Use the right pain relief

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 of calves are widely acknowledged and supported by field trials. There are 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 - Triamcinolone 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 but provide 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 (Bayer)

- Description: Local anaesthetic which blocks sensory function, also contains adrenaline to reduce blood supply and loss, and an antiseptic.
- Composition: Lignocaine and Bupivacaine (anaesthetic), 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 prescription.

Metacam 20 and Metacam 40 (Boehringer Ingelheim)

- 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 export slaughter interval as this concentration is usually used for calves.
- Availability: Schedule 4 drug, requires veterinary prescription.
- Presentation: 200ml.

Triamcinolone OTM (Troy Pharmaceutical)

- Description: Non-steroidal anti-inflammatory drug which targets inflammation that causes pain.
- Composition: Triamcinolone 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.
- 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: 14 days.
- Export slaughter interval: 21 days.
- Availability: Schedule 4 prescription.

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.

**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.
- 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 export slaughter interval as this concentration is usually used for calves.
- Availability: Schedule 4 drug, requires veterinary prescription.
- Presentation: Metacam 20: 50ml and 100ml, 250ml; Metacam 40: 50ml and 100ml.

For more information, please contact Megan Garnett, Department of Agriculture and Fisheries, Toowoomba, (07) 4529 4221 megan.garnett@daf.qld.gov.au

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Bull management checklist

Current herd bulls

1. Bull health
   - Several diseases impair bull fertility. Many of which can be controlled or managed by an effective vaccination program before the breeding season.
   - Infection of a bull, particularly during a short mating season, can have a serious effect on the herd conception and subsequent branding rates.
   - An annual bull vaccination program should include: botulism, vibriosis, clostridial diseases (5-in-1 vaccine) and ephemeral fever (three-day sickness). Tick fever vaccination may be required in specific circumstances.
   - Also test for worms and treat bulls as necessary.

2. Body condition
   - Ideal body condition score is 3 (out of 5) for maximum sperm production.

3. Structural soundness
   - Check legs, joint and feet for injuries, stiffness and cuts/swelling.

4. Breeding soundness
   - BULLCHECK® or a Veterinary Bull Breeding Soundness Evaluation (VBBSE) covers scrotal and physical examination, semen motility, sperm morphology, and serving capacity (if required).
   - A vet should do an annual VBBSE, before joining, to identify bulls that are declining in fertility.

5. Bull age
   - To justify retaining an older age bull in the herd, the bull must be fertile, structurally sound and also be equal to, or better than, the most recent bull replacements for all genetic traits used in selection.

6. Bull percentages
   - Have you got enough or too many bulls?

A vet should do an annual VBBSE, before joining, to identify bulls that are declining in fertility.

Purchasing bulls

1. Determine your breeding objective
   - Identify the traits that are most economically significant.

2. Do your research
   - Analyse sire summaries, dam data and sale catalogues. Talk to your supplier about your requirements, for example a VBBSE certificate.

3. Selection
   - Look at BREEDPLAN Estimated breeding values (EBVs) and indexes to select bulls that match your criteria. Work through your bull cost per call and set your price limit and stick to it. Look at your list of selected bulls and assess/rank for structural and reproductive soundness (based on the VBBSE); temperament and BREEDPLAN EBVs.

To find out more visit futurebeef.com.au (search for ‘bulls’).

Megan Gurnett,
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Forage budgeting proves a valuable tool for pasture management

FORAGE budgeting is the process of calculating forage supply and livestock demand over a set period. Knowing how much forage is available assists us to make informed grazing management decisions, ensures there is enough residual pasture at the end of the grazing period, and helps us utilise pasture more efficiently.

Jo Campbell is a technical officer based at the Department of Agriculture and Fisheries’ (DAF) Brian Pastures Research Facility and in her role it is critical to understand how much forage is available for grazing from the end of the growing season (usually May) until the start of the next likely growing season. Most cattle on the research facility are involved in projects, so the capacity to destock during dry periods is often limited. Forage budgets are completed on a paddock by paddock basis, taking into account paddock area, land types, land condition, soil and pasture condition, pasture yield (kilogram DM/hare), and percent of unpalatable species.

