METACAM®
for mastitis

LESS PAIN ALL GAIN

72 hours
DURATION OF EFFECT IN CATTLE[2]

SUPPORTING
ongoing advancements
in veterinary and farming practices

Improvements in
MASTITIS CURE RATES
BY 32%[3]

#1 NSAID
GLOBALLY[1]

OPTIMISING
FERTILITY
and repro outcomes[3,4]

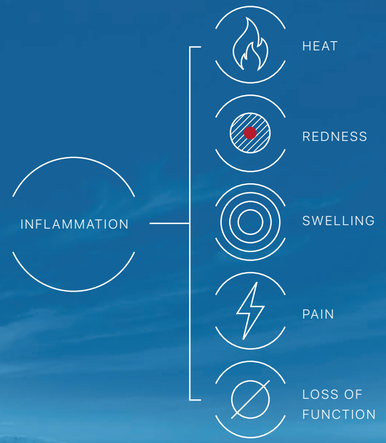
NEW

Boehringer Ingelheim

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.

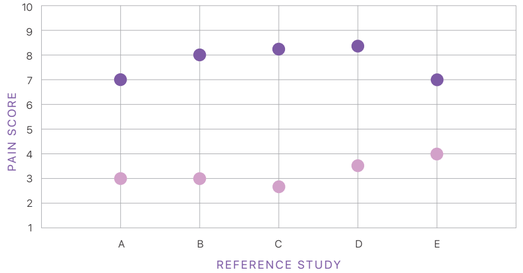
Inflammation consists of five cardinal signs.



Mastitis = pain

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) 2006[5]
B. New Zealand (Vets) 2011[6]
C. Denmark (Vets) 2012[7]
D. Denmark (Farmers) 2012[7]
E. United Kingdom (Vets) 2017[8]

Recognising mastitis early is critical

Veterinarians are seldom involved in the diagnosis of clinical mastitis. Farmers and farm staff play a crucial role in observing cows and identifying changes in the herd.

Associated behaviour changes may include:

- Changes in temperament
- Change in milking order
- Kicking off cups
- Restlessness
- Changes in gait
- Separation from herd
- Lethargy

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

METACAM® improves outcomes in mastitis

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

METACAM relieves inflammation and pain in cattle for 72 hours.[2] Additionally, METACAM mitigates fever, swelling and is anti-endotoxic.[9]

METACAM is a valuable tool in the toolkit due to its ability to:

- Address inflammation and pain
- Optimise production outcomes
- Maximise treatment success

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

Mastitis = production losses

Infertility is the greatest reason for culling[4,10]

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

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

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.[11]
- Have a longer calving to conception interval.[12]
- Display an increased risk of embryo loss or early abortion.[13,14]

METACAM improves fertility outcomes

As well as providing immediate relief from inflammation and pain, METACAM provides significant long-term reproductive benefits when used along with antibiotics for mastitis.

48% higher first service conception rate (p<0.01)[3]

29% more cows pregnant around six week in calf target (p<0.001)[3]

METACAM reduced the chance of culling in mild to moderate mastitis
Cows treated with METACAM were 2.5 x less likely to be culled for failing to conceive.[4]

AMR and meeting social demands

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.

Maximizing treatment success

METACAM treated cows had a 32% higher bacteria cure rate than control cows.[3] ($p<0.012$)

METACAM is a key tool in maximising the effectiveness of antibiotic treatment, managing cow comfort and meeting the social demands of global consumers.

A single dose of METACAM given alongside standard antibiotic treatment has been repeatedly proven to improve bacteriological cure rates compared to antibiotic treatment alone.[3,15,16]
This means that the pathogen causing the mastitis has gone.

This can help reduce
- Repeated or prolonged antibiotic treatment
- Reliance on different antibiotics to cure stubborn cases
- Overall use of antibiotics on farms

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.

1998

METACAM 20 added to antibiotic treatment improved outcomes in bovine respiratory disease (BRD)[17,18]

2000

METACAM 20 optimal dose rate determined to be 0.5 mg/kg in cattle[19]

2001

First registration in New Zealand

2004

Pig claim approved New Zealand

2005

METACAM 20 superior to Flunixin when used to treat mastitis alongside antibiotics[20]

METACAM 20 added to antibiotic treatment of BRD reduced lung lesions and improved LWG[21]

2009

MAMMARY STUDY
METACAM 20 alongside antibiotics reduced SCC and reduced culling when treating mild to moderate mastitis[4]

Adding METACAM 20 alongside local anaesthesia at disbudding mitigated the pain response once local wears off[22]

2010

Horse claim approved in New Zealand

METACAM 20 alongside oral electrolytes improves appetites and performance compared to placebo treated calves[23]

2012

Disbudding claim approved in New Zealand

2013

METACAM benefit based on reduced pain sensitivity, reduced udder oedema and reduced temp[24]

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 pain[25]

2016

FERTILE STUDY
METACAM 20 alongside antibiotics improved fertility and milk quality outcomes when treating mild to moderate mastitis[3]

Sheep claim approved in New Zealand

2017

METACAM 20 plus local at disbudding improved motivation to feed compared to local or NSAID on their own[26]

2021

METACAM 40 LAUNCH IN NEW ZEALAND

Surgical claim in cattle approved in New Zealand for METACAM 40

METACAM 20 Dosing Guide

MULTI-SPECIES

FLEXIBILITY IN SPECIES: CATTLE, SHEEP, PIGS, HORSES

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 disbudding and dehorning of cattle, administered approximately 10 minutes prior and accompanied by effective and appropriate local analgesia.
- 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

PIGS:
- For use in acute non-infectious locomotor disorders and in combination with appropriate antibiotic therapy for puerperal septicaemia and toxaemia (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 (A010142).

3 mL / 100 KG

METACAM 40 Dosing Guide

SPECIES

CATTLE AND HORSES

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 disbudding and dehorning of cattle, administered approximately 10 minutes prior and accompanied by effective and appropriate local analgesia.
- Single use only by S/C or I/V injection at 1.25 mL/100 kg.

1.25 mL / 100 KG

- **NEW SURGICAL CLAIM** - for the alleviation of pain and inflammation associated with surgery in cattle.

WITHHOLDING PERIODS

MEAT

10 DAYS | 28 DAYS

MILK

84 HOURS

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 (A010142).

1.5 mL / 100 KG

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METACAM® 20 mg/mL Solution for Injection and METACAM® 40 mg/mL Solution for Injection are Restricted Veterinary Medicines, only available under veterinary authorisation.

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