

PENGARUH SUPLEMENTASI EKSTRAK EMPEDU SAPI DAN ASAM EMPEDU
KOMERSIAL PADA RANSUM TINGGI MINYAK TERHADAP KINERJA
PENCERNAAN DAN PERFORMA BROILER FASE STARTER

INTISARI

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Penelitian ini bertujuan untuk mengetahui pengaruh dari suplementasi ekstrak empedu sapi dalam ransum starter tinggi lemak terhadap performa pertumbuhan, morfologi organ, histomorfologi usus halus, perlemakan hati, pencernaan lemak, dan aspek ekonomi pada broiler selama fase starter. Sebanyak 336 DOC strain Cobb dibagi secara acak dalam 8 kelompok dan diberikan pakan: BF (lemak basal), HF (tinggi lemak), HF+CBA (asam empedu komersial 200, 400, 600 mg/kg), dan HF+BBE (ekstrak empedu sapi 200, 400, 600 mg/kg). Setiap kelompok memiliki 6 ulangan dengan 7 ekor ayam per ulangan. Pakan diberikan selama 7-21 hari, dengan penyesuaian dimulai pada hari ke-5, dan air minum *ad libitum*. Data dianalisis menggunakan kontras ortogonal dan polinomial ortogonal. Hasil menunjukkan level rendah CBA linear meningkatkan PBB ($P=0,02$), sementara peningkatan level BBE signifikan meningkatkan PBB ($P=0,05$), IP ($P=0,03$), dan menurunkan FCR ($P=0,04$). Perlakuan HF+CBA (200) dan HF+BBE (600) menunjukkan penurunan FCR ($P=0,01$) dan peningkatan IP ($P=0,02$) pada hari ke-21. CBA rendah dalam pakan HF meningkatkan bobot pankreas ($P=0,02$) dan menurunkan tinggi villi ($P=0,01$), sedangkan BBE menurunkan bobot empedu ($P=0,03$), dan meningkatkan bobot ileum ($P=0,04$), serta panjang usus besar ($P=0,00$). Selain itu, perlakuan BF vs HF, HF+CBA (200), dan HF+BBE (600) secara signifikan meningkatkan pendapatan 5,25% dan IOFC 12,29%. HF+CBA (200) vs HF+BBE (600) juga meningkatkan IOFC 9,71%. Kesimpulan menunjukkan bahwa suplementasi CBA dan BBE pada ransum tinggi minyak meningkatkan efisiensi organ pencernaan dan performa pertumbuhan sehingga menjadikannya strategi pakan yang efektif biaya, dengan dosis BBA 600 mg/kg sebagai yang paling optimal.

Kata kunci : Asam empedu, broiler, crude palm oil, ekstrak empedu sapi, performa pertumbuhan

EFFECT OF BOVINE BILE EXTRACT AND COMMERCIAL BILE ACID
SUPPLEMENTATION IN HIGH-FAT DIETS ON DIGESTIVE AND GROWTH
PERFORMANCE OF BROILERS STARTER PHASE

ABSTRACT

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This study aimed to investigate the effects of bovine bile extract supplementation in high-fat starter diets on growth performance, organ morphology, small intestine histomorphology, liver fat deposition, fat digestibility, and economic aspects in broilers during the starter phase. A total of 336 Cobb strain day-old chicks (DOC) were randomly divided into 8 groups and fed with diets: BF (basal fat), HF (high fat), HF+CBA (commercial bile acid at 200, 400, and 600 mg/kg), and HF+BBE (bovine bile extract at 200, 400, and 600 mg/kg). Each group had 6 replicates, with 7 birds per replicate. The feeding period lasted from days 7 to 21, with adjustments starting on day 5, and water was provided ad libitum. Data were analyzed using orthogonal contrast and orthogonal polynomial analysis. The results indicated that low-level CBA linearly increased body weight gain ($P=0.02$), while increasing BBE levels significantly enhanced body weight gain ($P=0.05$), performance index ($P=0.03$), and reduced feed conversion ratio (FCR) ($P=0.04$). Treatments with HF+CBA (200) and HF+BBE (600) showed reductions in FCR ($P=0.01$) and improvements in performance index ($P=0.02$) by day 21. Low-level CBA in the HF diet increased pancreas weight ($P=0.02$) and reduced villus height ($P=0.01$), whereas BBE decreased bile weight ($P=0.03$), increased ileum weight ($P=0.04$), and lengthened the large intestine ($P=0.00$). Additionally, the treatments BF vs HF, HF+CBA (200), and HF+BBE (600) significantly increased revenue by 5.25% and IOFC by 12.29%. HF+CBA (200) vs HF+BBE (600) also increased IOFC by 9.71%. The study concluded that the supplementation of CBA and BBE in high-fat diets improved digestive organ efficiency and growth performance, making it a cost-effective feeding strategy, with the optimal dose being 600 mg/kg of BBA.

Keywords: Bile acids, broilers, bovine bile extract, growth performance, Income on Feed Cost