To estimate pasture yield, specific land type photo standards are used and quadrat cuts are taken of the dominant grass species to calibrate our estimates. A photo is taken annually in each paddock to compare any changes in land, pasture and soil condition. These measurements are critical for decision making, and can answer a number of important questions such as: How many grazing days do we have for our herd? Do we need to adjust our herd numbers?

Visit futurebeef.com.au (search for ‘forage budget’).

Jo Campbell, DAF, Brian Pastures Research Facility, Gayndah (07) 4161 4007 joanne.campbell@daf.qld.gov.au

Forage budgeting

- Simple calculations using Excel take into account target residual pasture to maintain adequate ground cover.
- This information is extremely valuable to determining stocking rates and length of grazing in each paddock, planning paddock grazing and spelling rotations, and identifying if further measures must be taken.

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Navigating made easier

Take the worry out of getting lost in the outback

THE Australian outback is well known for its perilous nature and people becoming lost on a property, poses a significant health and safety risk. Search and rescue operations can be costly in time, human resources, equipment, and lost productivity.

The information available to people travelling on properties varies considerably. Most properties have infrastructure maps with varying levels of detail and currency, while others have internal roads, tracks and water points marked with signposts or objects such as tyres, drums and old Jerry cans to indicate turn-offs.

Acclimatising to a new patch of country comes naturally to some, and not so much for others. Fortunately, advances in technology have paved the way for contemporary solutions to an age-old problem.

What is an offline mobile map app?

As the name suggests, offline mobile map apps work without wi-fi or network connectivity. Some popular apps allow you to download maps offline, but this is generally limited to only public roads and tracks, not infrastructure and internal roads on properties.

Can infrastructure maps be connected with offline mobile map apps?

Yes, property infrastructure maps can be connected with offline mobile map apps through the process of georeferencing.

Georeferencing is the term used for identifying a point on the earth’s surface and matching it to its location on a map using international coordinates.

Digital property maps are usually in PDF format. A georeferenced map will have the coordinates of the property stored within the PDF.

When accessed through specific software applications, the GPS locations of anything within the boundary of that map is available.

How do offline mobile map apps work?

When using any sort of navigation system, a dot generally appears on the screen to indicate the user’s current position (this is a blue dot in Google Maps).

When a georeferenced property map is accessed through the appropriate mobile software application, a dot will also appear to indicate the user’s position.

The difference is that the map being viewed is a property map - which, if up to date, will show where the user is in relation to marked infrastructure such as tracks, fences, water points and yards.

Do they offer other features?

There are several different mobile map app products, and the features included depend on the individual product and subscription tier. With certain products users can:

• plot and record information about locations
• import and export place marks
• measure distance and area
• georeference photos.

This means that in addition to using the app for navigational purposes, it can be used to record the coordinates of broken infrastructure or where equipment was left behind (including a photos attached to that placement on the map) so that others can locate it.

Each product provides different options, and users should consider their needs and speak to the manufacturer before choosing a product.

For more information, contact Meg Humphrys, pastoral extension officer, Department of Primary Industry and Resources, Alice Springs, 08 8951 8144.

Urea can kill if eaten quickly

UREA increases ammonia levels in the rumen and blood, and this becomes a problem if ammonia in the blood exceeds what the liver can convert back into urea.

Urea can kill cattle if eaten too quickly, for example, when cattle are new to supplements, are hungry, or have a depraved appetite from being deficient in protein, phosphorus or salt.

Even though regular urea supplements increase the ability of the liver to detoxify ammonia over several weeks, this ability can be lost within a week without supplementation.

The main signs of urea poisoning are: twitching ears and facial muscles; grinding teeth; frothy saliva; bloating; difficulty breathing; staggering; spasms just before death; dead cattle near the urea supplement.

