

Enhanced Broiler Production Achieved Through Incorporating Beta-Glucanase in Wheat Diets

CHINA, November 22, 2023 /EINPresswire.com/ -- In a pioneering breakthrough within the realm of literature, scientists have harnessed the power of purified beta-glucanase to transform broiler wheat diets. By skillfully degrading [beta-glucan](#) molecules, they have unlocked a remarkable secret to boost growth performance. What's even more impressive? This discovery eliminates the need for antibiotics in feed, making it a game-changer for healthier and more sustainable broiler farming.

In today's world, where concerns about antibiotic resistance and public health are on the rise, scientists are actively seeking alternatives to antibiotics in chicken feed. In a recent publication in the *Animal Nutrition* journal by KeAi, a team of Canadian researchers detailed a common ingredient in chicken diets—wheat—and how a special enzyme, purified beta-glucanase, can make a big difference.

The primary aim of the study was to determine whether the incorporation of purified beta-glucanase into chicken feed based on wheat could result in improved beta-glucan utilization and enhanced chicken performance. The researchers anticipated that beta-glucanase had the potential to break down a wheat component known as beta-glucan, which, in turn, could enhance nutrient digestion, promote a healthier gut microbiota, and ultimately contribute to the growth and well-being of the chickens.

"The results were fascinating. Not only did beta-glucanase effectively break down beta-glucan, but it also improved chicken growth and health," shared lead author of the study, Namalika Karunaratne. "But there's more to the story. We compared beta-glucanase to antibiotics historically used in chicken feed and found that beta-glucanase had some unique advantages."

While antibiotics did a decent job of breaking down beta-glucan, beta-glucanase performed even better, especially in the early stages of growth.

"However, beta-glucanase reduced short-chain fatty acids, which carbohydrate fermentation products in the chicken's digestive system. This might seem counterintuitive," said Karunaratne. "Interestingly, it didn't harm the chickens' overall performance. In fact, it led to improved weight gain and increased feed efficiency."

The researchers concluded that adding purified beta-glucanase to the chicken feed not only boosted performance but also reduced the need for antibiotics and other medications.

“This marks a major step forward in keeping our feathered friends healthy and our food supply safer. It's a win-win for both chickens and those who care for them!” remarked Karunaratne.

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