



# A zinc oxide alternative.

There are multiple reasons why nursery pigs struggle – some unavoidable and others manageable. For many years, nursery pig health was managed using Zinc Oxide (ZnO).

## THE LOSS OF A TRUSTED TOOL.

The swine industry and many countries around the world are actively taking steps to ban or reduce the use of ZnO. What will you use to improve piglet body weights and avoid scouring?



## WHAT IF YOU COULD REPLACE ZINC OXIDE WITH A NATURAL PRODUCT TO MAINTAIN PIGLET HEALTH?



### PROTECT HEALTH.

What if you could prepare the immune system ahead of challenges?



### HIT TARGET GOALS.

What if you could consistently meet target weight goals by minimizing risk of feed variation?



### IMPROVE PROFITABILITY.

What would reduced mortality and heavier pigs mean for your bottom line?

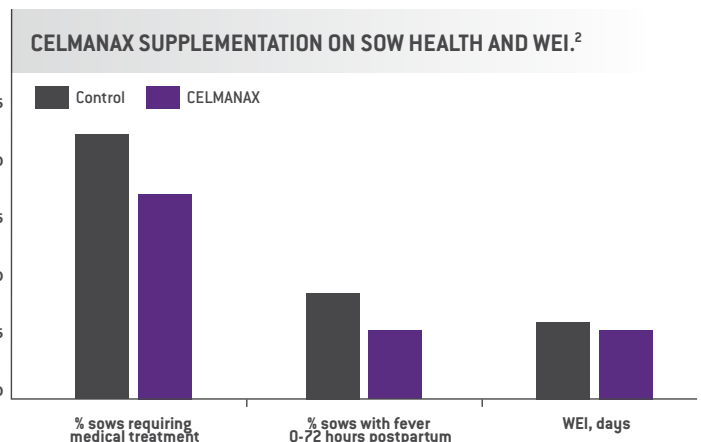
## THE PROOF IS IN THE RESEARCH.

A holistic approach using a two-step strategy to raising pigs without pharmacological levels of ZnO.

### Step 1 starts with farrowing:

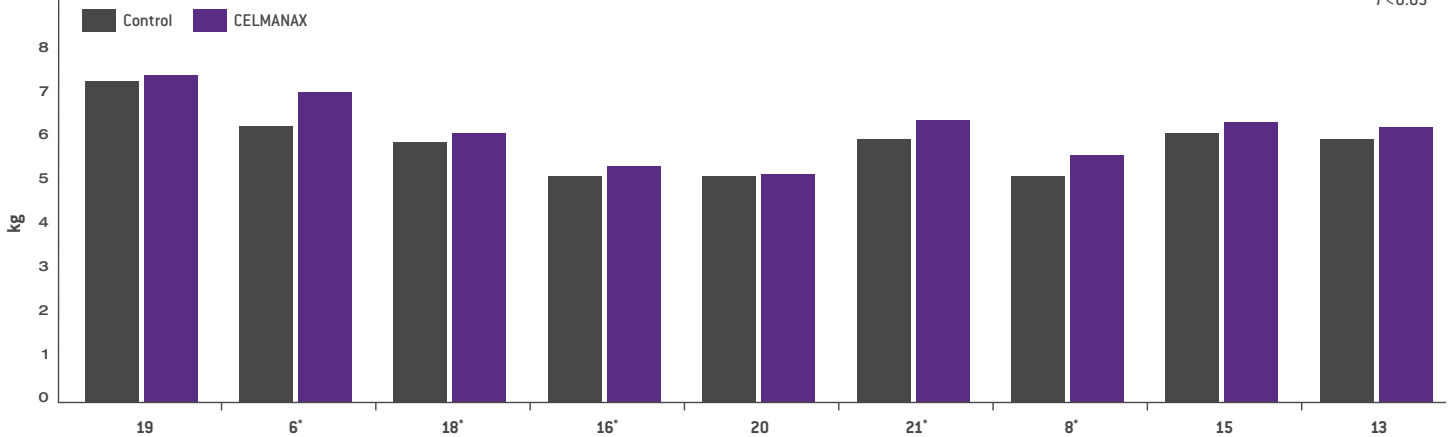
- Improve sow health and lactation response<sup>1</sup> with CELMANAX™ supplementation to wean healthy and robust piglets which will transition better into nursery phase.

