

## Minimising the risk of acidosis through better feed management

Acidosis occurs when the pH of the rumen falls to a level which causes digestive upsets and reduced intake. There is debate around the rumen pH at which it occurs but levels below 5.5 are commonly quoted. This fall has two effects. First of all the rumen stops functioning which reduces appetite and secondly the rumen bugs change, with lactic acid-producing bacteria taking over which aggravates the problem further.



In acute cases, acidosis can result in death, although illness and liver abscesses may be seen before.

Symptoms of sub-acute acidosis are less noticeable, with reduced feed intake being the most common symptom. This makes it

difficult to diagnose and separate from other diseases which may depress intake.

Acidosis is most commonly seen in intensive finishing systems where animals are fed a high-concentrate ration. Cattle consuming high-grain diets secrete between 30 to 40% less saliva than animals fed similar amounts of forage. Saliva acts as a buffer, helping to neutralise the acidic rumen environment caused by feeding high levels of grain. It is therefore important that straw is available *ad libitum* to animals fed high-grain diets to encourage saliva production.

Ration composition and feeding management can have a big impact on animal performance and the development of metabolic diseases, including acidosis.

### Signs of acidosis include:

- Cattle not coming forward to feed
- Loose dung
- Cattle lying at back of pen looking unwell



## Management practices to reduce acidosis risk:

- Implement any feed changes gradually – usually over 2-3 weeks when high-starch diets are being introduced
- Avoid over processing cereals – grains should be cracked and not finely ground
- Consider grain moisture content, as moist grains, which will need to be treated with a suitable preservation method, tend to be easier to roll without shattering
- Ensure rations are consistently mixed
- Feed mixed rations including forages
- Ensure sufficient feed space
- Avoid meal sizes greater than 2.5kg/head/day for dry cereals fed on top of silage
- Avoid feed troughs being empty during peak feeding times (sunrise/sunset)
- Avoid increasing feed allocation by more than 10% a day

## In ad lib cereal-based systems:

- Don't let hoppers become empty so that cattle gorge when they are filled
- Ensure the hopper is clean and the feed is running freely
- Clean fresh water must be available at all times – clean out troughs regularly
- Always offer a source of long fibre, eg straw, in a rack to encourage rumination. Intake is likely to be 1-1.5kg/day
- Consider including neutralising agents such as limestone flour or sodium bicarbonate in the ration
- Consider increasing the level of digestible fibre in the ration



Further information can be found in BRP manual [Feeding Growing and Finishing Cattle for Better Returns](#).