



Effect of Enzyme Supplementation on Performance and Nitrogen Excretion of Broiler Chick Fed Low-Protein Diets Based on Corn and Soybean Meal

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Abstract

The effects of dietary multi-enzyme complex supplementation on the performance and nitrogen excretion of broiler chicks were investigated. Low crude protein diets (19% CP) based on corn and soybean meal with commercial enzyme complex at the inclusion level of 0,150 and 300 mg/kg diet, and a control diet (21%CP) were fed to 6-day-old male broiler chicks for 14 days. The commercial enzyme complex had cellulase (800 U), protease (10000 U) and pectinase (300 U) activities per gram of crude product. As a result, body weight gain, feed consumption and feed efficiency were not affected by the dietary treatments. Apparent metabolizable energy (AMEn) content was significantly increased with enzyme supplementation. Excreted nitrogen was lower for chicks fed low-protein diets compared to the control diet, however, no significant effect of enzyme supplementation was observed.

It can be concluded that dietary CP content can reduce from 21% to 19% without affecting performance of chick, and supplementation of the enzyme complex to the 19% CP diet increases the AMEn level of the diet.

Key words: enzyme supplementation, nitrogen excretion, metabolizable energy, broilers