If caught early, cattle can be treated using a stomach tube passed into the rumen to relieve the bloat and then used to drench the animal with cold water; 45 litres for an adult cow followed by 2-6L of 5 per cent acetic acid or vinegar, 0.5-1L for sheep. This reduces the alkaline corrosive effect of ammonia in the digestive tract and conversion of urea to ammonia. Repeated doses of vinegar may be needed as signs may recur after 30 minutes.

Visit futurebeef.com.au and search for ‘urea’.

Meg Garnett,
Department of Agriculture and Fisheries, Toowoomba (07) 4629 4221 or megan.garnett@daff.qld.gov.au

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Worm egg counts: worth it

WITH improved seasonal conditions across much of the state, sheep producers are being reminded that visible symptoms of a worm burden in even a small percentage of the mob should be taken seriously.

Jed Sommerfield, Leading Sheep Manager and Senior Extension Officer with the Queensland Department of Agriculture and Fisheries, said symptoms like pale inside eyelids and gums, lagging or collapsing, scouring or vomiting, or bottle jaw, are all signs that sheep may have worms and need testing.

A Worm Egg Count Test (WEC) is the most efficient way to understand the presence of worms in a flock, as it identifies the number of worm eggs in sheep faeces which indicates the worm burden of the animal.

Critical to accurate WEC testing is ensuring that a representative sample size is tested.

"It’s really important that producers don’t just test the handful of sheep that appear symptomatic," Mr Sommerfield said.

"For larger mobs, especially where Barber’s pole worm is an issue, the more animals sampled the better.

“The number of worms varies greatly between animals, the more animals you can sample the more accurately you will be able to accurately rate the results.”

A WEC test is the best way for a producer to understand whether sheep should be drenched and when additional testing might be required.

"It is recommended that WEC testing is carried out when you have sheep showing symptoms, when lambs are four to six months old or prior to weaning, before mustering, six weeks after a green flush of feed or after congregation in a small area.

The steps to complete a WEC test are straightforward, and include:

1. Getting a WEC test kit from your supplier
2. Deciding when to test
3. Ensuring time for postage of samples that avoids tests being held in the post over the weekend
4. Collecting fresh dung, ideally when the mob is camped or grazing close together
5. Completing the submission paperwork, packing and posting the samples in line with the instructions
6. You will then receive results that will show the average level of worm infection in your sheep.

Leading Sheep recently held a webinar on managing worms.

To view the recording, visit leadingsheep.com.au and look for Recorded Webinars under the Resources tab or visit wormboss.com.au.

Leading Sheep is an important partnership between the Queensland Department of Agriculture and Fisheries and Australian Wool Innovation and is supported by AgForce.

For more information, contact us at leadingsheep@daf.qld.gov.au.

LIVESTOCK PRODUCERS MUST PREPARE FOR THE EMERGENCE OF TOXIC PIMELEA

AS WE move into the cooler months with some autumn rain in the gauge, livestock producers need to be mindful of the potential germination of pimelea.

The plant is most toxic when it is in its dry form and can lead to major cattle losses.

‘While most cattle will avoid grazing green pimelea, the dry stalks are difficult to spot amongst other pastures and it only takes two grams of dried pimelea per day to lead to toxicity in small weaner cattle,’ Queensland Department of Agriculture and Fisheries extension officer Hannah Vicary said.

Pimelea is most prevalent when dry summers are followed by wet winters, and rainfall events in early autumn through winter can lead to widespread germination.

‘Most poisonings occur between August and January, when the dry plant material is present,’ Miss Vicary said.

‘While the clinical signs are more prevalent in cattle, sheep can be impacted with intestinal irritation and black scours, which can be fatal.

‘Fortunately, sheep do not experience the oedema seen in cattle, as they lack the thick pulmonary muscle. This means that grazing sheep or goats in pimelea infested paddocks can be a viable management strategy for producers, provided they are closely monitored for any signs of diarrhoea or loss of condition.’

If you have a paddock with a mix of pimelea and grass, consider grazing it with sheep.

To view case studies on how other sheep producers have managed pimelea, visit futurebeef.com.au (search for ‘Understanding Pimelea Poisoning of Cattle’) or email leadingsheep@daf.qld.gov.au.

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