Which pain relief suits?

PROVISION of pain relief medication to cattle during routine husbandry procedures is increasingly being adopted by beef producers. The benefits of administering analgesia for castration and dehorning are widely acknowledged and supported by field trials. There are currently three pain relief products registered for cattle with the Australian Pesticides and Veterinary Medicine Authority (APVMA), one local anaesthetic - Tri-Solfen, and two non-steroidal anti-inflammatory drugs (NSAIDs) analgesics - Ilium Buccalgesic OTM and Metacam 20 or 40.

Anaesthetic versus analgesic

Anaesthetics and analgesics target different areas of the pain pathway. Local anaesthetics provide short-term pain relief by temporarily blocking sensory function (i.e. numbing the area). NSAIDs are a type of analgesic which block inflammatory pathways in the body but not the sensory function.

Single or multi-modal use?

Anaesthetics and analgesics can be used individually or together. A local anaesthetic can reduce pain at the time of the procedure by causing the surgical site to become numb. As Tri-Solfen is a topical spray, it will only work when applied to exposed nerves, i.e. after the procedure. An analgesic will not block pain at the time of the procedure but provide a longer lasting pain relief by targeting inflammation as the wound heals.

Which option is right for me?

It is recommended that producers consult their veterinarian for a comprehensive understanding of the function and application of their chosen product(s) and to ensure effective treatment, before investing in pain relief measures.

TRI-SOLFEN (BAKER)

- Description: Local anaesthetic which blocks sensory function, also contains adrenaline to reduce blood supply and loss, and an antiseptic.
- Composition: Lignocaine and Bupivacaine (Anaesthetics), Adrenaline (aids in control of bleeding) and Cetrimide (Antiseptic).
- Function: Pain relief, reduces bleeding and risk of bacterial infection, and assists in healing by sealing and protecting the wound.
- Application: Castration - three applications (one in each incision, final to scrotal skin wound); dehorning - immediately following (product must be applied to exposed nerves at the surgical site to work).
- Time it takes to work: Immediately (within one minute).
- Claimed period of pain relief: Castration and dehorning/disbudding - up to 24 hours.
- Meat Withholding Period: 90 days.
- Export Slaughter Interval: 90 days.
- Availability: Schedule 4 drug, requires veterinary prescription. Presentation: - 5L, 20L.

BUCCALGESIC (TROY PHARMACEUTICAL)

- Description: Non-steroidal anti-inflammatory drug which targets inflammation that causes pain.
- Composition: Meloxicam 10mg/ml in a buccal (cheek) formulation. Designed for retention in the buccal cavity, and absorption across the mucous membrane.
- Function: Pain relief, reduces inflammation.
- Application: Administer the dose into the buccal cavity that lies between the molar teeth and inside of the cheek, while holding the mouth closed. This product is not intended to be swallowed (although will not cause harm) but to be absorbed through the mucosa of the inner cheek.
- Time it takes to work: 10-15 minutes.
- Claimed period of pain relief: Castration - 24-72 hours; dehorning/disbudding - research suggests up to 44 hours.
- Meat Withholding Period: Meloxicam 40 - 11 days; Meloxicam 20 - eight days.
- Export Slaughter Interval: Meloxicam 40 - 17 days; Meloxicam 20 - No ESI as this concentration is usually used for calves.
- Availability: Schedule 4 drug, requires veterinary prescription. Presentation: Metacam 20: 50ml, 100ml, 250ml; Metacam 40: 50ml, 100ml.

The benefits of administering analgesia for castration and dehorning are widely acknowledged and supported by field trials.

The benefits resulting from administering analgesia for painful procedures such as castration, dehorning and disbudding are widely acknowledged and supported by field trials. Department of Primary Industries (DPI) drug, requires veterinary prescription. Presentation: 200ml.

