INSIGHTS - A LOOK INSIDE PEER-REVIEW

Zinpro® Availa® Cu Improves Growth Performance, Intestinal Health, and ROI in Pacific White Shrimp, *Litopenaeus vannamei*

Study Objective

Evaluate use of dietary copper sources in Pacific white shrimp, *Litopenaeus vannamei*

Study Duration

2-week acclimation period to experimental conditions and commercial diet; 8-week feeding study

Animals

360 juvenile Pacific white shrimp, *Litopenaeus vannamei*, of approximately 1.86 initial body weight, stocked at 30 shrimp/tank

Treatments

Four supplemental Cu diets:

- **Control**. No supplemental Cu
- **$CuSO_4$**. 30 ppm Cu
- **$CuSO_4$/AvCu**. 15 ppm Cu each from copper sulfate and Availa Cu
- **AvCu**. 15 ppm Cu from Availa Cu

Location

Ningbo University, Ningbo, China

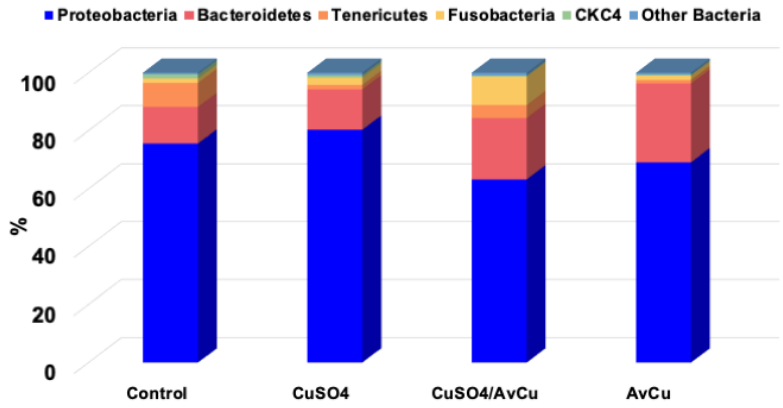
Results Summary

Partial or complete replacement of $CuSO_4$ with Availa Cu at a half-rate of supplementation:

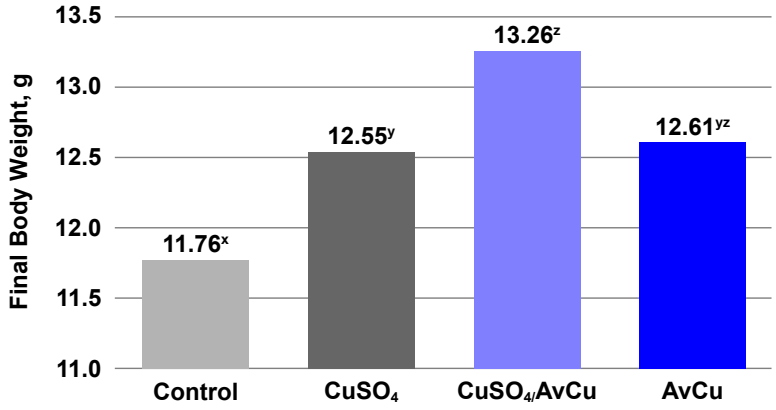
- Improved growth performance
- Decreased intestinal distribution of *Vibrionaceae* and *Mycoplasmataceae* bacteria

ROI was 9.6% greater when shrimp consumed $CuSO_4$/AvCu compared to no supplemental Cu.

Distribution of Intestinal Bacteria by Phyla



Final Body Weight



Yuan, Y., M. Jin, J. Luo, J. Xiong, T. L. Ward, F. Ji, G. Xu, M. Sun, and Q. Zhou. 2019. Effects of different dietary copper sources on the growth and intestinal microbial communities of Pacific white shrimp (*Litopenaeus vannamei*). Aquac. Nutr. 00:1-13.

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