

LESS PAIN ALL GAIN

#1

NSAID
GLOBALLY¹



SUPPORTING
ongoing advancements
in veterinary and farming practices



METACAM® 40 mg/mL
Solution for Injection



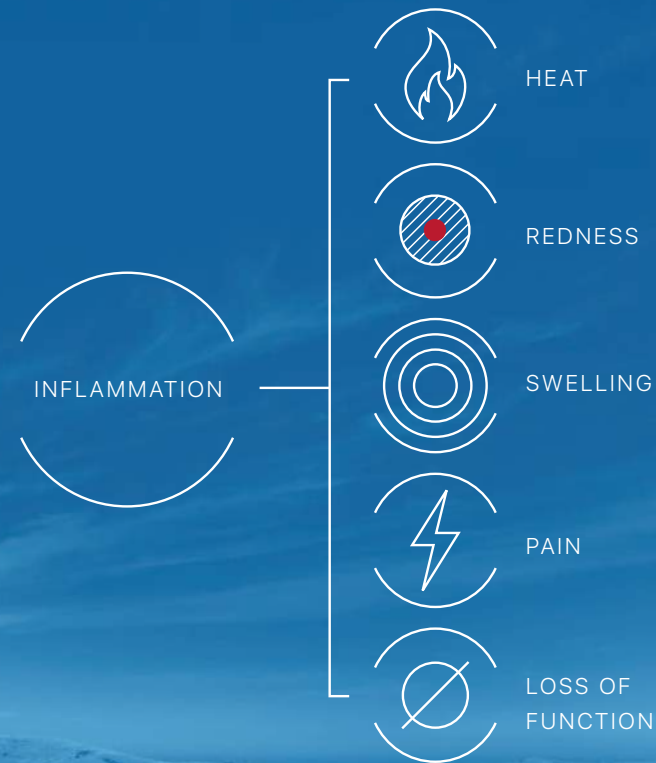
METACAM® 20 mg/mL
Solution for Injection

Mastitis = inflammation

Mastitis is, by definition, an inflammatory condition of the udder. It has significant implications for animal health as well as milk quality and production.

Inflammation consists of five cardinal signs.

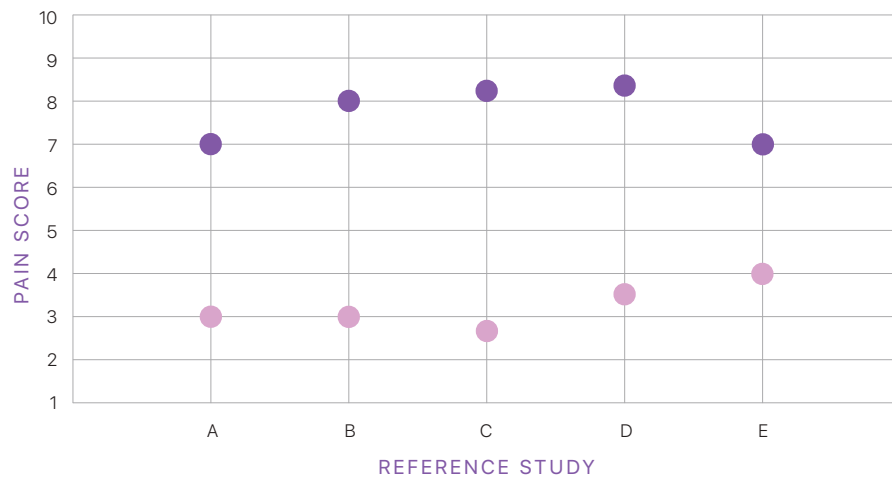
METACAM is highly effective in relieving the inflammation and pain associated with inflammatory conditions such as mastitis.



Mastitis is painful

There is strong evidence that cows with mastitis experience pain, **regardless of severity**. There is also broad agreement from the veterinary and farming community that mastitis of any type is painful for cows.

VET AND FARMER OPINIONS FOR MILD AND SEVERE MASTITIS



KEY:
1 = no pain, 10 = worst pain imaginable.

● MILD ● SEVERE

- A. United Kingdom (Vets) 2006²
- B. New Zealand (Vets) 2011³
- C. Denmark (Vets) 2012⁴
- D. Denmark (Farmers) 2012⁵
- E. United Kingdom (Vets) 2017⁵

Recognising mastitis early is critical

Mastitis pain and inflammation has significant negative implications for animal health as well as production. Observing cows and identifying changes in the herd is crucial to successful outcomes.

Associated changes may include:

- Changes in temperament
- Change in milking order
- Kicking off cups / restlessness
- Changes in quarters
- Changes in gait and separation from herd
- High or increasing Somatic Cell Counts
- Clots on filter sock
- Reduced in-calf rate^{10,11,12}

There is an important role to play in helping farmers and farm staff to identify and treat cases early and understand the link between mastitis, inflammation, productivity and pain.