METACAM 20 AND METACAM 40 (BOEHRINGER INGELHEIM)

- Description: Non-steroidal anti-inflammatory drug which targets inflammation that causes pain.
- Composition: Meloxicam in an injectable solution in two formulations - 20 mg/ml and 40 mg/ml.
- Function: Pain relief, reduces inflammation.
- Application: Single dose only by subcutaneous or intravenous injection. Administer subcutaneously 10 minutes before the procedure.
- Time it takes to work: 10-15 minutes.
- Claimed period of pain relief: Castration - 24-72 hours; dehorning/disbudding - research suggests up to 44 hours.
- Meat Withholding Period: Meloxicam 40 - 11 days; Meloxicam 20 - eight days.
- Export Slaughter Interval: Meloxicam 40 - 17 days; Meloxicam 20 - No ESI as this concentration is usually used for calves.
- Availability: Schedule 4 drug, requires veterinary prescription. Presentation: Metacam 20: 50ml, 100ml, 250ml; Metacam 40: 50ml, 100ml.

Marlah Maughan, Development officer, Department of Primary Industries and Regional Development Broome, 08 9194 1442. Stephanie Coombes, Development officer, Department of Primary Industries and Regional Development Broome, 08 9194 1439.
Get a grip on reef protection

HOW do the recently introduced Reef protection regulations affect you as a commercial grazier?

The regulations address agricultural and industrial sources of nutrient and sediment pollution in all six reef regions - Cape York, Wet Tropics, Burdekin, Mackay Whitsunday, Fitzroy and Burnett Mary. Most of the requirements do not apply to producers in Cape York as the region has met its water quality targets. When the reef protection regulations apply for beef cattle grazing:

- Comply with three minimum practice agricultural standards, which are rolled out over three years across different regions, including: for land in good or fair condition, implement measures to improve land condition towards achieving good or fair condition; and for land in degraded condition, continue using measures to maintain the land in good or fair condition; for land in poor condition, implement measures to improve land condition towards achieving good or fair condition; and for land in degraded condition, implement measures to improve land condition towards achieving good or fair condition or prevent areas of degraded land condition from further degrading or expanding. Land condition is determined by the amount of ground cover at September 30 each year. Paddocks with less than 50 per cent ground cover are considered to be in poor condition, and less than 20pc considered degraded condition. However, it is recognised that:
  - Some land types may not be able to achieve 50pc ground cover even when taking all reasonable steps, especially if affected by natural disasters or drought.
  - It may be impractical and cost prohibitive to improve some areas of very degraded land, e.g. severe gullying or scoured areas. If so, measures must be taken to prevent these from further degrading.

A range of programs and support tools can help you identify opportunities to improve your farming practices. For information, call the Department of Agriculture and Fisheries on 13 25 23 or your regional Natural Resource Management organisation. Alternatively visit qld.gov.au/environment/agriculture/sustainable-farming/reef/reef-regulations/producers.grazing.

North west producers shift their focus to long-term recovery

A FOURTH generation farming family in north west Queensland is among hundreds of primary producers establishing long-term resilience following widespread flooding.

Megan and Gerald Easton are already getting back to business on their property at Maxwellton between Richmond and Julia Creek.

The couple lost close to half of their herd during the monsoon weather event in February 2019. Cameray Downs, an 11,000 hectare property, was in the thick of the flooding event.

Half the paddocks were covered in water up to a metre deep.

The family’s homestead was threatened and freezing conditions killed close to 700 head.

To help replace the lost livestock, the Eastons were able to access a Restocking, Replanting and On-Farm Infrastructure co-contribution grant.

The grant is administered through the Queensland Rural and Industry Development Authority (QRIDA) on behalf of the Australian Government.

Megan (pictured with the couple’s children Jacob, 6, Olivia, 12, and Breanna, 9) said the restocking grant was able to be drawn down when seasons permitted, which meant they could buy cattle when their land had recovered.

“By accessing the grants, it’s not only improved our own business resilience but also the larger community,” she said.

“For us it makes good business sense to access the grants.”

QRIDA administers North Queensland Restocking, Replanting and On-Farm Infrastructure co-contribution grants of up to $400,000 are available for primary producers to:

- Restock lost livestock
- Repair lost or damaged crops
- Repair lost or damaged on-farm infrastructure
- Eligibility criteria applies.

See the QRIDA website.
Gulf pasture strategies

The response of grass pastures across the north-west Gulf have been variable following the February monsoon event in early 2019. In some areas, severe soil erosion occurred due to fast moving floodwaters. In others, rain provided recovery opportunities for drought-stressed perennial pastures.

