GUIDE TO THE USE OF PAIN RELIEF IN THE GRASS-FED BEEF CATTLE SECTOR

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The information contained in this document does not constitute advice and in no way replaces advice from a veterinary practitioner.

Schedule 4 pain-relief compounds are only available from a vet. If intending to use S4 products on cattle, producers must have consulted with a veterinarian.

Pain relief is not a replacement for good animal welfare practice as described in the Animal Welfare Standards and Guidelines for Cattle. Surgical procedures can also be replaced with non-surgical options, where practical, and can have wider benefits for producers, such as cost savings.

Prepared by Cattle Council of Australia with support from Meat & Livestock Australia.

CATTLE COUNCIL OF AUSTRALIA

PURPOSE OF THIS DOCUMENT

This document is presented as a **guide only** for producers considering the use of pain relief when conducting certain aversive procedures on their cattle as part of routine management.

WHY NOW?

Producers' access to registered pain-relief compounds has recently improved. Each compound has a different purpose, so it is important to match the planned procedure with the most relevant compound or combination of compounds. If in doubt, veterinarians are best placed to advise.

IS PAIN RELIEF COMPULSORY?

Animal Welfare Standards for Cattle are being regulated progressively by state/territory governments. When regulated within a state or territory, the use of pain relief **will be** compulsory for castration and dehorning of animals above certain ages – for details see the *Animal Welfare Standards and Guidelines for Cattle (Standards 6.2 and 6.4).* Producers are encouraged to consider pain relief for aversive procedures on all their cattle.

WHAT PROCEDURE?	PAIN TYPE	PAIN RELIEF OPTIONS
Disbudding/dehorning →	Refer to Table 1.1 in this document →	Refer to Table 2 in this document
Spaying →		
Castration →		
Branding →	Refer to Table 1.2 in this document →	
Ear notching and tattooing →		

Table 1.1 – Surgical procedures and pain types

PROCEDURE	LIKELY PAIN TYPE	PAIN-RELIEF OPTIONS (see Table 2 for details)
Disbudding/ dehorning	• Immediate (Phasic), due to nerve damage at the site of injury AND • Inflammatory (Tonic), slightly slower onset, longer duration AND • Long-lasting (Chronic) (< 6 weeks), inflammatory or neuropathic	• Multi-modal using local anaesthetic PLUS longer-acting Non-Steroidal Anti-inflammatory Drugs (NSAIDs)[1] • If using Tri-solfen® as the local anaesthetic, ensure proper adhesion of the spray to the wound • If done at marking, would be covered by the NSAID administered for other procedures
Castration	• Immediate (Phasic), due to nerve damage at the site of injury AND • Inflammatory (Tonic), slightly slower onset, longer duration AND • Long-lasting (Chronic) (< 6 weeks), inflammatory or neuropathic	• Multi-modal using local anaesthetic (Tri-solfen®) PLUS longer-acting NSAID • If done at marking, would be covered by the NSAID administered for other procedures
Spaying (Dropped Ovary Technique)	• Immediate (Phasic), due to nerve damage at the site of injury AND • Inflammatory (Tonic), slightly slower onset, longer duration AND • Long-lasting (Chronic) (< 6 weeks), inflammatory or neuropathic	• Long-acting NSAID • Tri-solfen® must not be used internally (e.g., when spaying using the dropped ovary technique)

Table 1.2 – Minor procedures that benefit from being undertaken at the same time as surgical procedures

PROCEDURE	LIKELY PAIN TYPE	PAIN-RELIEF OPTIONS (see Table 2 for details)
Fire branding	• Immediate (Phasic), due to nerve damage at the site of injury AND • Inflammatory (Tonic), slightly slower onset, longer duration	• NSAID • If done at marking, would be covered by the NSAID administered for other procedures
Freeze branding	• Inflammatory (Tonic), slightly slower onset, longer duration	• NSAID • If done at marking, would be covered by the NSAID administered for other procedures
Ear Notching and tattooing	• Immediate (Phasic), due to nerve damage at the site of injury AND • Inflammatory (Tonic), slightly slower onset, longer duration	• NSAID • If done at marking, would be covered by the NSAID administered for other procedures

[1] NSAIDs are analgesics that reduce pain by suppressing inflammation. They do not totally block (anaesthetise) pain.

Table 2 – Summary table of pain-relief products

PAIN RELIEF OPTIONS	SOURCE	WHP/ESI[2]	INDICATIVE COST[3]	COMMENTS
Local anaesthetic • Tri-Solfen®[4,5] for open-wound spray-on (after the injury)	S5 Over the counter	WHP 90 days ESI 90 days	$2.30 plus GST Depends on number of sites treated	• Depletion trials have not been done so default WHP and ESI of 90 days apply • Topical spray contains anaesthetic to reduce pain and adrenaline to reduce blood loss • Almost-immediate effect • 24-hour relief
Local anaesthetic • Lignocaine for nerve block injection(s) (before the procedure	S4 Vet only	WHP nil ESI not established	Highly variable, depends on vet's costs, type of procedure, retail mark-up, etc.	• Almost-immediate effect • Residue depletion work yet to be done • Must be administered by a veterinarian
Non-Steroidal Anti-inflammatory Drugs (NSAIDs)[6] – 33 in total, as follows: • Meloxicam Buccalgesic® (cheek pouch gel) and Metacam® (injection), +10 other registered products • Flunixin (13 registered products) • Ketoprofen (5 registered products) • Tolfenamic acid (3 registered products)	S4 Vet prescription	WHP 11-14 days ESI 17-21 days Products vary – read the label and seek veterinary advice	Buccalgesic®, $4.30 plus GST Metacam®, $5.50-6.50 plus GST Others?	• 10-15 minutes to take effect • Effective 1-8 hours (pain relief benefits up to 3 days) • Prescription remedies – available from/through veterinarians[7] • Some label claims are procedure-specific • Buccalgesic® is administered as a gel into the cheek cavity – more suitable for young cattle • Metacam® is applied as a subcutaneous injection • Can be given before or during the procedure • NSAIDs do not lead to anaesthesia (loss of feeling)

[2] For the beef industry, most pain relief would be administered to calves at marking, meaning WHPs and ESIs may have little relevance if the calves are retained for grow-out. However, risks of non-compliance rise significantly when treating weaners, vealers and adult cattle, particularly when the animals are being grown for the local or overseas slaughter market.
[3] Calculated on a 160-200kg weaner using recommended doses. Subject to change.
[4] Registered for dehorning/disbudding and castration of calves.
[5] Tri-Solfen® contains lignocaine (40.6 g/L), bupivacaine (4.2 g/L), cetrimide (5 g/L) and adrenaline (24.8 mg/L) in a gel base and is applied to wound surfaces during or immediately following painful procedures, using a spray applicator, where it is absorbed at the site of injury for provision of local anaesthesia and enhanced wound healing
[6] NSAIDs are analgesics that reduce pain by suppressing inflammation. They do not totally block (anaesthetise) pain.
[7] It is important for lay operators to develop a business relationship with local vets, providing the vet with a high level of confidence regarding responsible use of the product.