RFCs look promising as zinc oxide alternatives

Sangita Jalukar, Product Development and Research Coordinator, Arm & Hammer Animal and Food Production

With environmental concerns associated with the use of zinc oxide (ZnO), swine producers around the world are seeking effective, sustainable alternatives for maintaining piglet health. Urgency is increasing as the European Union (EU) plans to ban ZnO use in swine rations starting in 2022. Swine producers in China and other markets expect to face significant ZnO restrictions as well. With the impending loss of this long-trusted tool, producers need a replacement that performs just as well as ZnO – or even better.

New research shows that natural solutions can keep piglets healthy without ZnO, even in the most stressful times. A trial completed in Spain evaluated how Refined Functional Carbohydrates (RFCs) in CELMANAX affect growth and performance of nursery piglets. Researchers compared CELMANAX with ZnO and with controls without supplementation.

SOW AND PIGLET RATIONS

In a unique approach, researchers supplemented sow rations during prefarrowing and lactation, as well as supplementing the piglets' creep and starter rations. The trial assigned 60 sows to one of two dietary treatments from 10 days before farrowing until weaning:

- Control.
- Control plus CELMANAX SCP, 0.02%.

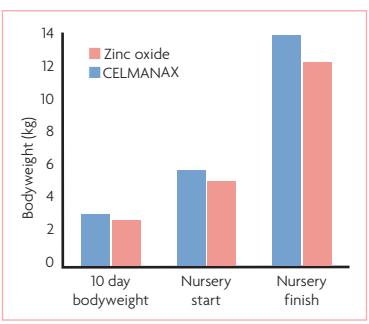
Piglets also received experimental treatments. At 10 days of age, piglets were individually weighed and litters were reassigned to four treatments, fed as creep feed:

- Control diet only, no supplementation.
- Control diet supplemented with CELMANAX SCP at 0.03% from 10 days of age to seven days post-weaning, and 0.02% from days seven to 28 postweaning.
- Control diet supplemented with ZnO.
- Control diet supplemented with both CELMANAX and ZnO.

At 25 days of age, piglets were weaned and fed starter rations with the above experimental treatments for four weeks. Piglets were grouped in pens containing 15 animals each.

IMPROVED BODY WEIGHTS AND DAILY GAINS

Including CELMANAX in lactation, creep feed and nursery rations improved average piglet body weight by 1.5kg per animal by the end of the nursery phase, compared with ZnO. Pigs fed CELMANAX also had significantly higher feed intake and weaning weight and a numerical increase in average daily gain. In addition, piglets receiving CELMANAX had less mortality (1.53%) compared with controls (3.63%); ZnO (5.58%); and CELMANAX plus ZnO (4.39%).



These results show that CELMANAX is a viable alternative to ZnO to keep piglets healthy and growing through the nursery phase. In fact, piglets fed CELMANAX performed better than those fed ZnO.

The trial concluded that CELMANAX can help reduce mortality and result in heavier pigs at the end of the nursery period, which could lead to fewer days to slaughter weight. That creates potential for improved profitability for swine producers around the world, while also reducing the environmental impact of ZnO.

References are available on request.

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