The flooding resulted in:
- mass germination of Mitchell grass seedlings
- fast moving floodwater exposed Mitchell grass crowns and roots
- increasing risk of tussocks being pulled out by grazing
- large areas of pastures buried in silt due to relocation of topsoil into downstream areas
- mass germination of less palatable, short-lived forbs and broadleaf weeds
- increase in undesirable pasture species; e.g. Asbestos grass particularly in flood out areas
- increase in woody weeds/woody natives
- emerging weed infestations in previously unaffected areas.

Depending on severity, a range of strategies may assist rangeland recovery during the wet season.

**BLUEGRASS BROWNTOP/MITCHELL GRASSES**

In the Gulf Bluegrass burning plains, dominant perennial pasture species include Gulf Bluegrass, *Dicanthium fecundum*, Hoop Mitchell, *Eulalia aurea* (syn. *Astrakia elymoides*), Silky Browntop, *Eulalia aerata* and Bull Mitchell, *Asstrelopa squarro-

Everyone reading this article will understand how their pasture has responded, and every situation will be different. If you have further questions please contact the Department of Agriculture and Fisheries team:

- Bernie English, 0427 146 063
- Joe Rolfe, 0427 378 412
- Rebecca Gunther, 0417 726 703
- Lindsay Perry, 0477 755 243
- Eloise Moir, 0436 666 290
- Megan Munchenberg, 0429 433 773

**BUFFEL GRASS**

Buffel grass (Cenchrus ciliaris) that was underwater for three to five days may have drowned, depending on depth, turbidity and temperature of flood waters. However, it is important to monitor new tillers when assessing grazing pressure as removing tillers will prevent tussocks' ability to respond to future rain events. New plants should have established from seed, or will establish this wet season. Long standing and well-managed Buffel grass pastures will have a good soil seedbank despite grazing. Buffel grass sets seed during all phases of pasture growth, which helps replenish soil reserves even in tough years.

WEEDS AND OTHER UNDESIRABLES

Emergence of new woody weed infestations like prickly acacia (*Acacia nilotica*) is of significant concern. Conditions following last February’s floods were ideal for spread and establishment of weeds.

Asbestos grass (*Cenchrus basedowii*) is commonly found in Gulf pastures. Dispersal of the seed occurs via wind, overland flow of flood waters and attachment to animals and vehicles.

Given the extent of the February flooding, Asbestos grass may well be expanding into new areas. Priority treatment is critical to prevent establishment of new infestations.

ASSISTING LANDSCAPE RECOVERY

Erosion has been significant across flooded regions. Surviving grass tussocks and newly established grasses post-flooding need time to recover, establish and set seed for future productivity. Managing stocking rates will allow surviving seedlings to mature during this wet season. Recovery time for severely impacted pastures is unknown.

Low-cost options:
- Wet-season spelling
- Forage budgeting
- Light stocking
- Exclusion of livestock from severely impacted areas

High-cost options:
- Mechanical interventions (seedbed)
- Planting suitable sown pastures into flood-impacted areas (after break-of-season rain)

These options are not always practical as they can be challenging to apply across large areas and success is seasonally dependent.

**Recommendations:**

- Use country that recovered well after the flood for grazing over the wet season.
- Where tussocks are recovering, spell at least until the pasture is “ahead of the cattle” i.e. the grasses have established a good root system, so when cattle are re-introduced they can withstand grazing without being ripped out of the ground.
- In damaged country with erosion and tussock roots exposed soil seedbank will be reduced or completely lost. A wet-season spell for successive years is needed to maximise seed setting and rebuild the seedbank.
- Spell pastures to allow weak tussocks to establish and seed.
- Avoid stocking rates that are too high for the pasture capacity, animal performance declines and production is impacted. Cattle grazing down to the stem will go hungry and growth will be poor.
- Establish points to monitor seedling and tussock development.
- Forage budget to set stocking rates and determine new carrying capacities.
- Leave 15-20cm residual stubble height at the end of the dry season to enable a quick response following rain.

Megan Munchenberg, Department of Agriculture and Fisheries, Cloncurry.