



# Essential Trace Minerals. Exceptional Performance.



Our time-tested and proven products are the only true performance minerals on the market.

As the most research-proven trace minerals in the industry, Zinpro Performance Minerals® deliver improved performance and greater profitability to swine operations.

For more than 40 years, an uncompromising commitment to superior science and product quality standards puts Zinpro in a class by itself.



For more information, visit [zinpro.com](http://zinpro.com)  
or contact Chemuniqué on +27 11 789 2414  
or [nutri@chemuniqué.co.za](mailto:nutri@chemuniqué.co.za)



**Some of the benefits of including essential trace minerals in swine diets may include:**

- Improved reproductive efficiency
- Improved claw integrity
- Increased pigs weaned per sow lifetime
- Increased sow longevity
- Heavier weaning weights
- Less weight loss in lactation



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# Zinpro Copper Helps Young Pig Performance

## Introduction

The growth potential of copper when fed at levels of 100 to 250mg/kg is widely recognised. It has been suggested that copper acts in an antibiotic-like fashion by influencing microflora in the gut<sup>1</sup>. The solubility of the dietary Cu source has also been identified as a factor related to copper simulated growth<sup>2</sup> implying observed benefits are partially due to absorbed Cu.

It is suggested that Cu binds to peptides and amino acids in the gut, and that this aids in Cu absorption<sup>3</sup>. The growth response of Cu in young pigs is affected by source.

## Key Findings

### In a series of seven trials

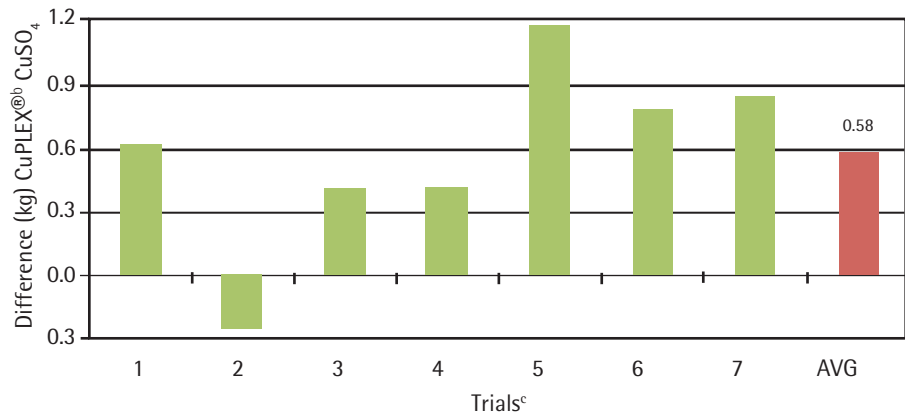
- Pigs fed 100ppm Cu from Zinpro CuPLEX<sup>®</sup> copper lysine grew faster and consumed more feed than pigs fed a higher level of Cu (200-250ppm) from ordinary copper sulphate (figures 2 & 3);
- Overall pigs fed CuPLEX<sup>®</sup> were 0.58kg heavier and consumed 39g more feed per day than pigs fed ordinary copper sulphate (figures 1 & 2);
- Previous research indicates that both CuPLEX<sup>®</sup>, and Availa<sup>®</sup>Cu have similar efficacy in improving nursery pig performance<sup>4</sup>.

### Impact

- Dietary copper sulphate may be replaced by lower levels of Cu in the form of Availa<sup>®</sup>Cu whilst simultaneously improving performance;
- The environmental impact of high levels of dietary Cu may be reduced.

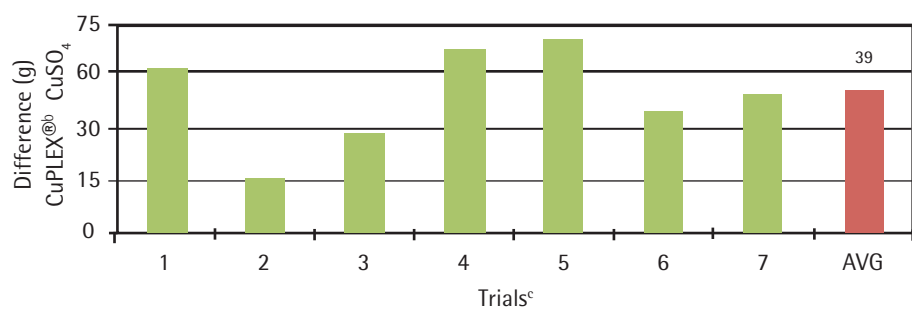
1, 2, 3 & 4 – references available on request

Figure 1: Effect of CuPLEX<sup>®</sup> copper lysine on total weight gain<sup>a</sup> of nursery pigs



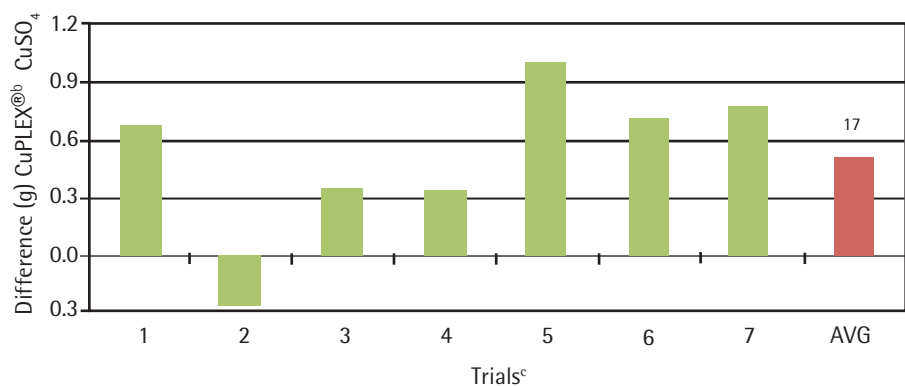
- a Summary data not statistically analyzed  
 b CuPLEX copper lysine  
 c 100 ppm Cu (CuLys) vs 200 ppm Cu (CuSO<sub>4</sub>) – Trials 1 to 2 (28 d); Trials 3 to 5 (35 d)  
 100 ppm Cu (CuLys) vs 250 ppm Cu (CuSO<sub>4</sub>) – Trials 6 to 7 (33 d)

Figure 2: Effect of CuPLEX<sup>®</sup> copper lysine on daily feed intake<sup>a</sup> of nursery pigs



- a Summary data not statistically analyzed  
 b CuPLEX copper lysine  
 c 100 ppm Cu (CuLys) vs 200 ppm Cu (CuSO<sub>4</sub>) – Trials 1 to 2 (28 d); Trials 3 to 5 (35 d)  
 100 ppm Cu (CuLys) vs 250 ppm Cu (CuSO<sub>4</sub>) – Trials 6 to 7 (33 d)

Figure 3: Effect of CuPLEX<sup>®</sup> copper lysine on daily gain<sup>a</sup> of nursery pigs



- a Summary data not statistically analyzed  
 b CuPLEX copper lysine  
 c 100 ppm Cu (CuLys) vs 200 ppm Cu (CuSO<sub>4</sub>) – Trials 1 to 2 (28 d); Trials 3 to 5 (35 d)  
 100 ppm Cu (CuLys) vs 250 ppm Cu (CuSO<sub>4</sub>) – Trials 6 to 7 (33 d)



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