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The influence of a certain fatty acid combination on performance and litter weight of lactating sows in praxis

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Introduction:

Due to legally required antibiotic reduction in livestock farming, the application of organic acids have increasingly come into focus. Especially medium-chain fatty acids play an important role, due to their energy providing properties as well as antibacterial effects (Jackman et al., 2020).

The broad range of effects of medium-chained fatty acids has been proven to be effective against gram-positive bacteria in the digestive tract of animals (Zentek et al., 2011) and has already been tested in praxis many times. This has also been shown by a previous trial on a sow farm in the Netherlands, where the influence of a combination product based on fatty acids and phytogenic additives on the health status of piglets has been tested (Schemmer, 2021, figure 1).

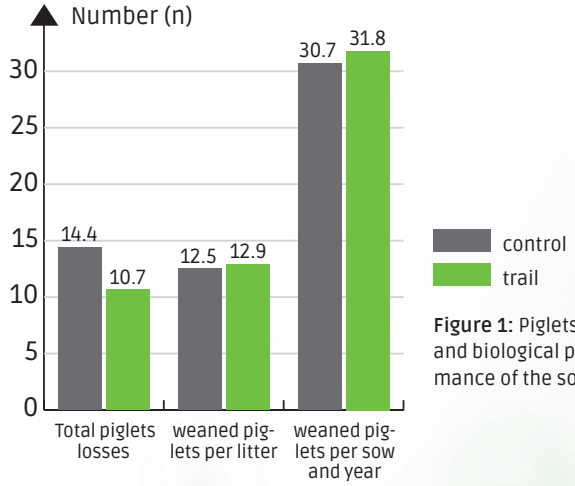
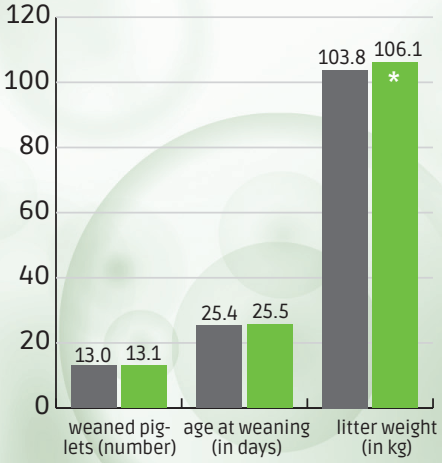


Figure 1: Piglets losses and biological performance of the sows

Material and methods:

Building up on the previous trial with the aim to reduce loss rates in suckling and weaned piglets (Schemmer, 2021), this feeding trial was set up on the same farm with 500 sows (Topigs 50), being carried out between February and August 2021, where totally 526 litters were taken into account. The goal of the trial was to evaluate the effects of a matrix-encapsulated combination product based on fatty acids and phytogenic additive on the performance of lactating sows. Both groups, trial group and control group, received the standard lactation feed of the farm (13.5% crude protein, 6.2% crude fibre, 0.76% lysine, 0.99% calcium, 0.54% phosphorus). The trial group the product **BEWI-FATRIX SynerG+** was added as a top dressing, from seven days before until four days after farrowing (12g per sow and day). The number of weaned piglets as well as weaning weight of the entire litter (figure 2) were recorded.

Results:



*shows a significant difference between trial and control group ($p<0.05$)

control (n=155)
trial (n=371)

Figure 2: Results of the number of weaned piglets and litter weight

Conclusion:

The trial clearly shows that the addition of a matrix-encapsulated combination product based on a certain fatty acid combination and phytogenic additives was able to significantly increase litter weight at weaning. The application of a pure plant based product in a targeted combination of ingredients creates synergistic effects that lead to a significant reduction of medication on the farm. At the same time biological performance has been increased, contributing to the success of the farm.

Literature

Jackman, J. A., Boyd, R. D., Elrod, C. C. 2020. Medium-chain fatty acids and monoglycerides as feed additives for pig production: towards gut health improvement and feed pathogen mitigation. Journal of Animal Science and Biotechnology 11:44,

Schemmer, R., 2021. Acting naturally against gram-positive bacteria in pigs. Feed Magazine 7-8, 29-32.

Zentek, J., Buchheit-Renko, S., Ferrara, F., Vahjen, W., Van Kessel, A. G., Pieper, R., 2011. Nutritional and physiological role of medium-chain triglycerides and medium-chain fatty acids in piglets. Animal Health Research Reviews 12 (1), 83-93.

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