Productive wellbeing – it is not only about pain

METACAM provides relief from inflammation and pain and mitigates fever, swelling and is anti-endotoxic.⁶

Relief from inflammation and pain has been shown in studies to last up to 72 hours.⁷

A single shot of METACAM optimises mastitis treatment outcomes and supports a faster, more comfortable journey to recovery.

METACAM is a valuable tool in the toolkit due to its ability to address inflammation and pain to help:

- Maximise treatment success
- Optimise production outcomes

Boehringer Ingelheim places a high priority on supporting improvements in farming practices with outcome-based evidence.



Inflammation = production losses

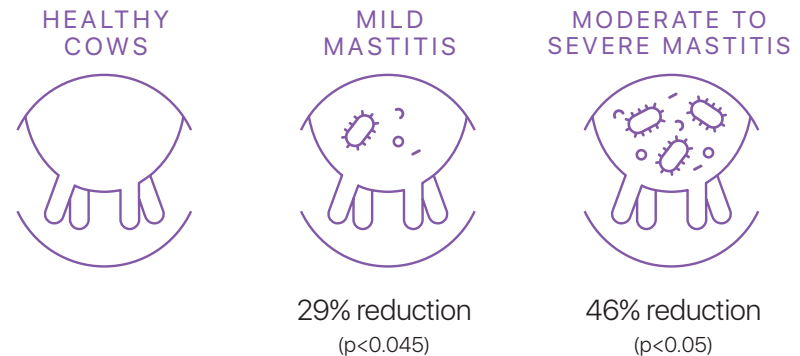
Infertility is the greatest reason for culling^{8,9}

Poor reproductive performance in the dairy herd is one of the most common reasons for culling in New Zealand and around the world.

When mastitis can't be avoided, farmers need to minimise its impact on fertility.

METACAM is highly effective in relieving the inflammation associated with inflammatory conditions.

The chance of pregnancy is reduced in cows with clinical mastitis



Cows that have had a case of clinical mastitis:

- Demonstrate a lower first service conception rate.¹⁰
- Have a longer calving to conception interval.¹¹
- Display an increased risk of embryo loss or early abortion.^{12,13}

Improved reproductive outcomes with METACAM

By providing **relief** from inflammation, the addition of METACAM has shown **significant long term reproductive benefits** compared to the treatment of mastitis with antibiotic alone.

Studies showed:

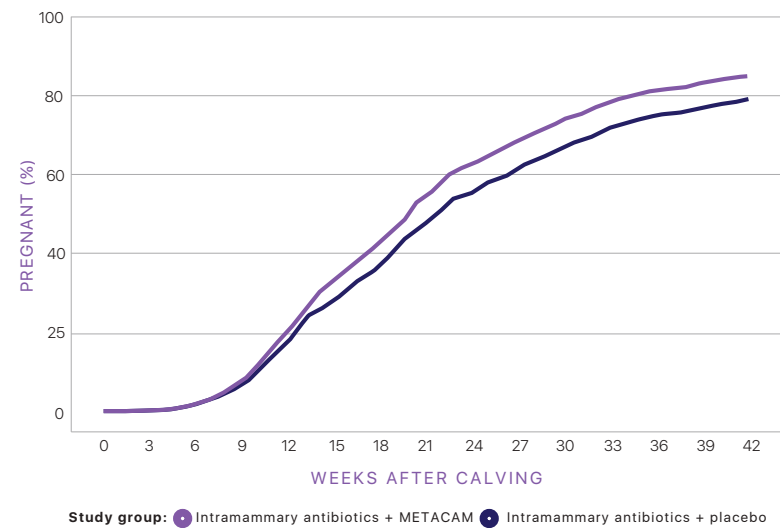


10% higher first service conception rates¹⁴



9% more cows pregnant around six weeks in calf target¹⁴

METACAM improved reproductive outcomes in clinical mastitis



Improved outcomes in inflammatory lameness

Providing **anti-inflammatory** effects with METACAM added to traditional treatments for hoof lameness (e.g. trimming and application of blocks), has also shown **significant long term reproductive benefits**.

