



TRI-SOLFEN[®]

**The better choice for
pain relief and wound care.**

A better choice

Providing pain relief during surgical animal husbandry procedures is a better choice for your livestock, your business and your industry. Australian Animal Welfare Standards and key industry organisations, including the Sheep Sustainability Framework, Meat & Livestock Australia, Australian Wool Innovation, Sheep Producers of Australia, Wool Producers of Australia and Animal Health Australia, all advocate the provision of pain relief during mulesing, tail docking and castration.¹⁻⁵

Adoption of pain relief

Providing pain relief during animal husbandry procedures helps you to meet the expectations of your industry and your customers. The vast majority of Australian sheep and wool producers already provide pain relief to lambs during mulesing.⁶ However, the provision of pain relief during tail docking or castration remains considerably lower.⁶



PRODUCERS WHO PROVIDE PAIN RELIEF DURING ⁶ :	MERINO	NON-MERINO
Mulesing	88%	83%
Tail docking (hot knife)	78%	39%
Tail docking (ring)	11%	10%
Castration	12%	11%



TRI-SOLFEN[®]

4-IN-1 PAIN RELIEF AND WOUND CARE

4-in-1 pain relief and wound care

Tri-Solfen is the better choice for pain relief and wound care following mulesing, tail docking or castration in lambs. This unique formulation provides immediate and lasting pain relief, reduces bleeding, protects against infection and facilitates wound healing.

Easy to administer

Tri-Solfen makes it easy to provide pain relief to lambs during surgical procedures. It is applied using a special spray applicator that turns the liquid formulation into a foaming gel that adheres to the wound.

Readily available

Tri-Solfen can be purchased from your rural supplier or veterinarian without a prescription. It is available in 1 L, 5 L and 20 L packs.

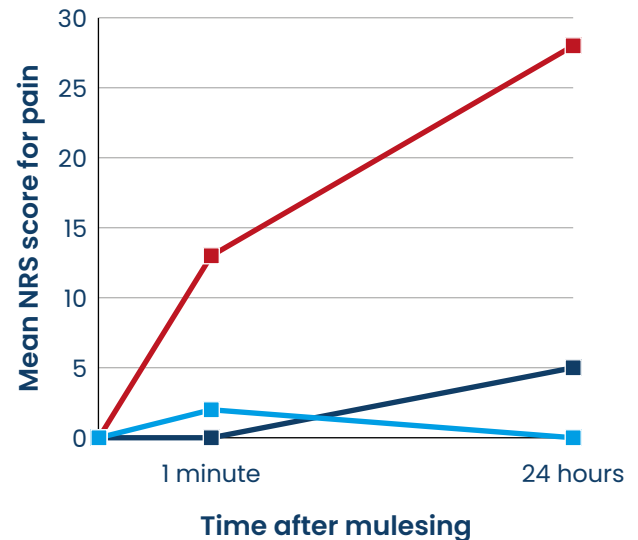
Scientifically proven

The beneficial effects of Tri-Solfen in reducing pain following mulesing, tail docking and castration in lambs has been confirmed in numerous scientific papers.⁷⁻¹⁰ Clinical studies conducted by leading Australian universities have found Tri-Solfen provides effective pain relief for **up to 24 hours** after mulesing and surgical tail docking and/or castration.

Withholding periods (sheep)

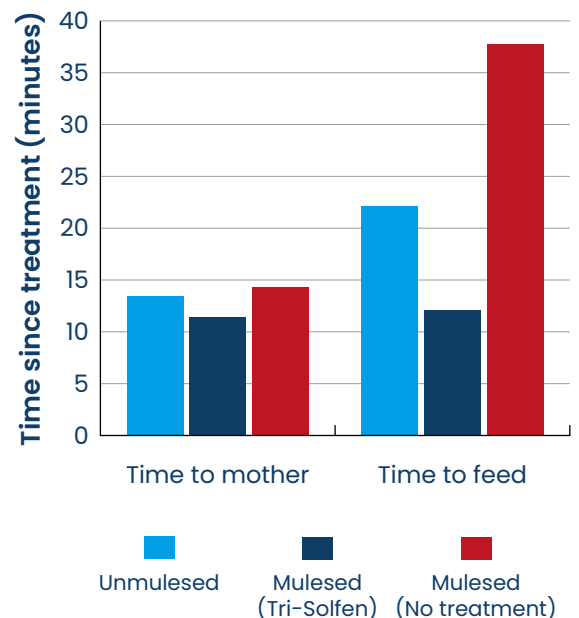
Milk Withholding Period:	DO NOT USE
Meat Withholding Period:	0 days
Export Slaughter Interval:	90 days

Mean head and rump response scores to pain stimulation of wound after mulesing.^{9a}



^aLambs tail docked at the same time as mulesing.

