

TECHNICAL BULLETIN #3

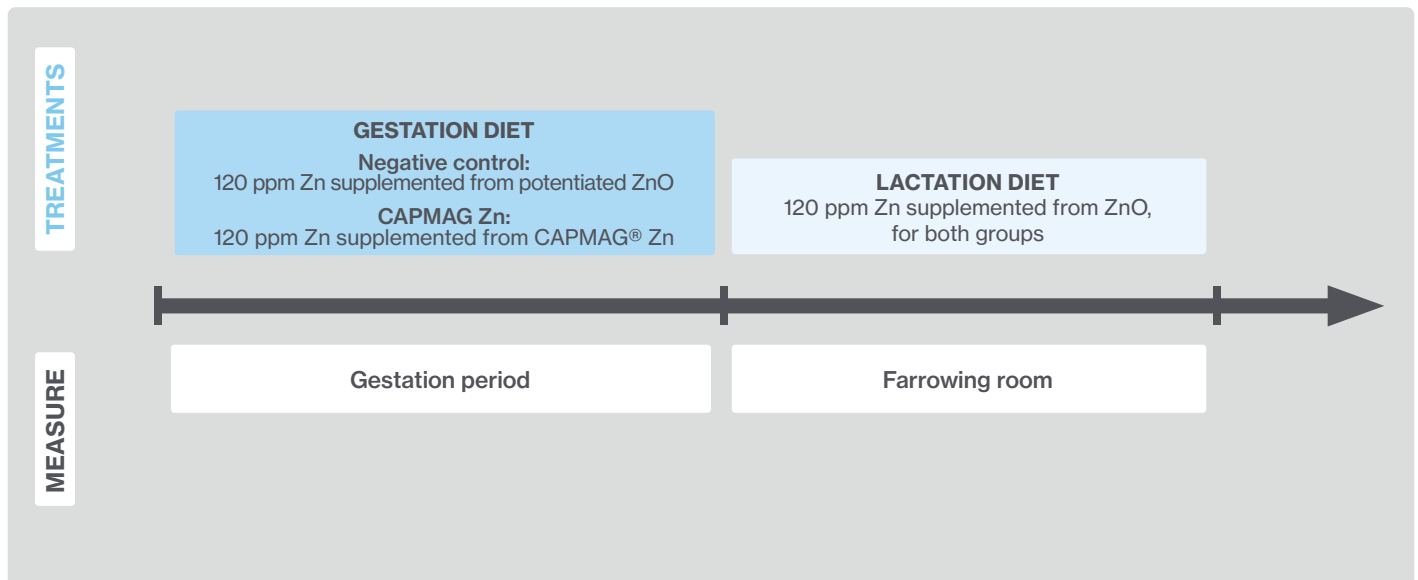
SUPPLEMENTATION IN GESTATING SOWS TO IMPROVE BIRTH PERFORMANCES AND GAIN IN THE PIGLETS' FIRST DAYS OF LIFE

INTRODUCTION

One of the main challenges of breeding hyperprolific sows is to ensure the viability and performances of the piglets, despite larger litter sizes. During the first weeks of life, improving milk quality can help piglets develop a better immunity and growth. Zinc supplementation in the sow's feed is a common practice in pig farming to ensure adequate levels of zinc are passed on to the piglets through the sow's milk. The goal of this trial is to optimize zinc absorption and utilization within the animal's body, while minimizing environmental impact and maximizing the efficacy of zinc supplementation. This trial has been designed to prove the better action of CAPMAG[®] Zn through the improvement of growth performance of piglets at farrowing thanks to the sow supplementation during gestation period.

MATERIAL & METHODS

The trial has been conducted in the experimental farm of Euronutrition in France. Gestating sows were divided in two groups of 18 sows. Dietary treatment was either a supplementation with a potentiated ZnO (120 ppm Zn) or CAPMAG[®] Zn (120 ppm Zn) during the gestation period. When entering the farrowing room, the sows were fed a lactation diet with a conventional source of Zn (ZnO) at 120 ppm Zn dose until weaning.



Parameters analyzed were weight of the piglets at birth and at 5 days of life (corresponding to the adoption day). Total number of piglets born, born alive, stillborn and mummified has been noted, as well as the number of piglets weaned. Vitality scoring of the piglets directly at birth has been processed. Colostrum quality has been assessed.

