health of young piglets

colon, it is crucial that butyrate is able to reach these areas. Butyrate can only arrive in the lower luminal parts of the intestinal tract when it is protected from metabolism in the stomach and is gradually released in the distal regions of the intestine. The most efficient way to achieve this is by administering a protected butyrate with precision delivery capacity.

Different coated butyrate products are available for use in animal production. However, they come in many different forms. One should make a clear distinction between high-quality coatings that result in optimal protection and precision delivery of butyrate and coatings that are applied solely to cover the distinct butyrate smell.

Recent research conducted at the University of Illinois (Song et al., 2013) demonstrated the importance of high-quality coating. Weanling pigs were euthanized, and the concentration of butyrate was measured in the area (30 Coated, 30% sodium butyrate). The results showed that the coated butyrate (ADIMIX butyrate), or a smell-coated butyrate (50% sodium butyrate), resulted in higher concentrations in the distal regions of the intestinal tract when compared to the control group and the group fed the smell-coated butyrate (Figure). It could, therefore, be concluded that administration of high-quality protected butyrate was effective in delivering butyrate to the lower intestinal tract of pigs despite a lower percentage of sodium butyrate (30%), whereas supplementation of the more concentrated (50%) but less-protected butyrate (smell-coated) was not.

Summary

In conclusion, thanks to its specific properties affecting intestinal health, butyrate may be a very valuable tool in the fight against the dramatic effects of PEDV on infected pigs. However, to unlock the full potential of butyrate, it is crucial to assure its delivery in the right area of the digestive tract. When applying protected butyrate in animal production, it is of great importance to distinguish between different types of coated products as their in vivo efficacy will differ greatly due to their different delivery profiles.

Research results presented here demonstrate that a high-quality precision delivery butyrate is able to deliver butyrate to the areas most affected by PEDV.

References


Nutrition & Health: Swine

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Preventive Health – Rodent Control

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