



Progress beyond

Bicar®Z from Solvay ensures calf growth

Bicar®Z supplementation helps stabilize ruminal pH and guarantee performance of future dairy cows. The opinion of our expert, Dr. Michel Vagneur.

Paris, 19th July 2021 - 12:00 CET/CEST

Acidosis in calves directly impacts calf health and, therefore, calf growth. Ultimately, the entire herd and its financial performance can be affected. This drop in ruminal pH leads to general digestive dysfunction that hinders growth. Common symptoms include reduced feed intake, swelling and diarrhoea. Other serious consequences can appear at a later date, such as liver infections and abscesses.

Bicar®Z in the concentrate

“With the aim of stabilizing ruminal pH in calves (and also preventing ruminal acidosis), we recommend adding 1% sodium bicarbonate to concentrated feed (to 1.5%), i.e. 10 to 15 g per kilogram of feed. The composition of the concentrate should also be optimized in terms of starch, fibre, proteins and minerals. Because the animal's sodium requirements are met, salt should be eliminated from the diet.”

Fostering growth

“If bicarbonate is not used preventively, the limited amount of forage consumed can cause a drop in pH and increase the risk of ruminal acidosis in calves and adult cows. A good strategy involves using fibromash, a dry mixture of concentrated feed and forage, but when animals are able to sort their feed, the effect is reduced. In France, experts recommend that calves receive a crude fibre supplement representing at least 18% of dry matter intake. But studies (1) show that this is not enough to increase ruminal pH to 6, below which calf health and growth are at risk. In practice, however, calves consume less fibre than recommended (2). Ingestion of forage is often low, whereas concentrated feed is consumed well. That's why Solvay recommends using Bicar®Z as a preventive measure in calves' daily ration.”

(1) A recent study (Xiao, 2021) shows that calves on a diet rich in concentrated feed and 16% neutral detergent fibre (NDF, i.e. hemicellulose, cellulose and lignin) had a ruminal pH of 5.5. Another study (Mitchell, 2020) reports a ruminal pH in calves of 5.8 on a diet consisting of 90% concentrated feed and 10% hay.

(2) In one study (Kahn 2011), calves consumed less than 100 g of hay a day for up to five weeks. In another trial (Eckert 2015), consumption of straw was very low (only a few tenths of a gram per day).



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