

PROVIDING PAIN RELIEF TO CALVES FOR DISBUDDING

Leaving horns to grow can be dangerous for other cows in the herd and stock people, so disbudding calves under eight weeks of age with pain relief is best practice. The practice of providing pain relief for disbudding was recently endorsed by the Australian Dairy Industry Council (ADIC).

Why provide pain relief?

Disbudding (under two months) or dehorning (over two months) are painful procedures, which are distressing for the calf. They slow their growth and affect their behaviour for the following weeks.¹ Disbudding using a cauterizing iron before the horn bud is able to attach to the skull (at around 2 months of age) is less painful and causes less distress and growth delays than scoop dehorning at any age.²

Caustic paste is not registered for use in Australia. If dehorning older cattle, it is recommended that this be conducted under veterinary advice. The painful or distressing elements of disbudding, even with the best operator, are:

- The distress of restraining the calves during the disbudding process
- The immediate pain of the cauterizing iron
- The pain cascade associated with inflammation of the wound that follows and can last for days.

What pain relief is available?

The best way to reduce pain and stress caused by disbudding is to perform the procedure prior to eight weeks of age using hot iron cauterizing alongside sedation, local anaesthesia and long-acting anti-inflammatories at the time of disbudding.



The welfare of calves being disbudded is underpinned by the Australian Animal Welfare Standards and guidelines for Cattle.

These Standards and Guidelines are the legal requirements for the welfare of cattle. They have been endorsed federally, by all states and by the Australian Dairy Industry Council (ADIC).

More information on the Standards and Guidelines can be found at:
animalwelfarestandards.net.au/cattle

¹ A. Bates et al., 'The effect of different combinations of local anaesthesia, sedative and non-steroidal anti-inflammatory drugs on daily growth rates of dairy calves after disbudding', *New Zealand Veterinary Journal*, vol. 64, no. 5, 2016, pp 282–287

² K. Stafford and D. Mellor, 'Dehorning and disbudding distress and its alleviation in calves', *The Veterinary Journal*, vol. 169, 2005, pp 337–349

Veterinary prescribed

This information is provided as a guide only—speak to your vet about what is suitable for your animals.

Local anaesthetic

Local anaesthetic is injected close to the nerves, which supply the horn buds, and requires skilled administration by a vet. Like getting a nerve block for a filling at the dentist, this blocks the acute pain during the procedure, but only lasts for about four hours.

Anti-inflammatories

These are slower-acting, can be injected or applied orally, and provide longer-lasting pain relief for one to two days. They are not good for acute pain during the procedure but prevent or slow the 'pain cascade' which follows disbudding, helping the calves keep their appetite in the days following.

An oral, rapidly absorbed anti-inflammatory gel can be applied with a dosing gun into the mouth of calves before disbudding, and while it is a veterinary drug available only on prescription, can be administered without a vet present. However local anaesthetic is still recommended due to the need to block the acute pain associated with the procedure.

Sedation

Sedation results in the calves lying down in a sleepy state, which removes the stress to the calves from being handled multiple times during the procedure. Extra tasks, such as vaccination, dehorning and checking for spare teats can also be carried out easily. Sedation does not block all of the pain so local anaesthesia is still required.

Non-veterinary

Topical anaesthetic

New topical anaesthetic products are available, which are gels sprayed onto the disbudding site after the procedure. This provides up to 24 hour pain relief, as well as antiseptic properties to the site. As they act immediately, topical anaesthetics help relieve some of the initial pain from cautery disbudding, as well as interrupting the pain cascade. It is available from rural resellers without a veterinary prescription.

How this can work on farm

Many veterinary clinics offer a full combined approach of sedation alongside one or multiple pain relief drugs, often offering full health checks in addition to disbudding. Providing sedation, short term and longer acting pain relief for calves during disbudding provides the best coverage of the painful and distressing elements of the procedure.

Without a vet, topical anaesthetic spray gel is available through rural resellers and is easily applied. Topical anaesthetic can also be used in combination with the anti-inflammatory oral gel, which although a veterinary drug, can be administered without a vet to provide better pain coverage for calves.

For all veterinary drugs, speak to your vet to work out the best option for your farm. It is also important to remember that all drugs used for disbudding, whether prescribed or over the counter, have meat withhold periods associated with their use.

What alternatives are available?

Disbudding or dehorning can be avoided by the use of polled genetics. For more information on breeding for polled dairy animals look to DataGene's Technote 11: Genetic Codes and select true and carrier polled bulls in the Genetic Characteristics filter of the Good Bulls Guide.