFACC**) does not recommend dehorning during weaning, due to the stress that the calf is already experiencing [3].

To avoid the time and cost involved in disbudding, an alternative is to breed polled lines of cattle into your herd. Studies have shown that there is no difference in reproduction or growth between polled and horned breeds [1,4].

#### Chemical Paste

The use of chemical paste to stop horn growth is most effective in young calves less than 1 week of age. However, calves less than 2 days of age have not become coordinated enough to rub the paste off. So this time may be preferred to avoid incomplete horn removal [5].

Disbudding using chemical paste should only be performed by trained or experienced personnel. Sedation and pain control make this procedure much easier and safer for both the calves and humans [1, 3-4].

Paste should not be applied to wet calves, as this will not allow the paste to set appropriately. It is best to restrain the calf and immobilize the head. Avoid getting paste in the calf's eyes, as this can cause blindness. To protect your hands, make sure to always wear gloves when using the chemical paste. Find the horn buds and clip the hair around the buds, so that the paste has direct contact to the horn bud. Apply a thin layer of paste on the horn buds as seen in Figure 1 [5].



Figure 1: Appropriate paste application.

Separate the calf from contact with others and away from objects that the calf can rub its head on for at least 6 hours (enough time for the paste to dry). If the calf is introduced to the cow before the paste has dried, the paste can burn the underbelly and/or udder of the cow when the calf attempts to suckle. Make sure that the calf does not get wet for the first 24 hours, as this can result in incomplete horn removal [5].

## Pain

All methods of disbudding cause pain and stress to calves. Signs of pain after disbudding include:

- Abnormally stretching the neck
- Ear shaking or flicking
- Head shaking
- Head rubbing
- Reduced activity level
- Reduced interest in feed and/or water
- Tail flicking

The use of pain control, through nerve blocks, anti-inflammatory medications and sedation can decrease the pain and stress associated with this procedure [1-3]. Consult with your veterinarian as to what your operation can do to prevent pain during and after disbudding [3].

## References:

1. National Farm Animal Care Council (NFACC). 2013. Code of Practice for the Care and Handling of Beef Cattle: Review of Scientific Research on Priority Issues. Available from: <http://www.nfacc.ca>.
2. Canadian Veterinary Medical Association (CVMA). Disbudding and Dehorning of Cattle - Position Statement. Available at: <http://www.canadianveterinarians.net/documents/disbudding-and-dehorning-of-cattle>
3. National Farm Animal Care Council (NFACC). 2013. Codes of Practice for the care and handling of beef cattle. Available from: <http://www.nfacc.ca/codes-of-practice>.
4. Goonewardene, L.A., et al. 1999. A comparison of reproductive and growth traits of horned and polled cattle in three synthetic beef lines. Canadian Journal of Animal Science. 79(2): p. 123-127.
5. Villarroel, A. 2011. Dehorn calves with paste. Available from: <http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/20420/pnw626.pdf>

# For Your Information



## Code of Practice Requirements

➤ **Effective January 1, 2016:**  
Use pain control, in consultation with your veterinarian to mitigate pain associated with dehorning calves after horn bud attachment.

## Acknowledgement

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