

Effect of beta-mannanase (Hemicell) on growth performance and immunity of broilers.

Zou XT, Qiao XJ, Xu ZR.

Animal Science College, Zhejiang University, HangZhou, 310029, P. R. China

Abstract

Two hundred four broilers (1-d-old) were randomly allocated to 4 treatments, each of which had 3 pens of 17 chicks per pen and were used to investigate the effects of beta-mannanase (Hemicell) on growth performance and immunity. The chicks received the same basal diet based on corn-soybean meal and Hemicell was added to the basal diet at 0, 0.025, 0.05, and 0.075%, respectively. Weight of each replicate was determined at wk 0, 3, and 6 of age. There were no significant differences in average feed intake in the 0- to 3-wk and 0- to 6-wk periods, and no differences in serum IgA, or IgG concentrations. However, the addition of Hemicell significantly increased ($P < 0.05$) weight gain in the 4- to 6-wk and 0- to 6-wk periods. Feed conversion for the 0.025 and 0.05% groups was significantly greater ($P < 0.05$) than for the control group in the 4- to 6-wk and 0- to 6-wk periods. Hemicell significantly increased ($P < 0.05$) the serum IgM concentration in 3- and 6-wk-old broilers. Proliferation of T lymphocytes in 6-wk-old broilers for the 0.05% group was also improved ($P < 0.05$) significantly. The results indicate that Hemicell may improve growth performance and immunity of broilers.

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