

# PAIN RELIEF

## FREQUENTLY ASKED QUESTIONS

There has been large scale adoption of post-operative pain relief (Tri-Solfen®) during the past ten years. New pre-operative products Buccalgesic® and Metacam 20® were released in 2016. Here we provide answers to some frequently asked questions about pain relief.



Tri-Solfen®, a topical local anaesthetic and antiseptic gel spray.



Metacam 20®, a subcutaneous injection high on the neck behind the ear.



Buccalgesic® being applied to the internal cheek of a lamb.



Numnuts® prototype applicator; R&D continues.

### WHY SHOULD WOOLGROWERS CONSIDER USING PAIN RELIEF PRODUCTS?

The supply chains for both wool and meat are becoming increasingly interested in their suppliers' husbandry practices.

On farm adoption of pain relief for mulesing has been rapid. In the ten years since Tri-Solfen® was first registered, 75 per cent of Merinos mulesed now receive pain relief.

Pain relief with a specific claim for knife castration and knife tail docking was first registered for use in 2016 and adoption rates will be monitored over the coming years.

Pain relief with a specific claim for ring castration and ring tail docking is not yet commercially available. R&D continues for a technique called Numnuts® which injects local anaesthetic just above the ring.

### WHAT ARE THE DIFFERENCES BETWEEN ANALGESIC AND ANAESTHETIC PAIN RELIEF TREATMENTS?

**Analgesics** provide relief from pain while retaining most sensory function. There are a range of products with a large variation in the intensity and duration of pain relief provided. Active compounds can take 10 to 15 minutes to reach optimum blood concentration and they require the pain enzymes to be created at the site of tissue damage before they can act and the release of pain enzymes can also be slow to ramp up. They last for varying times depending on how quickly the active compound is metabolised and excreted.

- Mild to moderate pain relief:
  - (a) *Paracetamol*, also known as *Acetaminophen*,

- (b) *Non-Steroidal Anti-Inflammatory Drugs* such as aspirin, meloxicam (Buccalgesic® and Metacam 20®) and carprofen, and
- (c) mild *Opioids* such as codeine.

- Strong pain relief, *Opioids* such as morphine. Opioids act on the nervous system, rather than on the enzyme production at the site of tissue damage. They can produce hallucinations and can be addictive.

(There are also other types of drugs such as *Corticosteroids* that are injected to a site to reduce inflammation, along with *Anti-anxiety* and *Anti-depressant* drugs that also provide pain relief.)

**Anaesthetics** block pain and sensory function is lost. There are three main types: local, regional and general anaesthetics, most taking from 2 to 10 minutes to take effect. They typically do not provide long-lasting pain relief.

- Local (eg dental) and regional (eg epidural) anaesthetics are administered subcutaneously or topically and desensitise a defined location. (Tri-Solfen®)
- General anaesthetics create a medically induced coma, a state of unconsciousness and are administered by injection or inhaled. The patient cannot move, feel pain, remember and breathing may need to be assisted.

### FOR WHOLE FLOCK TREATMENTS, ARE ANAESTHETIC OR ANALGESIC, PRE-OPERATIVE OR POST-OPERATIVE PRODUCTS BETTER?

There are no black and white answers with so many variables and factors to consider including:

- availability of a product to livestock producers and veterinarians

- availability of veterinary prescription and oversight
- throughput required per day
- restraint requirements
- time and method of treatment
- ability of the animal to breathe unassisted during treatment
- time and supervision required post treatment
- ability of the lamb to mother up
- type of husbandry practice and method used
- likelihood of adverse impact to humans
- degree of pain relief provided
- practicality and cost.

Welfare trials offer the most valuable information about how effective the treatment is, yet these still require an overall subjective expert assessment of the 30 or so measures used, because no single measure tells the whole story. For specific advice contact your veterinarian.

### WHAT PURPOSES HAS THE APVMA APPROVED THE PAIN RELIEF PRODUCTS FOR?

The Australian Pesticide and Veterinary Medicine Authority (APVMA) has registered products for the following purposes:

- Tri-Solfen® for pain relief following mulesing, castration and tail docking
- Metacam 20® for alleviation of pain and inflammation
- Buccalgesic® for alleviation of pain and inflammation for castration and tail docking.