CELMANAX supplementation in sow diets reduced health challenges in sows and reduced wean-to-estrus (WEI)<sup>2,3</sup>.



COMPOSITE DATA FROM NINE DIFFERENT STUDIES SHOWING EFFECT OF CELMANAX™ ON PIGLET WEAN WEIGHT.

\*P<0.05



Step 2 nursery management:

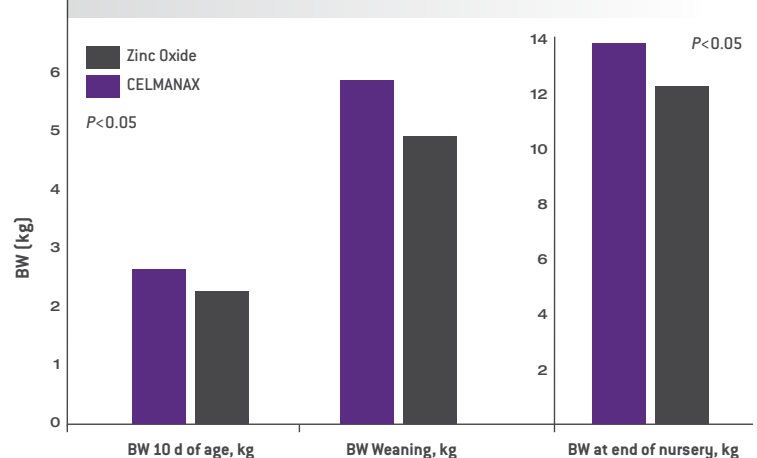
- Good nursery management and farm hygiene are integral to healthy pigs. In addition, use of one or a combination of research proven additives can help reduce health challenges, drive feed intake post-weaning and improve average daily gain.

Research shows including CELMANAX in lactation, creep feed and nursery diets increased average piglet 10-day, weaning and end of nursery phase body weight compared to zinc oxide.<sup>4</sup>

Recent research studies done without any pharmacological ZnO in diets show including CELMANAX in sow and phase 1 and 2 nursery diets increased piglet body weight (BW), average daily gain (ADG) and a trend for higher average daily feed intake (ADFI) compared to control fed piglets.<sup>2</sup>

CELMANAX supplementation in sow lactation and nursery pig diets can improve gut health and productivity in nursery pigs raised without pharmacological ZnO and antibiotics.

PIGLET BODY WEIGHT COMPARISON.



Benefits of CELMANAX supplementation in sows and piglets in the nursery.<sup>2</sup>

PARAMETER	CELMANAX	CONTROL	P-value
Pens, n	22	27	
BW d 0, kg/piglet	5.62	5.35	0.373
BW d 21, kg/piglet	9.32	8.93	0.031
ADG, kg/d	0.183	0.165	0.031
ADFI, kg/d	0.27	0.25	0.081
FCR (F/G)	1.6	1.7	0.135
Withdraw rate, %	4.24	5.19	0.11
Mortality, %	6.07	8.18	0.28
Medical treatment, n/litter	1.51	1.79	0.11



To learn more about CELMANAX, contact your veterinarian, nutritionist or ARM & HAMMER™ representative, or visit AHfoodchain.com.

1 Benefits of mannan oligosaccharide (MOS) for sows and weaning pigs. Hung and Lindemann (2009). Presented at the Midwest swine nutrition conference, Indianapolis, IN.  
 2 CELMANAX™ supplementation reduced pre-weaning mortality and improved performance of nursery pigs fed diets without antibiotics and pharmacological levels of Zinc Oxide. (2022) Research study on file.  
 3 Thompson et al. *J Anim Sci* Vol. 97, Suppl. S2, Abstract 180.  
 4 Jalukar et al. Presented at 2020 JRP swine days and Nutriform #P21.