Studies showed:

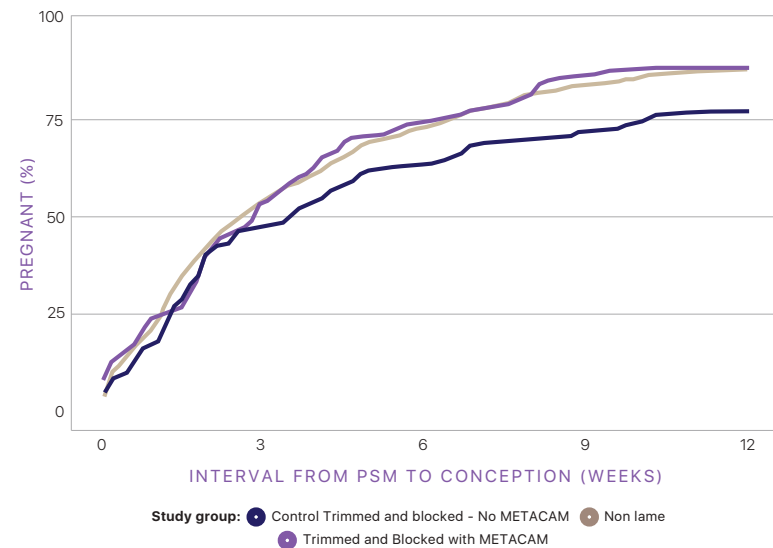


15% higher final pregnancy rate²⁵



15% improvement in six week in calf rate²⁵

METACAM improved outcomes in inflammatory lameness



METACAM reduced production losses from culling

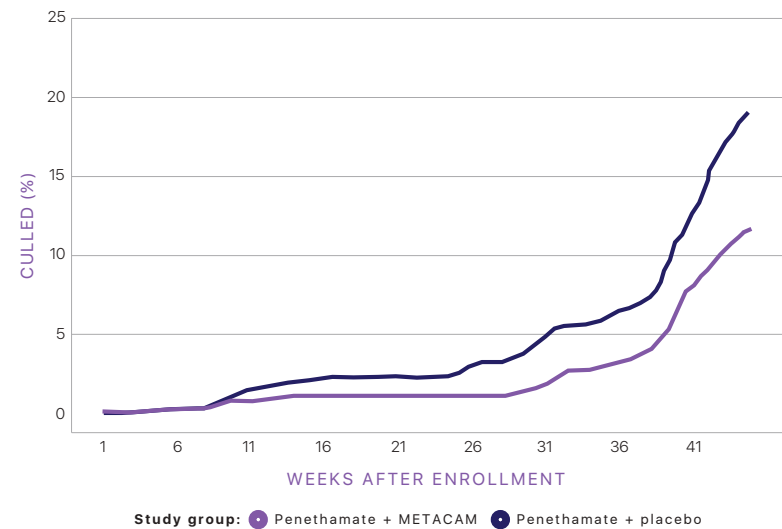
Relieving inflammation with METACAM in mild to moderate mastitis reduced the chance of culling by 12% when used along with antibiotic treatment.

Studies showed:



12% reduction in the chance of culling¹⁴

METACAM reduced production losses from culling in mild to moderate mastitis



Maximising treatment success

METACAM is a key tool in maximising the effectiveness of mastitis treatment, managing cow comfort and meeting the demands of modern farming practice.

A single dose of METACAM to relieve pain and inflammation alongside standard antibiotic treatment has been shown to **improve bacteriological cure rates** compared to antibiotic treatment alone.¹⁴ This means that the pathogen causing the mastitis had gone.

METACAM treated cows had a **32% higher** bacteria cure rate than control (antibiotic only) cows.¹⁴



Antimicrobial Resistance (AMR)

In farm animals antibiotics are, and will remain, an integral part of treating mastitis. Any infection must be treated before milking can resume.

In addition to conventional measures of treatment effectiveness, consumers worldwide place a great deal of importance on the comfort and welfare of animals.

While returning to normal production is an important part of any treatment, the journey to achieve this goal must also be considered.



The METACAM timeline

METACAM is the most widely researched NSAID in production animals, backed by over 150 peer-reviewed studies from New Zealand and all over the world.

CLAIMS

1998 

METACAM 20 first launched in Germany as adjunctive treatment for young cattle with respiratory infections

2001 

METACAM 20 registered in New Zealand for use in cattle

2004 

METACAM 20 approved for use in pigs in New Zealand

STUDIES

1998 

METACAM 20 added to antibiotic treatment improved outcomes in bovine respiratory disease (BRD)^{15, 16}

2000 

METACAM 20 optimal dose rate determined to be 0.5 mg/kg in cattle¹⁷

2005 

METACAM 20 was superior to Flunixin when used to treat mastitis alongside antibiotics¹⁸

METACAM 20 added to antibiotic treatment of BRD reduced lung lesions and improved LWG¹⁹

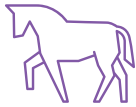
2009 

MAMMARY STUDY
METACAM 20 alongside antibiotics reduced SCC and reduced culling when treating mild to moderate mastitis⁵

METACAM 20 alongside local anaesthesia at disbudding mitigated the pain response once local wears off²⁰



2010



METACAM 20 approved for use in horses in New Zealand

2012



METACAM 20 disbudding claim approved for cattle in New Zealand

2016



METACAM 20 approved for use in sheep in New Zealand

2021



METACAM 40 launched in New Zealand along with a claim for the alleviation of pain and inflammation associated with surgery in cattle

