

Post-weaning Scours

An Alternative Control Strategy to Zinc Oxide

Weaning is one of the most stressful times in the commercial pig's life. During this period, diarrhoea (scour) is a widespread problem, leading to loss of condition and performance, and even death.

Here, we talk to Heidi Hall, Technical Manager for Swine at Anpario, about how important it is to manage the weaning process. Heidi has a degree in zoology from the University of Leeds, has worked as a nutritionist and is keen to develop products which help manage performance and welfare for the swine industry.



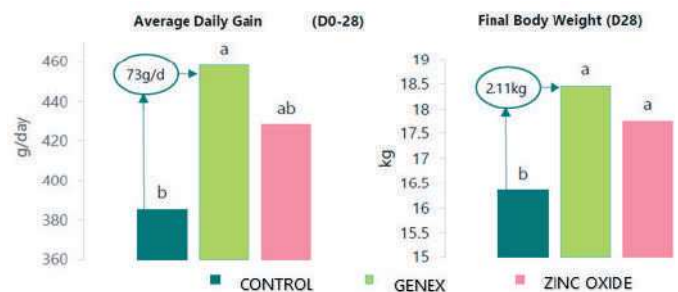
Heidi says "A healthy piglet starts with a healthy gut". The piglet's digestive tract is still immature around the time of weaning and the microflora are naïve. With multiple changes and challenges occurring simultaneously, weaning is a concentrated stress point in the young piglets' life, impacted by the removal of highly digestible milk and the introduction of novel feed ingredients, as well as bacteria from the environment. This can often result in a lower feed intake which we see reflected in the dip in piglet growth. Poor management and inadequate hygiene can exacerbate these stresses at weaning. Such factors can result in changes in gut microflora allowing the proliferation of potential pathogenic bacteria such as *Salmonella* spp and *E. coli* in the gut. *E. coli* specifically releases endotoxins that lead to diarrhoea, dehydration, loss of appetite, weight loss and in severe cases, death.

Traditionally, zinc oxide has been included at high levels in a piglet's diet under veterinary prescription, to control *E. coli* infections that cause post-weaning scours but now the European Commission has voted to ban the use of pharmacological levels of zinc (>150ppm) in piglet diets within the next five years. A major factor in this decision is that zinc has been linked to environmental pollution and antibiotic resistance in some bacteria, such as MRSA.

Heidi explains why this ban is such a landmark decision for swine producers in Europe; "This ban could result in losses of up to €1,080 million/year for the EU pig industry, with estimations as high as €8.50/pig/year due to increased piglet mortality and reduced daily weight gain. As an industry we need to use this time to work together and create solutions to ensure that animal health and welfare is not detrimentally affected. Here is an opportunity for Europe to show that high levels of zinc are not required to rear pigs."

In preparation for the forthcoming ban, Anpario has been considering alternative solutions. One such solution is acid based Eubiotic (ABE) on a unique carrier to form a free-flowing powder that is added to the feed, such as Genex Weaner¹.

Anpario carried out a piglet challenge study into the replacement of therapeutic levels of zinc oxide (3kg/T) with ABE (4kg/T). The piglets were randomly allocated to treatment diets at weaning for a duration of 28 days and



Different letters denote significant difference at $p < 0.05$

at eight days post-weaning (29 days of age), piglets were orally challenged with *E. coli* (strain K88+).

The study showed a significant increase in average daily gain of 73g when fed OAEOB compared with the control diet and 30g/day increase compared with the zinc oxide treatment group. In addition to this, a significant improvement of 2.11kg in final body weight was achieved in the ABE treatment, compared with the control group which was an extra 0.70kg more than the zinc oxide group.

Heidi concludes that "in this trial the ABE, Genex Weaner is able to support piglet performance in the absence of therapeutic levels of zinc oxide, highlighting the possibility of producing high performing, healthy pigs without zinc oxide."

REFERENCES

1. Genex Weaner is an Anpario PLC product



Heidi Hall

Graduated from the University of Leeds with a Bsc Hons in Zoology and gained experience with a large UK feed manufacturer. Currently working in the field of animal health with Anpario, innovating new products and solutions for the global pig industry.

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