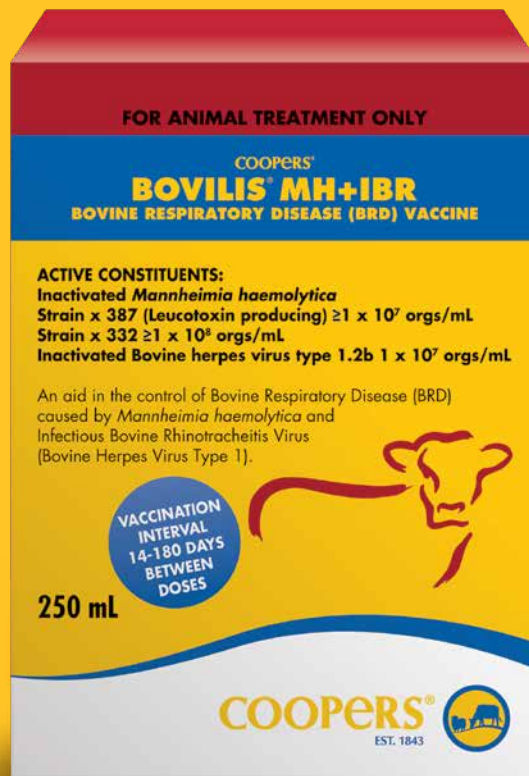


COOPERS®  
**BOVILIS® MH+IBR**

**THE MOST  
COMPLETE BRD  
VACCINE**



# WHEN YOU'RE CONTROLLING BRD, DON'T DO HALF THE JOB

Bovine Respiratory Disease (BRD) is caused by a combination of infectious agents and stress factors such as weaning, transporting, mixing, handling and changes in diet. This combination of issues affects both feedlot cattle and susceptible cattle on farm.

Of the several viruses and bacteria known to contribute to the development of BRD, *Mannheimia haemolytica* (MH) and Infectious Bovine Rhinotracheitis Virus (IBR) are considered two of the most damaging when it comes to cattle health<sup>1</sup>. Vaccinating against both of these is considered to be critically important to aid in the control of BRD.

**BOVILIS MH+IBR IS THE ONLY VACCINE IN AUSTRALIA THAT HELPS CONTROL BOTH MH AND IBR IN CATTLE.**

## *Mannheimia haemolytica* (MH)

- When immunity is weakened, the bacteria multiplies rapidly
- Causes pneumonia, pleurisy and death

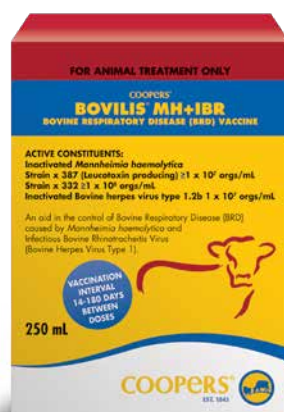
## Infectious Bovine Rhinotracheitis Virus (IBR)

- Damages natural defence mechanisms
- Antibiotics are ineffective against the virus
- Causes viral damage to upper airways, which can lead to BRD and mortalities

Controlling just one infectious agent is not always enough to protect cattle from BRD. Vaccinate against two important pathogens with Bovilis MH+IBR and implement a BRD management plan to achieve the best level of control<sup>1</sup>.