Mean time taken for lambs to mother up and to feed after mulesing.^{9b}



^bLambs tail docked prior to mulesing.

How Tri-Solfen works

PAIN RELIEF

Tri-Solfen contains two local anaesthetics that are commonly used to provide pain relief in humans. Lignocaine provides immediate (within 1 minute) pain relief on surgical wounds.

Bupivacaine provides longer-acting (up to 24 hours) pain relief on surgical wounds. Lignocaine and bupivacaine block the nerve signals from damaged tissue that are responsible for the sensation of pain, reducing the animal's pain response.

REDUCED BLEEDING

Tri-Solfen contains adrenaline, which reduces bleeding and slows the 'inflammatory cascade'.⁹ Adrenaline constricts blood vessels that have been cut during surgery, reducing blood loss and the risks associated with increased stress and shock to the animal. Adrenaline also reduces the rate of systemic absorption of lignocaine and bupivacaine, prolonging their anaesthetic effect.⁹

INFECTION CONTROL

Tri-Solfen contains cetrimide, an antiseptic and surfactant that helps to protect against infection, which can set back the healing process. Reduced bleeding and the disinfectant qualities of cetrimide help to start the healing process.

WOUND HEALING

Tri-Solfen is a gel formulation that seals and protects the wound for improved wound healing. Tri-Solfen is applied with the special applicator fitted with a spray tip (mulesing and docking) or nozzle (castration).

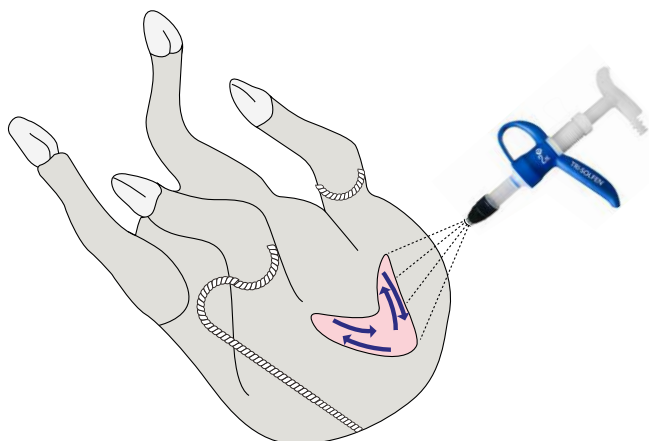
Application guidelines

- Always read and follow the label directions.
- Disinfect surgical equipment before use.
- Determine the dose rate for procedure and liveweight.
- Apply using the Tri-Solfen applicator fitted with a spray tip (mulesing and tail docking) or castration nozzle (castration).
- Pull the trigger firmly and quickly to generate the gelling foam.
- Apply the product evenly over the complete area of the wound.

Mulesing

LIVEWEIGHT	NO. OF 2 ML SPRAYS PER ANIMAL	TOTAL DOSE PER ANIMAL
Lambs 5–10 kg	3	6 mL
Lambs 11–15 kg	4	8 mL
Lambs 16–20 kg	5	10 mL
Lambs over 20 kg	6	12 mL

Apply using the Tri-Solfen applicator fitted with the spray tip. Apply in 2 mL increments according to liveweight. Apply immediately after mulesing as a series of stripes up and down the wound. Evenly cover the entire wound area with spray, particularly the wound edges. Do not spray to run-off.



Tail docking

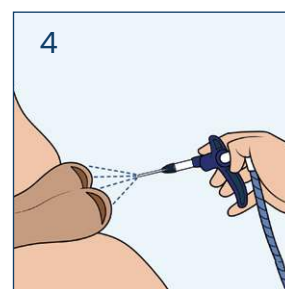
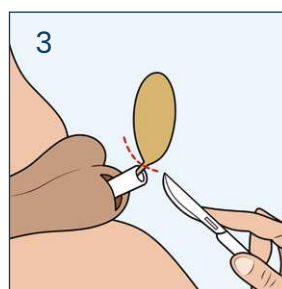
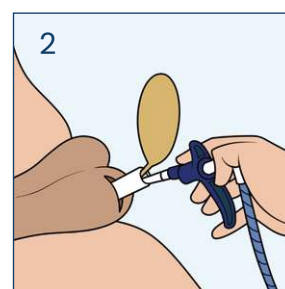
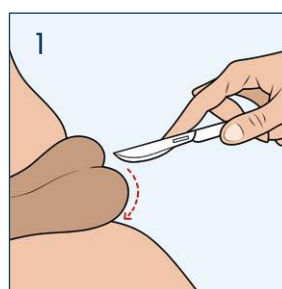
LIVEWEIGHT	NO. OF SPRAYS PER ANIMAL	TOTAL DOSE PER ANIMAL
Lambs up to 10 kg	1	1.5 mL
Lambs over 10 kg	1	2 mL

