pwrPlanz® EMC

A new concept – medium- and macro-chain fatty acids in swine production

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Introduction

Gastrointestinal diseases pose a serious threat to commercial swine production. In the past this hazard was controlled by the prophylactic use of antibiotics. However, animal production is viewed critically for its use of in-feed antibiotics, both from consumers and regulatory authorities. As a result, various feed additives have been studied as alternatives. Currently, there is growing interest in natural alternatives such as bioactive compounds, which are characterized by high food safety as well as consumer acceptance.

Table 1.
MIC testing of pwrPlanz® EMC, Veterinary Scientific Institute Belgrade, Serbia 2023/2025; results expressed in g/L

Bacteria	*Streptococcus agalactiae*	*Streptococcus suis*	*Clostridium perfringens*	*Staphylococcus aureus*
MIC in g/L	0.50	1.25	0.13	1.00

Results

The first laboratory antimicrobial tests of EMC gave the expected results against pathogenic bacteria. Results of minimum inhibitory concentration (MIC) testing showed a strong antibacterial effect of EMC against the most common pathogenic Gram-positive bacteria (Table 1).

In addition, the impact against Methicillin-resistant *Staphylococcus aureus* (MRSA) under laboratory conditions was seen at 2.5 g/L, which further demonstrates the power of the product.

The effect of EMC was confirmed under commercial conditions in several studies. The first study included 6000 weaned piglets, where the product reduced the mortality of severely infected piglets caused by *Streptococcus suis*. Amoxicillin, as advised by veterinarians, served as positive control (Figure 1). Results proved a similar impact to the used antibiotic.

Objective

pwrPlanz® EMC (hereafter abbreviated as EMC) is a highly concentrated product, which consists of a mixture of aromatic compounds with medium- and macro-chain fatty acids and functional fibre. The distinctive combination of these plant extracts, including uneven medium chain fatty acids, naturally optimizes livestock production, especially due to improved animal performance and animal health status. EMC is efficiently supporting gut health in animals, by a strong antimicrobial effect against pathogen bacteria and improving the gut morphology. This leads ...to healthier animals and reduced mortality rates. The objective of the launching trials was to demonstrate the impact of EMC under bacteria challenge in post-weaning piglet production.

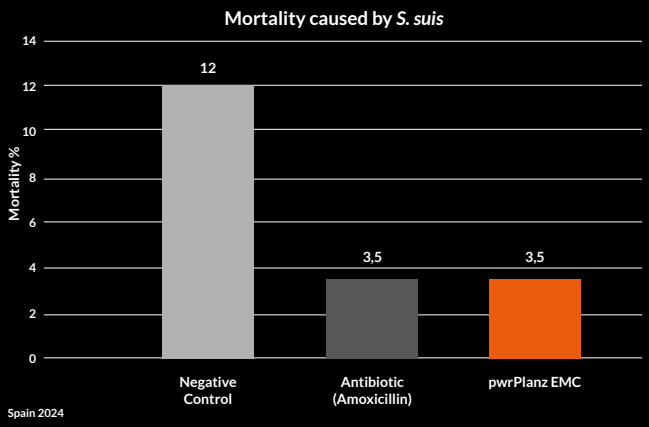

Figure 1.
Impact of pwrPlanz® EMC (1.5 kg/t) against *Streptococcus suis*, Spain 2024

The latest data from Germany with almost 7000 piglets reproduced the Spanish results: under commercial post-weaning conditions (initial weight 7.7 kg) with *Streptococci* incidences, the use of EMC reduced mortality to only 2.5%, in the absence of veterinary prescribed antibiotics.

Conclusion

To summarize, the product has a broad impact against Gram-positive bacteria, as such pwrPlanz® EMC can be an important tool in any antibiotic reduction strategies – thus supporting sustainable animal production. Therefore, the product can be a part of the "One Health" approach of the EU for reducing the risk of Antimicrobial Resistances.