## BRD IS THE BIGGEST CONTRIBUTOR TO ECONOMIC LOSS<sup>2</sup>

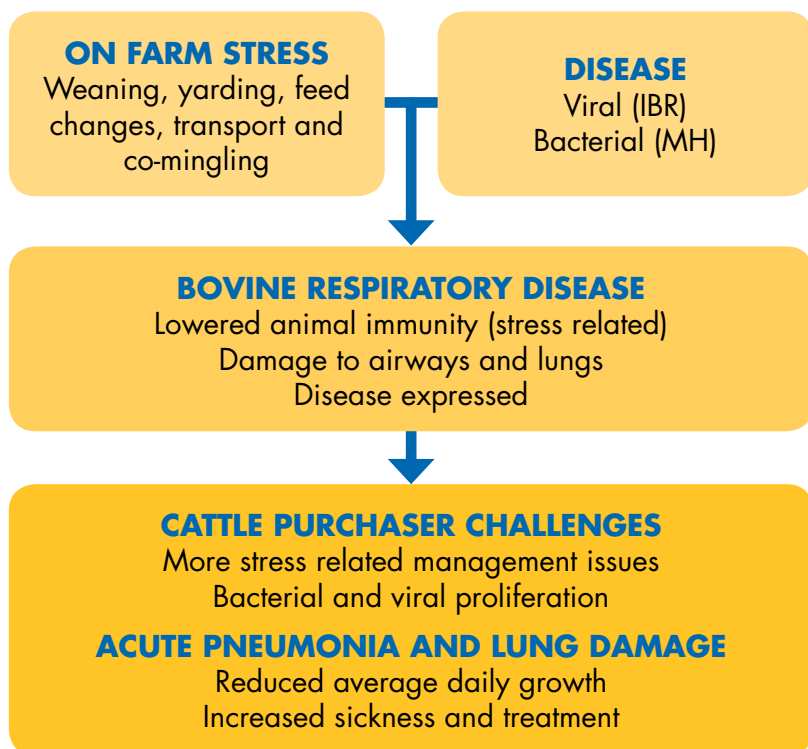
- BRD causes mortalities<sup>2</sup>, reduced growth performance<sup>2</sup>, more days on feed<sup>3,4</sup>, reduced meat quality<sup>4</sup> and increased labour costs<sup>2,3</sup>.
- Even if treated after infection, many animals still die or suffer long term lung damage and associated production losses/reduced weight gains.
- **77%** of all pulls are BRD related<sup>5</sup>.
- **51.5%** of all feedlot mortalities are caused by BRD<sup>5</sup>.
- BRD costs the Australian beef industry an estimated **\$60 million** per year<sup>8</sup>.



## COMMON CATTLE STRESSORS TRIGGER BRD

Stress is a key factor for cattle getting sick from BRD. Infection is common when cattle are placed in stressful environments, their diets are changed, or when they are mixed with new cattle. That's why BRD is a major issue during the weaning period, while cattle are transported to and from sales yards, when they head to backgrounding operations, and when they are inducted at feedlots.

Once cattle are stressed and the immune system is compromised, BRD is more likely to take hold. An animal with a weakened immune system allows naturally occurring bacteria to multiply excessively and the infection spreads to the lung.



### KEY MANAGEMENT FACTORS THAT CAN CONTRIBUTE TO INCREASED RATES OF BRD INCLUDE:

#### Improper weaning practices

- Poorly weaned/not yard weaned and sent straight to market.
- Co-mingling of cattle from different sources – (major issue). Changes in pecking order as a result of co-mingling is a very understated stress, along with exposure to new viral and bacterial pathogens.

#### Transport

#### Dehydration

#### Change in nutrition and water

– moving from grass and natural water to feeding from bunks and troughs.

#### Sudden changes in environmental temperature

– autumn and spring are times of increased incidence of BRD.

#### Interaction with humans

– can't avoid interaction with humans, especially if selling through saleyards then movement to feedlots.

**Stress** – caused by factors above.

## IMPACTS OF BRD ON ANIMAL PERFORMANCE

While the impacts of BRD can vary significantly based on production systems, breed and classes of cattle and health management programmes; most cattle are susceptible to BRD at some point in their lifetime and the impact can have implications for growth performance<sup>2</sup>, marketability of animals, and the returns achieved by producers.

It is not uncommon for young, BRD susceptible cattle in intensive situations such as weaning, saleyard or feedlot to experience levels of sickness which effect 25% of the mob<sup>2</sup>, including death of some animals. By reducing BRD in cattle, performance is improved and the animal welfare benefits are significant as well as the subsequent reduction in antibiotic treatments.

## HOW DO TREATMENT PROTOCOLS COMPARE?

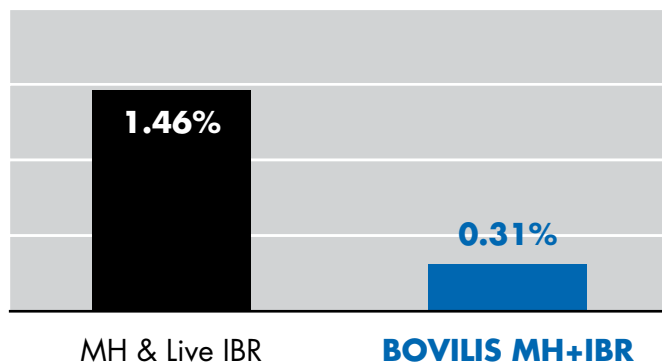
There are two treatment protocols that are commonly used in feedlots throughout Australia. Two shots of Bovilis MH+IBR is the preferred protocol for many of Australia's largest feedlots<sup>7</sup>, while an MH only vaccine along with Rhinoguard at induction is another protocol adopted by some feedlots. How do these protocols compare?

