



Yeast solutions as an alternative strategy to therapeutic zinc oxide in piglets' diets

Objective

To evaluate the effects of Actisaf® and Safmannan® on nursery pigs while replacing therapeutic zinc oxide.

Trial design

Comparative trial

Location: Commercial Trial Facility, Ireland

Species/life stage

Nursery pigs

(Large White -Landrace) x Topigs Tempo

Main criteria

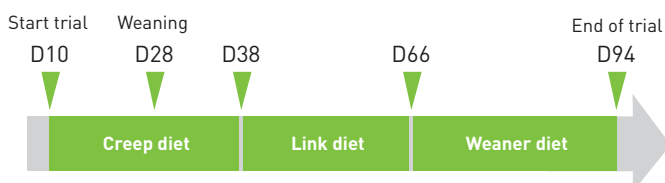
Body weight, feed intake

Reference

Trial Unit, Ireland, 2022

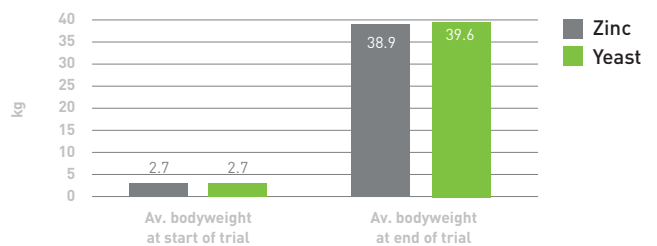
Protocol

		Zinc	Yeast
Number of piglets (n)		300	300
Diets	D10 - D38	Basal diet + 3.1 kg/t zinc oxide (creep)	Basal diet + 1.0 kg/t Actisaf® + 0.5 kg/t Safmannan® (creep)
	D39 - D66	Basal diet + 2.0 kg/t zinc oxide (link)	Basal diet + 1.0 kg/t Actisaf® + 0.5 kg/t Safmannan® (link)
	D67 - D94	Basal diet (weaner)	Basal diet + 1.0kg/t Actisaf® + 0.5kg/t Safmannan® (weaner)

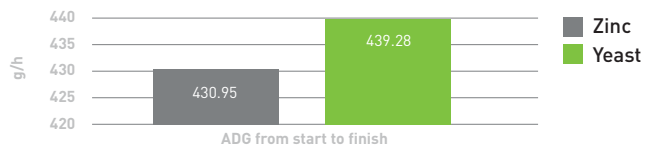


Main results

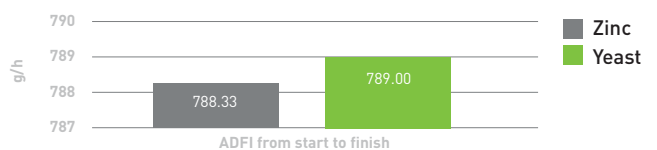
While average bodyweights were equal at the start of the trial, piglets in the Yeast-group had an increased body weight at the end of the trial compared to those in the Zinc-group.



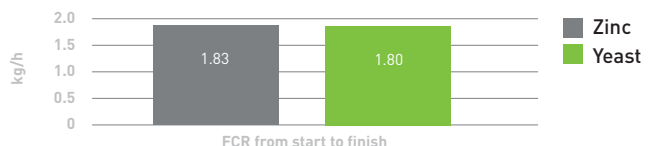
The average daily gain over the whole trial period was higher in the Yeast-group compared to the Zinc-group.



Piglets from the Yeast-group had a higher average daily feed intake during the duration of the trial compared to the Zinc-group.



The feed conversion rate calculated over the whole duration of the trial was lower in the Yeast-group compared to the Zinc group.



Conclusion

The inclusion of Actisaf® and Safmannan® in piglets diets allows for the elimination of therapeutic zinc oxide in piglets' diets.

