

Reduction of antibiotics in animal nutrition

Effects of Fatty Acids on the development of swine specific pathogens

- Fatty Acids inhibit growth of pig specific pathogens e.g. Streptococcus suis, Staphylococcus aureus, Escherichia coli, Clostridium perfringens.
To do this the Fatty Acids can interfere with the cell membrane to harm the bacteria. The Fatty Acids can also enter the cell membrane and harm the bacteria by reduction of the pH value inside the bacteria cell.
- Fatty Acids increase growth of beneficial Lactobacilli due to a lower pH value in the intestine. The Lactobacilli decrease then the growth of pathogens

Effects of specific Fatty Acids on specific pig specific pathogens

Fatty Acid	Effect on Gram-positive bacteria	Effect on Gram-negative bacteria
	<ul style="list-style-type: none"> - Streptococcus suis - Staphylococcus aureus - Clostridium perfringens 	<ul style="list-style-type: none"> - Escherichia coli - Salmonella poona - Campylobacter
C6	++++	-
C8	+++	+
C10	++	+
C12	-	++++

Recommendation

Dosage: 0,1 – 0,2% for swine

Application as a Fatty Acid or blends of Fatty Acids or as MCT

Conclusion

Fatty Acids and MCT are very helpful to improve the (gut) healthiness of animals, particularly due to the antimicrobial effect. Therefore Fatty Acids help to reduce the amount of antibiotics significantly in animal farming. Experience show that it is possible to grow swine completely without antibiotics.