Apply using the Tri-Solfen applicator fitted with the spray tip. Determine the correct dose rate according to liveweight. Apply as a single spray to the wound immediately after docking. Evenly cover the entire wound area with spray, particularly the wound edges.

Castration

LIVEWEIGHT	ALONG SPERMATIC CORD	EXTERNAL INCISION	TOTAL DOSE PER ANIMAL
Lambs up to 10 kg	2 x 1 mL	1 mL	3 mL
Lambs over 10 kg	2 x 1.5 mL	1.5 mL	4.5 mL

Apply using the Tri-Solfen applicator fitted with the castration nozzle. Determine the correct dose rate according to liveweight. Cut through the scrotum with a scalpel, as per normal procedure, and gently extrude the testis to expose the spermatic cord (without cutting or tearing it). Insert nozzle through skin incision and carefully advance the applicator along the length of exposed spermatic cord as far as possible within the scrotum. Eject one-third of the total Tri-Solfen dose as the applicator is withdrawn from the scrotum to coat the spermatic cord. Repeat for the other scrotal incision and spermatic cord. Remove testes from the scrotum, as per normal procedure. Apply the final one-third of the total dose of Tri-Solfen to the edges of the scrotal skin wounds. NB: The castration nozzle can also be used to generate the gelling foam needed for treating mulesing or tail docking wounds.





Lambs experience acute (immediate) and chronic (long-term) pain during and after certain animal husbandry procedures.² Best practice guidelines recommend the provision of both acute and chronic pain relief during mulesing, tail docking and castration.¹⁻⁵

- Tri-Solfen is the first choice for **acute and lasting pain relief (up to 24 hours) following surgical procedures** (e.g. mulesing, hot/cold knife tail docking and/or hot/cold knife castration) in lambs.
- NumOcaine® applied using the Numnuts® device is the first choice for **acute pain relief following ring docking and/or ring castration** in lambs.
- Non-steroidal anti-inflammatory drugs (e.g. meloxicam) provide **chronic pain relief**.
- Tri-Solfen, NumOcaine and the Numnuts device are available from your rural reseller or veterinarian.

Demonstrate your commitment to delivering best-practice animal welfare standards by registering in the Better Choices program. This independently-audited program enables livestock producers to certify they implement best-practice animal welfare standards. To create or renew your registration, visit **betterchoices.com.au** or call **1300 595 250**.

trisolfen.com.au
1300 015 825

ACUTE PAIN RELIEF	CHRONIC PAIN RELIEF
Tri-Solfen (surgical castration, tail docking and/or mulesing) or Numnuts (ring docking and/or ring castration)	Non-steroidal anti-inflammatory drugs (e.g. meloxicam)

Contact your Dechra territory manager, rural reseller or veterinarian about how you can deliver Gold Standard pain relief in your livestock business.

References: 1. Australian Animal Welfare Standards and Guidelines – Sheep Animal Health Australia (AHA) 2014. Publication record: Edition 1 Version: 1.0 January 2016 Endorsed. 2. Meat & Livestock Australia (2020), Fact sheet – Pain mitigation in sheep and cattle. 3. Australian Wool Innovation Limited. (2020). Anaesthetics and Analgesics at Lamb Marking. 4. Wool Producers Australia, 2023/24 Policy document. 5. Responsible Wool Standard 2.2, 2021. 6. On-Farm Insights from the National Producer Survey (2022). Sheep Sustainability Framework. 7. Lomax, S. et al. (2008). Impact of topical anaesthesia on pain alleviation and wound healing in lambs after mulesing. *Aust Vet J.* 86:159–168. 8. Lomax, S. et al. (2010). Topical anaesthesia alleviates the pain of castration and tail docking in lambs. *Aust Vet J.* 88:67–74. 9. Lomax, S. et al. (2013). Duration of action of a topical anaesthetic formulation for pain management of mulesing in sheep. *Aust Vet J.* 91:160–167. 10. Lomax S. et al. Quantitative Sensory Testing for assessing wound pain in livestock. Faculty of Veterinary Science, University of Sydney, PMB 3, Camden, NSW 2570 Australia.

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