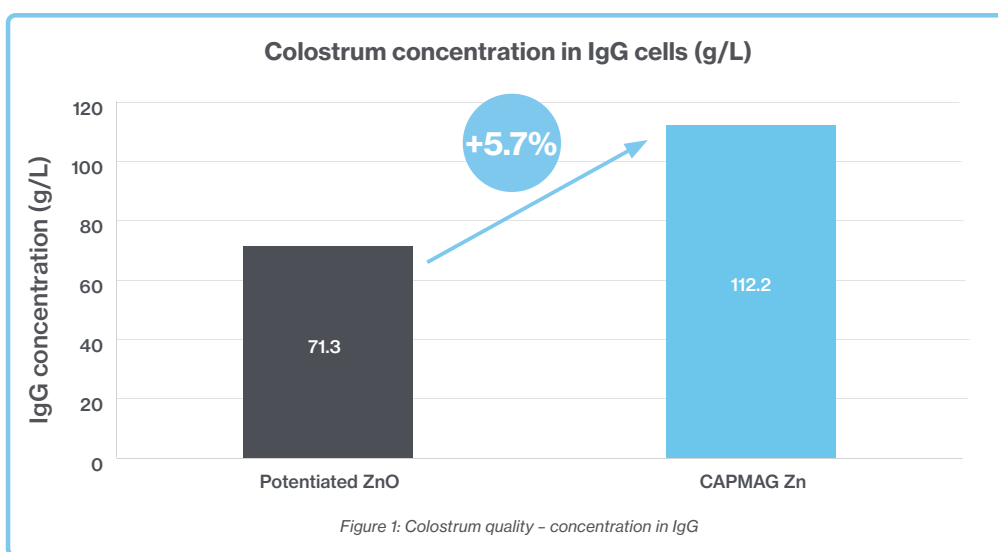
RESULTS & DISCUSSION

CAPMAG[®] Zn supplementation during gestation showed a tendency to improve birth weight of the piglets ($P= 0.06$). It improved significantly the weight of the animals at 5 days of life. Numerically, there were more piglets weaned with CAPMAG[®] Zn than with the competitor (*Table 1*).

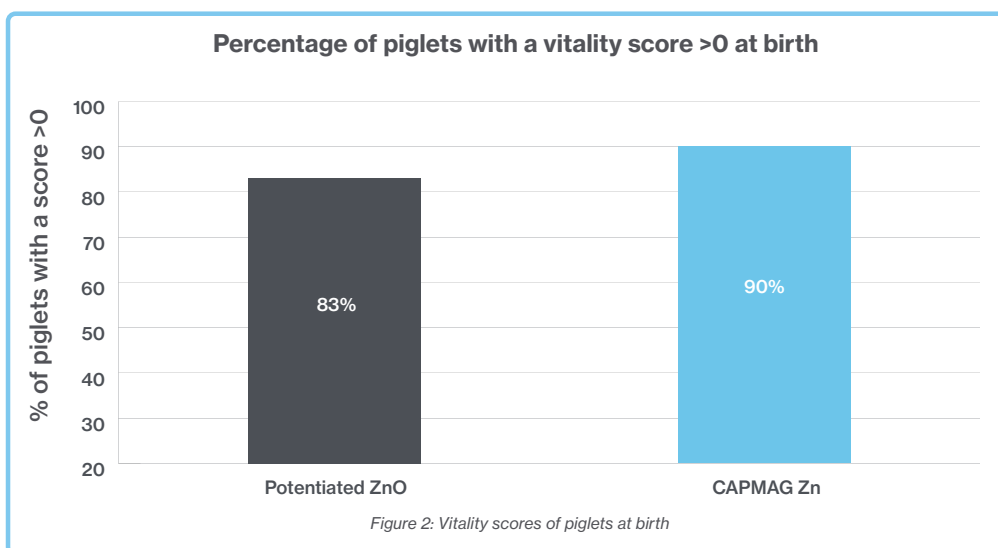
Table 1: Growth parameters in the first days of life, depending on the Zn source

	Potentiated ZnO		CapMag® Zn		p-value
Total born	16.87		16.88		
Birth weight (kg)	1.34		1.39		<i>P=0.0632</i>
Adoption weight, at 5d (kg)	1.77	a	1.94	b	<i>P<0.001</i>
ADG birth-adoption (g/d)	115.79	a	137.70	b	<i>P<0.001</i>
Weaned	12.67		13.18		
% weaned/total born	75%		78%		
% weaned/born alive	81%		85%		

Analysis of colostrum samples assessed on a higher quality when the sows were supplemented with **CAPMAG® Zn**. Immunoglobulins G (IgG) concentration was improved by 5.7% allowing a better passive immunity to the piglets. It enables the piglets to develop a more robust immune system and improves the development of their gastrointestinal tract.



Numerically higher vitality scores have been recorded at birth for the piglets from the group supplemented with zinc **CAPMAG® Zn** (Figure 2).



CONCLUSION

This investigation shows that **CAPMAG® Zn** is able to improve piglet growth, and potentially immunity, if supplemented during gestation.