

EVALUASI PERAN *BENTONITE* DAN *CURCUMIN* DALAM PENURUNAN TOKSISITAS AFLATOKSIN B1 TERHADAP KINERJA PRODUKSI DAN BIOMARKER KERUSAKAN HATI

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INTISARI

Pakan broiler berisiko terkontaminasi aflatoksin B₁ (AFB₁) akibat cemaran jamur *Aspergillus sp.* Kontaminasi AFB₁ dapat menurunkan produktivitas ternak dan kesehatan saluran pencernaan serta hati ayam, sehingga berdampak pada kerugian ekonomi. Penelitian ini bertujuan untuk mengetahui efek pemberian *toxin binder* pada pakan yang terkontaminasi AFB₁ terhadap produktivitas dan enzim biomarker kerusakan hati pada ayam broiler. Sebanyak 120 *Day Old Chick* (DOC) dipelihara selama 21 hari ditempatkan pada 24 kandang. Terdapat 4 perlakuan yang terdiri dari CTRL (kontrol), AF (CTRL + 300 ppb AFB₁), AFTB2 (AF + 2 g/kg TB) AFTB4 (AF + 4 g/kg TB). Setiap perlakuan terdiri dari 6 ulangan dengan 5 ekor broiler per ulangan. Parameter yang diamati meliputi *feed intake*, *body weight*, *body weight gain*, *average daily gain*, *feed conversion ratio*, *index performance*, *aspartate aminotransferase* (AST), *alanine aminotransferase* (ALT). Data yang diperoleh dianalisis menggunakan analisis variansi pola searah (*One-Way ANOVA*) dan uji lanjutan menggunakan uji *duncan multiple range test* (DMRT). Hasil penelitian menunjukkan bahwa pakan terkontaminasi AFB₁ secara signifikan meningkatkan *feed intake* ($P < 0,05$), FCR ($P < 0,05$), dan ALT ($P < 0,001$). Perlakuan AFTB4 secara signifikan menurunkan *feed intake* ($P < 0,05$), FCR ($P < 0,05$), dan AST ($P < 0,001$). Berdasarkan penelitian yang telah dilakukan dapat disimpulkan bahwa penambahan *toxin binder* 4 g/kg efektif dalam melindungi hati dan meningkatkan produktivitas broiler

Kata kunci: aflatoksin B₁, broiler, hati, produktivits, *toxin binder*

EVALUATION OF THE BENTONITE AND CURCUMIN IN REDUCING AFLATOXIN B₁ TOXICITY ON PRODUCTION PERFORMANCE AND LIVER DAMAGE BIOMARKER

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ABSTRACT

Feed has high risk with aflatoxin B₁ (AFB₁) due to *Aspergillus sp.* mold contamination. AFB₁ contamination can reduce livestock productivity, impair digestive and liver health, leading to economic losses. This study aimed to evaluate the effect of toxin binder supplementation in AFB₁ contaminated feed on production performance and liver damage biomarkers in broiler chickens. A total of 120 Day-Old Chicks (DOCs) were raised for 21 days in 24 cages and assigned to four treatment groups: CTRL (control), AF (control + 300 ppb AFB₁), AFTB2 (AF + 2 g/kg toxin binder), and AFTB4 (AF + 4 g/kg toxin binder). Each treatment had 6 replicates with 5 broilers per replicate. Observed parameters included feed intake, body weight, average daily gain, feed conversion ratio (FCR), performance index, aspartate aminotransferase (AST), and alanine aminotransferase (ALT). Data were analyzed using one-way ANOVA followed by Duncan's Multiple Range Test (DMRT). The results showed that AFB₁ significantly increased feed intake ($P < 0.05$), FCR ($P < 0.05$), and ALT levels ($P < 0.001$). The AFTB4 treatment significantly reduced feed intake ($P < 0.05$), FCR ($P < 0.05$), and AST levels ($P < 0.001$). It can be concluded that supplementation of 4 g/kg of bentonite and curcumin as a toxin binder is effective in protecting the liver damage and improving broiler productivity.

Keyword: aflatoxin B₁, broiler, liver, productivity, toxin binder