Sick animals

Invisible subclinical disease
Bovine Respiratory Disease (BRD)

Outbreaks of BRD continue to be the cause of significant economic losses and hardship for cattle farmers.

The fact is, many contributing agents can produce similar clinical signs. Good animal husbandry and farm management practices, including a comprehensive herd vaccination scheme, remain the best strategy.

The Main Risk Periods

**Young age**

The immune systems of young calves become more efficient with age, allowing for a better response when challenged by respiratory pathogens. For this reason, respiratory disease is more commonly diagnosed during the first three months of life. For calves being fed with milk replacers, it is also the period in which weaning takes place.

**Mixing & Weaning**

A particularly vulnerable time in an animal’s life, especially young calves, are the days just following the introduction and mixing of animals from different sources. Circulation of respiratory pathogens and differences in immune status are the main factors that lead to a higher incidence of respiratory disease.

**Costs**

Mortality costs and treatment expenses are only the tip of the iceberg when it comes to adding up the overall financial losses associated with a pneumonia outbreak.
The effect of Pneumonia on productivity and profitability

Subclinical disease  
The hidden costs

Studies have shown 12 month old dairy replacement heifers to be ~20kg live weight lighter than potential due to subclinical respiratory disease.¹

On finishing, slaughter dates ²

Severely sick beef cattle take over 59 days longer to finish than healthy animals. Even animals showing little or no sickness can be suffering from subclinical respiratory disease which will increase finishing times to slaughter.

The facts about Pneumonia

Pneumonia is by far Ireland’s No. 1 cattle killer.

It accounts for over 30% of all deaths in cattle from one month to one year of age.¹

ANTIBIOTICS DO NOT TREAT VIRAL PNEUMONIA

Grade 1
Subclinical disease

• Proliferation of viruses and bacteria
• Modest lung dysfunction
• No evident clinical signs

Grade 4
Irreversible clinical disease

• Extensive lung damage
• Impaired performance
• Death risk

¹ Anon 2012. AFBI/DAFM All-Island Animal Disease Surveillance Report 2012
Pasteurella (Mannheimia) haemolytica
- Bacterial Pathogen
- Associated with stress factors
- High mortality rates. Bacterial pneumonia - No 1. cause of death in young stock *(see graph below)*
- Only one vaccine available for *Pasteurella (Mannheimia) haemolytica* and viral pneumonia - Bovilis Bovipast RSP

**PI3**
- Is often referred to as the ‘gateway’ virus for bacteria ie. opens the door for bacteria
- Vaccines available

**RSV**
- Virus which effect young cattle mainly
- Stress factors trigger an outbreak such as overcrowding, weaning etc.
- Vaccines available and advisable in young stock

**Causes of respiratory disease in Ireland**

• Pasteurella (Mannheimia haemolytica) is the 2nd most common cause of pneumonia and the most common cause which can be vaccinated against

• Iron is needed for Pasteurella* to multiply

• When Pasteurella* reach the lung, Iron Regulating Proteins (IRPs) on their surface absorb iron

• If cattle are vaccinated with Bovipast RSP before Pasteurella* reach the lung, antibodies are produced against IRPs

• These antibodies attach to the IRPs on the surface of Pasteurella*. They prevent absorption of iron resulting in the failure of the Pasteurella* to multiply and reducing clinical signs of pneumonia.

*Mannheimia haemolytica
**Bovilis Bovipast RSP vaccination programs**

**Start early and choose the right vaccine for the job at hand**

Initiation of vaccination at a young age is key in BRD control programs to ensure that young calves are protected during the highest risk period.

Bovilis Bovipast RSP can be safely administered from 2 weeks of age, and it is advisable to vaccinate all animals in a group in order to minimise the infectious potential.

**Compatible with Bovilis IBR Marker Live**

Vaccination with Bovilis IBR Marker Live at the same time as Bovilis Bovipast RSP may be required as part of an eradication program or because respiratory disease with IBR involvement has been detected on the farm.

The compatibility of Bovilis Bovipast RSP and Bovilis IBR Marker Live has been proven in a challenge study.¹

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1. Makoschey B. and others (2006), Comprehensive protection against all important primary pathogens within the bovine respiratory disease complex by combination of two vaccines. Der Praktische Tierarzt 87, 819-826.
Why vaccinate with Bovilis Bovipast RSP?

- Reduces the use of antibiotics
- Increases productivity and in turn, the profitability of your farm
- Protects against Pasteurella* & Viral Pneumonia (RSV and PI3) - among the most common causes of pneumonia in young stock (<12 months old)

Licensed for concurrent use with Bovilis® IBR Marker Live.

Bovilis Bovipast RSP contains inact. BRS strain EV908, PI-3 strain SF-4 Reisinger and Mannheimia haemolytica A1 strain M4/1
Bovilis IBR Marker Live contains live, attenuated IBR marker vaccine BHV-1 strain GK/D (gE). For the active immunisation against infectious bovine rhinotracheitis virus.

Withdrawal periods: zero days. Legal Categories: ROI [POM(E)] NI [POM-V].
For further information see SPC, contact prescriber or MSD Animal Health, Red Oak North, South County Business Park, Leopardstown, Dublin 18, Ireland.
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* Mannheimia haemolytica
# GFK sales data September 2014
§ Anon 2012. AFBI/DAFM All-Island Animal Disease Surveillance Report 2012