Introduction

Low feed intakes and reduced gut development in young piglets is a big challenge in pig farming as it can impact growth performance and subsequent profitability. Therefore, for decades zinc oxide has been widely used in the pig industry to help overcome these issues and help alleviate post weaning diarrhoea. However, due to new legislation and concerns over the health and environmental implications of the use of zinc oxide, the EU has banned the use of therapeutic zinc oxide by 2022. The inclusion of Actisaf® in animal feeds has been seen to boost the performance of animals by improving their gut microbiota. It can also improve their digestibility, energy supply and overall health. Safmannan® may help support gastrointestinal balance, preserve gut integrity, reduce pathogen pressure and modulate immunity. Studies have shown that the use of Safmannan® can help alleviate stress and reduce the presence of pathogens relevant to piglets in this stage of life.

Material and methods

A total of 600 piglets were weighed and blocked according to litter weight and sow parity on day 10 after birth and allocated to one of the two treatments. Creep feeding began from this moment onwards. At weaning all litters were weighed and housed across two 1st stage houses. Each house consisted of 8 pens with approx. 38 pigs per pen. This resulted in 4 pens per treatment and pigs continued to be fed creep for 10 days post weaning and then switched to a link diet. Pigs were housed in the 1st stage accommodation for approx. 4 weeks. On transfer to the 2nd stage accommodation, all pens were weighed and introduced to a weaner diet. The 2nd stage accommodation consisted of 20 pens with approx. 30 pigs/pen. This resulted in 5 pens per treatment, and pigs were housed in the 2nd stage accommodation for approx. 4 weeks. At all stages all pigs were fed manually. The treatments were as follows:

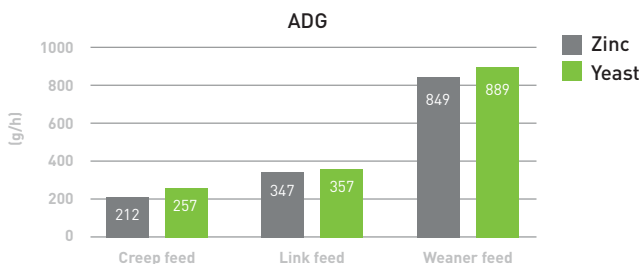
- Zinc-group: commercial diets including zinc oxide in the creep feed (3.1 kg/t) and in the link feed (2.0 kg/t)
- Yeast-group: commercial diets including **Actisaf®** (1.0 kg/t) and **Safmannan®** (0.5 kg/t) in creep, link and weaner feed

The following parameters were recorded:

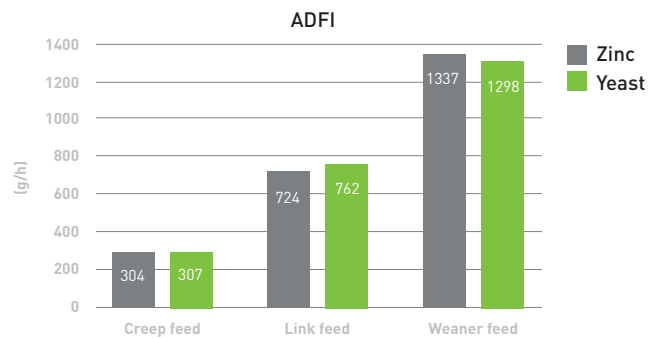
- Bodyweights: individual weights at day 10, day 28, day 38, day 66 and day 94 of the piglets' life
- Feed intake: per pen at day 28, day 38, day 66 and day 94 of the piglets' life

Results and discussion

A clear difference was observed between the two treatments. The Yeast-group exceeded the average daily gain in the creep and weaner stage. The average daily gain during the whole period was also higher in the Yeast-group.



While the Yeast-group had a higher average daily feed intake during the creep and link stage, as well as over the whole duration of the trial, this was not the case for the weaner stage.



Conclusion

The aim of this trial was to evaluate the potential for Actisaf® and Safmannan® to eliminate therapeutic zinc oxide from piglets' diets without compromising the zootechnical performance. The results of this trial demonstrate that supplementation of these products indeed allow for piglets' diets without high zinc oxide while maintaining high performing piglets.