An Australian feedlot specific trial was conducted in 2009/2010 to measure the effectiveness of these two most common protocols<sup>6</sup>.

**MH and Live IBR group** (2197 cattle) were backgrounded with Bovilis MH vaccine. On feedlot induction, a booster dose of Bovilis MH as well as a Live IBR vaccine were given.

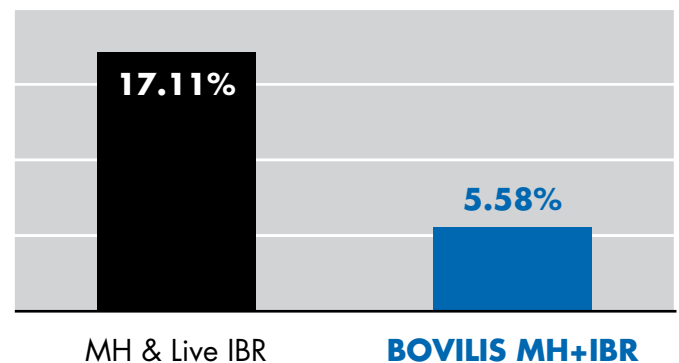
**Bovilis MH+IBR group** (2274 cattle) were backgrounded with Bovilis MH+IBR. On feedlot induction, a booster dose of Bovilis MH+IBR was given.

**FIGURE 1:**  
**BRD MORTALITIES<sup>6</sup> –**



Total number of BRD mortalities in feedlot pens.  
Trial cattle were subject to natural challenge.

**FIGURE 2:**  
**BRD MORBIDITIES (PULLS)<sup>6</sup> –**



Total number of BRD morbidities in feedlot pens.  
Trial cattle were subject to natural challenge.

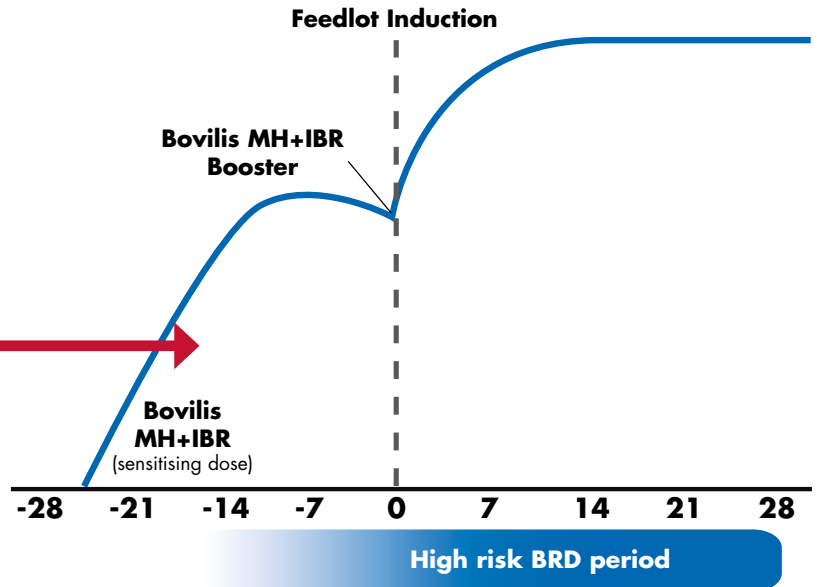


**This trial demonstrated that pre-vaccination with BOVILIS MH+IBR, followed by a booster dose at feedlot induction, provided significantly better protection against BRD when compared to a MH and Live IBR protocol<sup>6</sup>.**

# ON-FARM PRE-VACCINATION VS FEEDLOT ONLY INDUCTION

Vaccinating prior to feedlot entry has two main benefits. Firstly, when cattle are pre-vaccinated in the unstressed environment of their farm the cattle can be expected to develop a better immune response rate to the vaccine. And secondly, and most importantly, pre-vaccinated cattle have a higher level of protection at the time of maximum risk – immediately following feedlot induction.

