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Effects of alginate oligosaccharide on the growth performance, antioxidant capacity and intestinal digestion-absorption function in weaned pigs

Running Head: Alginate oligosaccharide affects performance

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Highlights

- We investigated the effects of alginate oligosaccharide, a lyase depolymerised product of alginic acid polysaccharides, on growth performance, antioxidant capacity and intestinal digestion-absorption function in weaned pigs.
- Alginate oligosaccharide supplementation enhanced growth performance of weaned pigs, by elevating antioxidant capacity, serum hormones levels and intestinal digestion-absorption function.
- These results suggest that alginate oligosaccharide is a valid feed supplement for swine production.

Abstract: Alginate oligosaccharide (AOS), a depolymerisation product of alginic acid polysaccharides of seaweed by alginate lyases, holds great potential as a novel feed supplement in swine production. This study conducted two trials to evaluate the effects of AOS supplementation on the growth performance, antioxidant capacity, serum hormone levels and intestinal digestion-absorption function in weaned pigs. In trial 1, 200 weaned pigs were allotted to four groups and fed a basal diet (control group) or a basal diet containing 50, 100 and 200 mg/kg AOS, respectively. Supplementation with 100 or 200 mg/kg AOS for 2 weeks significantly increased ($P < 0.05$) the average daily body weight gain of the pigs compared to the control group.