

The 'Aim For Zero' program: A total solution to reduce dependency toward Zinc Oxide around weaning

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Background and objectives

Therapeutical dosages of Zinc Oxide (ZnO) have been used for decades in piglet nutrition to prevent post-weaning diarrhea. However, current reports highlight the undesired effects on animals, environment and health. Several studies proved that high dosages of ZnO increase antimicrobial resistance, change piglets' gut microbiota, accumulate in vital organs and negatively impact the environment (Vahjen et al., 2015, Yu et al., 2017). Therefore, the EU has decided to prohibit its use by 2022. Non-chemical alternatives must be developed to keep piglets healthy around weaning without impairing growth results. In that aspect, Nuscience has developed a total solution combining **nutritional and managerial advices** (reformulation, adjustment of practices) **with an innovative product (Vitazero®) into a program called 'Aim for Zero'**.

Material and methods

The 'Aim For Zero' program is based on 3 important pillars:

- **Online benchmarking:** Farmers and feed mills can fill out a short questionnaire on www.aim-4-zero.com in which they describe their current working methods regarding management, nutrition and health. A detailed report is returned to allow comparison of their routines with general farm practices in the same region.
- **Tailor-made advice:** Based on this report, Nuscience specialists will provide advices on how the dependency on Zinc Oxide can be reduced, keeping into account the specific farm situation.
- **Innovative concept:** Next to benchmarking and advice, Nuscience introduces the product Vitazero®, to be administered in the weaning diet. Vitazero® offers a natural protection to the piglets by 5 complementary actions, sparing the piglets own underdeveloped immune system.

Results

Together with feed mill partner ATR, Nuscience has developed and launched a complete zinc-free feeding line in Denmark. Taking into account the Danish situation, some managerial changes were advised. But more important, the Nuscience nutritional advices were combined in a concentrate based on the Vitazero® concept. In a trial conducted in farm conditions involving > 6,000 piglets, the zinc-free line delivered an alternative that provided **better performances (~3% improvement in ADG and FCR, see table)** and resulting in a **profit of 0.7€/piglet**.

	ZnO diet	Vitazero
Number of animals	3,058	3,039
Start weight (kg)	7.5	7.2
End weight (kg)	26.4	26.7
ADG (g/d)	492	507
Mortality (%)	1.0	1.0
ADFI (g/d)	900	890
FCR	1.83	1.76

Conclusion

There is no silver bullet to replace ZnO in weaning diets. Each and every farm or regional situation is different. This means that tailor made solutions will be the only answer towards this challenge for European pig husbandry. **The 'Aim for Zero' program from Nuscience has proven success all over Europe by combining managerial and nutritional knowledge with innovative concepts. It also helps to educate farm technicians on their contribution to pig rearing programs with less uses of chemicals such as Zinc Oxide.**