



CALF PNEUMONIA AND HOUSING

INTRODUCTION

Pneumonia in calves is complicated; it is caused by many different bacteria and viruses. Management and husbandry factors also impact greatly on the disease. It is a disease that costs the cattle industry millions of pounds, losses arise from the cost of treatment, the increased effort and labour in looking after sick animals, from reduced live weight gains and most significantly from calf deaths.

CAUSES

Viruses are the main cause of pneumonia in calves. The lungs are damaged by viruses and then bacteria infect the compromised lungs:

- **RSV (Respiratory syncytial virus)** is one of the most common causes of calf pneumonia; it can be a severe disease resulting in calves dying quickly without showing many clinical signs.
- **PI3 (Parainfluenza)** is also very common, it is responsible for damaging the airways which then become infected by bacteria.
- **IBR (Infectious bovine rhinotracheitis)** is less common in calves. It causes very high temperatures, eye and nasal discharge and conjunctivitis. Calves infected with IBR will remain carriers for their entire lives.
- **BVD (Bovine viral diarrhoea virus)** this virus does not directly damage the lungs but lowers the animal's immunity.
- **Pasteurella** bacteria usually cause pneumonia once the lungs have been damaged by one of the viruses.
- **Mycoplasma** can cause pneumonia, arthritis, joint infections, ear infections and abscesses. Disease caused by mycoplasma can be difficult to treat.

KEY CONTROL MEASURES

- 1. Ventilation.** Good ventilation is essential. Calf buildings should feel fresh and dry, as pneumonia bugs survive in damp beds and stale air. Many older buildings have insufficient outlets for stale air to escape. Outlets need to be at least 1.5m above inlets to allow for the stale air to escape. Air inlets must be above the level of calf heads to minimise draughts.
- 2. Stocking density.** Lower stocking densities means more airspace per animal and cleaner air with less infective agents.
- 3. Adequate colostrum.** Calves must receive 3 litres of colostrum within the first 6 hours of life.
- 4. Hygiene.** Calf buildings need to be kept clean and dry. Bugs survive in warm wet beds, and stale humid air. Steam cleaning and disinfection should be used between batches of calves. Calves should be reared in an 'all in all out' system.
- 5. Mixing ages of calves.** Calves should be reared in groups of similar ages. This is because older animals can carry the bacteria and viruses in their nasal passages without showing signs of disease. They then pass these bugs to younger calves.
- 6. Vaccination.** Used correctly vaccination will make a big difference to cases of pneumonia, but if the rest of the calf rearing and management is poor the vaccines will struggle to be as effective as they could be.



RISPOVAL INTRANASAL

Used in calves from 9 days old to provide protective immunity 5 days later. It is very effective on farms where calves under 3 months of age are getting pneumonia. It protects against RSV and PI3, the two most common calf pneumonia viruses.

RISPOVAL 4

Aimed at calves from 12 weeks of age. A course of 2 injections three to four weeks apart is needed; this provides 6 months protection against RSV, PI3, IBR and BVD. It should be used on farms where calves aged 3-12 months are getting pneumonia.

BOVIPAST RSP

For use in calves from 2 weeks of age to protect against the bacterial cause *Mannheimia haemolytica* and the two most common viral pathogens RSV and PI3. Primary course is two vaccinations at approximately 4 weeks apart, if booster doses are required they should be given prior to a risk period.

TREATMENT AND CONTROL

Calves with pneumonia should receive anti-inflammatories and antibiotics. Long acting antibiotics help to prevent relapses. Anti-inflammatories reduce temperatures and make the animal feel better, meaning they start eating sooner.

For every calf you see with signs of pneumonia another ten will also be affected. Any calf with a temperature above 103°F or 39.5°C should be treated.



DIAGNOSIS

Blood tests, nasal swabs, and post mortems can all be used to find out the cause of pneumonia.

KEY POINTS

- There are many different bugs that cause calf pneumonia
- Pneumonia may permanently damage the lungs
- Housing, hygiene and adequate colostrum all help reduce pneumonia
- Vaccination provides good protection
- Pneumonia results in reduced live weight gains



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