

By **Debby Brown**

Minimising pneumonia in finishing cattle

Introduction covering main causes of pneumonia, RSV, PI3, BVD, IBR, Mycoplasma, Pasteurella

Cattle in a finishing system are naturally under some pressure as we are aiming to grow them fast for a sharp, cost effective finish. If these cattle are being bought in over a period of time from a variety of sources they will be at risk of carrying various pathogens. With stress on top of mixing one of the most likely disease symptoms we see is pneumonia. In a finishing unit the most common cause is likely to be IBR virus or Pasteurella. Other viruses that may occur include RSV, PI3 and BVD as well as Mycoplasma infection which may lead to the cattle taking longer to finish.

Signs

The main signs seen will be increased respiratory rate, runny eyes, snotty noses, coughing and decreased feed intake which will all lead to a reduced growth rate and therefore mean more feed is needed to achieve the finishing targets required.

Disease management and control

- a. Ventilation – including details of air flow and inlet/outlet areas for buildings, fans etc
- b. Vaccination – brief overview of those available and when they are best used
- c. Management – groups, stocking, feeding, bedding

The two main areas on farm that will lead to the biggest impact on reducing the level of disease is improving ventilation and looking at stocking densities. Improving ventilation will reduce the build-up of infection within the buildings and reduce the risk of spread. Lowering stocking densities will again reduce the spread of infection and will minimise stress on the animals. Feed space is also likely to be more available which will help efficiency of feeding and better growth rates.

Vaccination should be considered to reduce the shedding of viruses but must be given as soon as cattle arrive on farm and they must be healthy when it is administered to ensure a good response is achieved. There are various vaccines available and the appropriate one will be dependent on the system in place on the farm. For finishing units only, where IBR is the main likely issue, using an inactivated live vaccine will be the most beneficial.

Ideally cattle will be put into a group and will remain in that set group throughout the system. Every change leads to at least 48 hours of cattle readjusting their hierarchy and so causes drop in intakes and stress. Diets should be fed to consider the rumen health of the animals as they are likely to be fed on a highly concentrated diet, so including structural fibre is important. The healthier the animal, the lower the stress and again the lower the risk of disease outbreaks. Bedding should be kept dry and clean and should be removed at least every 3 weeks to help keep humidity to a minimum and keep the animals dry. Clipping the backs of all animals can also help the cattle to lose some heat and reduce sweating and therefore energy loss and improve feed conversion efficiency.

Some cattle vaccination options:

	Covers against	Route	Dosage
Bovilis Huskvac	Lungworm	Oral	2 doses 4wks apart
Bovilis IBR Marker inactivated	IBR	I/M	2 doses 4wks apart
Bovilis IBR Marker live	IBR	I/N or I/M	1 dose
Bovipast RSP	RSV, PI3, <i>M. haemolytica</i>	I/M	2 doses 3wks apart
Imuresp RP	PI3 + IBR	I/N	1 dose
Rispoval RS	RSV	I/M	2 doses 3wks apart
Rispoval 3	RSV, P13, BVD	I/M	2 doses 3-4wks apart
Rispoval 4	RSV, IBR, P13, BVD	I/M	2 doses 3-4wks apart
Rispoval intranasal	RSV, P13	I/N	1 dose
Rispoval pasteurilla	<i>M. haemolytica</i>	I/M	1 dose
Rispoval IBR marker live	IBR -gE (negative)	I/N or I/M	2 doses 3-5wks apart
Rispoval IBR marker inactivated	IBR -gE (negative)	S/C	2 doses 3-5wks apart
Tracherine	IBR	I/N	1 dose

i/n = intranasal, i/m = intramuscular, s/c = subcutaneously

Risk factors for calf pneumonia:

Risk factors	Possible sources of risk
Mixing (in the same airspace, includes transport)	Calves from different sources (from within and outside the farm). Calves of different ages. Calves and older cattle (cows and bulls). Vaccinated and non-vaccinated calves. Sick and healthy calves
Moving	Calves from farm to farm or within the same farm complex To and from market, cattle shows, etc
Housing/assembling groups	Housing from pasture Assembling in open courts Calves congregating around troughs or for shelter outdoors Poorly designed calf creepers Poorly designed buildings
Poor nutritional status/changes in nutrition	Inadequate milk intake Mineral and vitamin deficiencies Weaning and other dietary changes
Change in immune status	Decline in maternally derived antibodies (persists for up to three months of age in calves from dairy herds, and up to about five months in single-suckled calves)
Concurrent infection	Clinical or subclinical disease
Other stresses	Inadequate trough space, surgical procedures (eg castration) etc

Example

Black and white finishing unit.

Calves reared on farm from 2 weeks age through to finishing.

Baby calves housed in individual pens – reduce drafts but keep airflow – minimal issues

Group post-weaning – move to bigger sheds all grouped together, same airspace as older bulls

Pneumonia issues begin

Airflow poor as restricted inflow with buildings being built next to each other

Open ridges and increase space between boarding on gable ends

Minimise group mixing and movements

Create isolation pens for sick animals to reduce spread

Vaccinate before grouping and moving

Keep beds clean and dry – muck out every 3 weeks and bed daily

Ensure good, clean water access

Offer fresh food daily, mix to optimise rumen health as well as performance.

Reduce losses from 20% to less than 5%

Reduce treatments from 50% to less than 20%

More economic production

Less stress and hassle