**Bovilis MH+IBR pre-vaccination can now be between 14 and 180 days before induction**

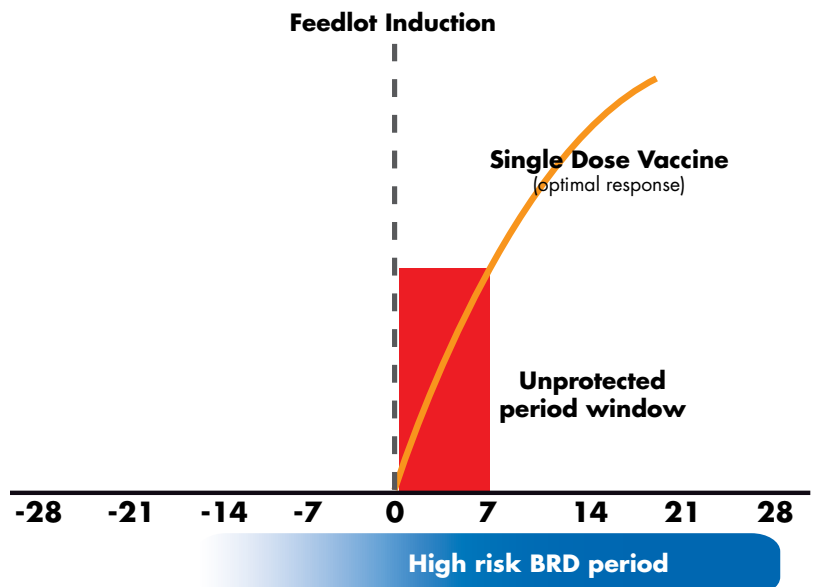


Schematic representation of booster doses

## TIMING IS VERY IMPORTANT

The risk of BRD is at its highest point on feedlot induction and is very common in the first 50 days on feed, due to the fact that cattle are moved, mixed, handled and stressed the most during this period.

It is at this stressful time that BRD is most likely to develop and why it is important that cattle are properly protected during this feedlot induction period.



Schematic representation of the unprotected window with single dose vaccines

# WHY DO MANY AUSTRALIAN FEEDLOTS PAY A PREMIUM FOR CATTLE PRE-VACCINATED WITH BOVILIS MH+IBR<sup>^</sup>?

- ✓ BOVILIS MH+IBR is the only combination vaccine that contains both MH and IBR antigens. Vaccinating for both MH and IBR is important to help control of BRD.
- ✓ Proven over many years to help protect cattle against BRD pre and post feedlot entry, as well as on farm.
- ✓ BOVILIS MH+IBR has a pre-vaccination window of 14 to 180 days making it easy for producers to use at a time that is convenient.
- ✓ BOVILIS MH+IBR is available through your veterinarian and through rural resellers.
- ✓ BOVILIS MH+IBR is ready to use (no mixing and shaking) making it easier to use on farm.
- ✓ Australian made with Australian strains of MH and IBR.

## COOPERS<sup>®</sup> **BOVILIS<sup>®</sup> MH+IBR** **THE MOST COMPLETE BRD VACCINE**

Toll Free 1800 885 576

[www.coopersanimalhealth.com.au](http://www.coopersanimalhealth.com.au)

<sup>^</sup> Premiums vary between feedlots and not all feedlots pay a premium.

Contact your feedlot buyer for more information.

1. MLA, Controlling BRD in feedlot cattle, FLO6, 2001.
  2. Gagea MI et al. J Vet Diagn Invest 2006; 18: 18-24.
  3. Wittum TE et al. JAVMA 1996; 209: 814-8.
  4. Thompson PN et al. J Anim Sci 2006; 84: 488-98.
  5. Barnes et al, epidemiology and management of bovine respiratory disease in feedlot cattle, MLA 2015.
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  7. AHA Data, July 2018. Doses sold.
  8. Rapid detection of bovine respiratory disease pathogens, Dr Timothy J Mahony and Dr Paul F Horwood.
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