2010



METACAM 20 alongside oral electrolytes improved appetites and performance compared to placebo treated calves²¹

2013



METACAM 20 demonstrated beneficial effect in relieving pain and decreasing udder oedema and body temperature in cows with induced clinical mastitis²²

First report that disbudding wounds may remain sensitive for at least 75 hours after the procedure. Play behaviours determined to be an effective indicator of pain²³

2016



FERTILE STUDY
METACAM 20 alongside antibiotics improved fertility and milk quality outcomes when treating mild to moderate mastitis¹⁴

2017



METACAM 20 plus local anaesthetic at disbudding improved motivation to feed compared to local anaesthetic or NSAID on their own²⁴

2025



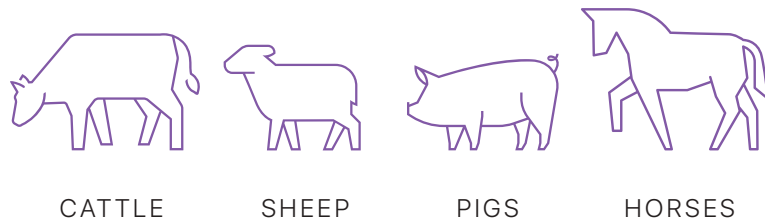
METACAM 20 plus trimming and application of blocks improved long term reproductive outcomes in cases of hoof horn lameness²⁴

CLAIMS

STUDIES

METACAM 20 Dosing Guide

MULTI-SPECIES



CATTLE:

- For use in acute mastitis, in combination with appropriate therapy.
- For use in acute respiratory infection alongside appropriate antibiotic therapy.
- For use in diarrhoea in combination with oral-rehydration therapy.
- For use to assist in the control of pain following the dehorning of cattle, particularly that following heat cautery dehorning of young cattle. It is recommended that the injection be administered approximately 10 minutes before dehorning and be accompanied by a corneal nerve block anaesthesia.
- For the alleviation of pain and inflammation associated with surgery in cattle.
- Single use only by *S/C* or *I/V* injection at 2.5 mL/100 kg.

2.5 mL
100 KG





SHEEP:

- For alleviation of pain and inflammation in sheep and lambs 14 days of age or older.
- Single use only by *S/C* injection high on the neck behind the ear at 1 mL/20 kg.



1 mL
20 KG

WITHHOLDING PERIODS

MEAT

| | | | |
|---|---|---|---|
|  |  |  |  |
| 10 DAYS | 11 DAYS | 3 DAYS | 28 DAYS |

MILK

| | |
|---|---|
|  |  |
| 84 HOURS | 35 DAYS |

PIGS:

- For use in acute non-infectious locomotor disorders and in combination with appropriate antibiotic therapy for puerperal septicaemia and toxemia (MMA syndrome) in sows.
- Single use only by *I/M* injection in the anterior half of the neck at 2 mL/100 kg (can be repeated ONCE after 24 hours if necessary).

2 mL
100 KG

HORSES:

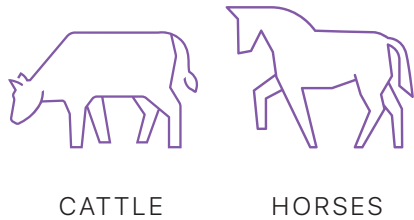
- For rapid initiation therapy of musculoskeletal disorders and relief of pain associated with colic.
- Single use only by *I/V* injection at 3 mL/100 kg. Can continue treatment in horses after 24 hours with METACAM 15 mg/mL Oral Suspension for Horses (ACVM No. A010142).

3 mL
100 KG



METACAM 40 Dosing Guide

SPECIES



CATTLE:

- Subcutaneous (S/C) and intravenous (I/V) use.
- For use in acute mastitis, in combination with appropriate therapy.
- For use in acute respiratory infection alongside appropriate antibiotic therapy.
- For use in diarrhoea in combination with oral-rehydration therapy.
- For use to assist in the control of pain following the dehorning of cattle, particularly that following heat cautery dehorning of young cattle. It is recommended that the injection be administered approximately 10 minutes before dehorning and be accompanied by a cornual nerve block anaesthesia.
- For the alleviation of pain and inflammation associated with surgery in cattle.
- Single use only by S/C or I/V injection at 1.25 mL/100 kg.

1.25 mL
100 KG

WITHHOLDING PERIODS

MEAT



MILK



HORSES:

- Intravenous (I/V) use only.
- For rapid initiation therapy of musculoskeletal disorders and relief of pain associated with colic.
- Single use only by I/V injection at 1.5 mL/100 kg. Can continue treatment in horses after 24 hours with METACAM 15 mg/mL Oral Suspension for Horses (ACVM No. A010142).

1.5 mL
100 KG



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