**What is the cause**

Known as a multi-factorial disease as it can be caused by a number of different bacteria and viruses, either individually or together. Stress from the environment such as changes in weather or feed can trigger bacteria and viruses to multiply and cause pneumonia.

**The common viruses that cause pneumonia are:**

- **RSV** (Respiratorial Syncitial Virus) - causes up to 50% of cases of pneumonia
- **PI3** (Parainfluenza Type 3) – present in many herds
- **IBR** (Infectious Bovine Rhinotracheitis) – herds may be infected or free of the disease
- **BVD** (Bovine Viral Diarrhoea) – affects the calves immune system

Many different bacteria can cause pneumonia these include pasteurella, haemophilus and mycoplasmas

**What factors are likely to increase the chance of disease?**

- warm, wet weather
- bought-in calves
- mixed age groups
- stress such as weaning or disbudding
- overcrowded buildings and high stocking density
- poor ventilation

**What age of calf is affected?**

Most disease occurs in the weaned calf and in fattening stock. Calves less than four weeks often have antibody protection, but can develop pneumonia if they did not receive enough colostrum or colostrum of poor quality. Disease occurs when natural defences are low, or there is a high load of infection in the environment. Pneumonia can occur at any time of the year, although most cases are seen during winter housing.

**What are the signs?**

- **Early stages:** red eyes, runny nose, deep chesty cough, and a faster breathing rate.
- **Severe cases:** calves stand with backs arched and heads down, breathe heavily, sweating makes hair on backs stand up. Calves stand apart from rest of group, don’t want to eat or drink.

**What are the effects?**

- **Deaths:** are often seen, can be sudden or after prolonged illness.
- **Sick calves:** many more can be affected than show real clinical signs.
- **Reduced LWG:** affected animals can often have high temperatures, painful lungs and difficulty breathing. So, reduce feed intake.
- **Long term:** poor doing calves with permanent lung damage, increased finishing time, reduced feed conversion efficiency.
Top tips for treatment and management

1. Call your vet: early intervention saves money. Lung damage happens quickly and is permanent.

2. Treat early with antibiotics and hit hard using the most appropriate product. Can lead to quicker recovery rates, fewer relapses and re-treatments.

3. Anti-inflammatory: to help the calf recover. Reduce temperature and lung damage.

4. Ask your vet about treating all stock in the same shared air space. Healthy animals can be incubating disease and group treatment may reduce new cases.

5. Isolate individual sick calves, giving them fresh food and water.

6. Improve ventilation to reduce humidity and cut numbers of pathogens and dust in air.

7. Reduce stocking densities and ensure different age groups of calves are kept in separate air spaces.

8. Ask your vet to blood test calves to determine cause of infection and suggest vaccination programme. Most calves will benefit from improving immunity with vaccination before the main period of challenge (see Preventing Respiratory Disease: calf card 5).

A range of management regimes and treatment protocols can be used to minimise the threat of infection and treat disease. Always consult your own vet for information and advice on what is most suitable for your unit.

**Metacam for Cattle** - is an excellent choice as an anti-inflammatory and as part of a pneumonia treatment protocol. A single injection of Metacam:
- Long acting - has been shown to work for 3 days to give continued activity.
- Better growth rates - works with antibiotic to maintain DLWG - 7kgs more in trials.
- Fitter calves - helps reduce the severity of lung damage, lower temperature and improve calf demeanour.
- Easy to use - can be used under the skin or intravenously.

**Nuflor Injection** - a broad spectrum antibiotic ideal for use in a pneumonia treatment protocol.
- Treats & prevents - proven first line antibiotic for bacterial pneumonia.
- Fast acting - Nuflor reaches effective levels within lung tissue in 30 minutes.
- Broad cover - kills all major pneumonia bacteria including M.bovis and H.somni
- No resistance - on a recent survey no resistance was seen.
- Long acting - a single subcutaneous injection can last over 6 days.