



DEALING WITH BLOAT IN LAMBS, KIDS & CALVES

WHAT CAUSES IT?

This is not completely understood, in that there are various risk factors that can lead to bloat. Risk factors include (but not limited to); anatomy around the oesophageal groove, colostrum management, milk feeding techniques and equipment, water and starter feed quality, and environmental factors.

There are 2 types of bloat:

- 1** Ruminal bloat - occurs when milk flows into the under-developed rumen where subsequent fermentation of milk sugars leads to rapid gas production;
- 2** Abomasal bloat - occurs when milk emptying from the abomasum is delayed and gas-producing bacteria have more time to ferment milk sugars and produce gas.

Severe cases of bloat will lead to death and it can occur surprisingly quick.

Bloat is an issue seen far more frequently in lambs and kids than in calves.

In lambs there are correlations between bloat and: over-gorging of milk; excessive milk intakes compared to abomasum (small or milk stomach) capacity; naturally occurring, opportunistic gas-producing bugs in the environment that feed on milk sugars; and feeding milk replacers or cow's milk.

NB There are no milk replacers based on sheep and goat milk powder as all milk production is committed to making products for human consumption. Consequently, infant animal milk replacers are made from dairy cow ingredients.

MILK REPLACERS

In discussion with leading lamb milk replacer manufacturers worldwide, bloat is **NOT** something that can be controlled completely at the formulation level. On-farm factors as well as environmental factors conspire against manufacturers best efforts to manage it when formulating.

From a production perspective, reducing lactose (milk sugar) levels is helpful. This is typically achieved by increasing the fat levels of lamb formulas which results in a subsequent reduction of lactose levels. Increasing fat levels does mean higher pricing as fat and protein are the primary cost drivers.

PRACTICAL TIPS WHEN BLOAT OCCURS

1

Hygiene – ensure all feeding equipment is clean and washed thoroughly after each feed.

5

Reduce mixing rate (Lambs-Kids: 120-125g/L; Calves: 100-110g/L) - this reduces lactose levels available for fermentation and therefore reduces gas production.

2

Avoid over-feeding – this minimises rumen filling or excessive dwell time in the abomasum. Feed more often and in smaller volumes (like in nature) is always best practice but is also time consuming.

6

Probiotics - add a probiotic supplement (look for the ProfeSTART® brand) or yoghurt to liquid milk feed (use an acidophilus or lactic acid producing probiotic yoghurt). Beneficial bacteria will start converting milk sugars into lactic acid – this results in less available milk sugars for gas production and also provides a barrier for pathogenic bacteria to cause havoc.

3

Check condition of teats especially hole size – larger holes allow infants to gorge during milk feeding and often leads to digestive upsets. Replace teats where necessary.

7

Hydration – consider offering an electrolyte solution (look for the ProfeSTART® brand) as a separate feed, with added probiotics if practical. This will address any dehydration and also provide a break in the supply of milk sugars to gas-producing bacteria.

4

Check mixing rates – weigh powders with a scale to ensure recommended feeding concentrations.

8

Veterinary advice – always seek veterinary advice if you experience an episode of bloat.

Further Reading - Recommended

Two excellent articles are readily available on the ProviCo Rural website as follows:

▶ BLOAT IN CALVES - VOLAC FARMER GUIDE 2015

This article, from a leading UK milk replacer manufacturer, details bloat risk factors and provides general management tips for best rearing practice.

▶ BLOAT IN LAMBS - BEEF+LAMB NZ FACT SHEET 2019

This article focusses on a NZ approach to preventing lamb bloat. This method forms the basis of Practical Tip #6 and has proven to be successful by many rearers who have adopted this approach.