## HOW MUCH DO THE PAIN RELIEF PRODUCTS COST?

### DOSE AND ESTIMATED RETAIL PRICES FOR TRI-SOLFEN® (BAYER)

HUSBANDRY PRACTICE	TOTAL DOSE	COST @ 12 CENTS PER ML
<b>Mulesing</b>		
Lambs 5-10kg	6.0 mL	\$0.72
Lambs 11-15kg	8.0 mL	\$0.96
Lambs 16-20kg	10.0 mL	\$1.20
Lambs over 20kg	12.0 mL	\$1.44
<b>Castration</b>		
Lambs up to 10kg	3.0 mL	\$0.36
Lambs over 10kg	4.5 mL	\$0.54
<b>Tail docking (if not concurrently mulesed)</b>		
Lambs up to 10kg	1.5 mL	\$0.18
Lambs over 10kg	2.0 mL	\$0.24
<b>Combined castration, tail dock &amp; mules</b>		
Lambs 5-10kg	9.0 mL	\$1.08
Lambs 11-15kg	12.5 mL	\$1.50
Lambs 16-20kg	14.5 mL	\$1.74
Lambs over 20kg	16.5 mL	\$1.98

### DOSE AND ESTIMATED RETAIL PRICES FOR BUCCALGESIC® (Troy Laboratories – 1.0ml per 10 kg bodyweight)

CASTRATION AND TAIL DOCKING	TOTAL DOSE	COST @ 48 CENTS PER ML
Lambs under 10 kg	1.0 mL	\$0.48
Lambs 10.1 -15.0kg	1.5 mL	\$0.72
Lambs 15.1 to 20.0kg	2.0 mL	\$0.96
Lambs 20.1 to 25 kg	2.5 mL	\$1.20

### DOSE AND ESTIMATED RETAIL PRICES FOR METACAM 20® (Boehringer Ingelheim – subcutaneous 1.0ml per 20 kg body weight)

PAIN AND INFLAMMATION	TOTAL DOSE	COST @ 165 CENTS PER ML
Lambs under 10 kg	0.50 mL	\$0.83
Lambs 10.1 -15.0kg	0.75 mL	\$1.24
Lambs 15.1 to 20.0kg	1.00 mL	\$1.65
Lambs 20.1 to 25 kg	1.25 mL	\$2.06

Prices used in the tables above are approximate retail prices at January 2017 for the product alone. They do not include the cost of labour to administer the products.

## SUMMARY: AVAILABLE PAIN RELIEF PRODUCT

PROCEDURES APPROVED BY APVMA	PRODUCT DESCRIPTION	WHEN TO USE	AVAILABILITY (APVMA SCHEDULE)	SLAUGHTER WITHHOLDING PERIODS	MANUFACTURER	
<b>Tri-Solfen®</b>	Pain relief following mulesing, castration and tail docking	Anaesthetic: A gel spray providing a local anaesthetic and antiseptic. Its active ingredients are Lignocaine, Bupivacaine, Adrenaline and Cetrimide.	Post-operative	Available over the counter (Schedule 5)	90 days	Bayer
<b>Buccalgesic®</b>	Alleviation of pain and inflammation for castration and tail docking	Analgesic: A meloxicam-based Non-Steroidal Anti-Inflammatory Drug. It is a viscous liquid administered between the inside of the cheek and molar teeth of sheep.	Pre-operative	Requires veterinary prescription (Schedule 4)	10 days	Troy Laboratories
<b>Metacam 20®</b>	Alleviation of pain and inflammation	Analgesic: A meloxicam-based Non-Steroidal Anti-Inflammatory Drug administered by subcutaneous injection high on the neck behind the ear.	Pre-operative	Requires veterinary prescription (Schedule 4)	11 days	Boehringer Ingelheim

## WHAT ARE THE SLAUGHTER WITHHOLDING PERIODS?

Tri-Solfen®	90 days (it is anticipated that with on-going R&D this will be reduced)
Buccalgesic®	10 days
Metacam 20®	11 days

## WHY SHOULD WOOLGROWERS USE THE NATIONAL WOOL DECLARATION?

The supply chain for wool is increasingly interested in the husbandry practices of their suppliers. Australian Wool Exchange (AWEX) created a Mulesing Status section on the National Wool Declaration (NWD) in 2007 and the number of bales being declared by woolgrowers is steadily increasing.

The NWD is voluntary, managed by AWEX and available for all wool sold by auction in Australia. It is a scheme that is audited by AWEX, is relatively low cost and focused on wool contamination and mulesing status. Increasingly clients are asking for the wools of certain NWD categories, so growers are encouraged to declare their wool regardless of whether they mules or not. There are variable, small but increasing premiums for all categories.

There are other more detailed schemes that woolgrowers can also choose, run by wool brokers and businesses providing quality assurance schemes.

**By 2015/16, eight years after the Mulesing Section was added to the NWD there were 133,910 Not Mulesed bales declared, 44,636 Ceased Mulesed bales and 342,215 Pain Relief bales, a combined 520,762 bales or 35 per cent of the total clip.**

### AUSTRALIAN WOOL SOLD AT AUCTION 2015/16 (Source: AWEX)

BALES	2015/16	
	% Sold	No of bales
Clip Declared	55%	818,341
Not Mulesed (NM)	9%	133,910
Ceased Mulesed (CM)	3%	44,636
Mulesed with Pain Relief (PR)	23%	342,215
NM, CM and PR	35%	520,762
Mulesed	20%	297,578
Clip not Declared	45%	669,552
<b>Total</b>		<b>1,487,894</b>