

PENGARUH PENAMBAHAN *TOXIN BINDER* PADA PAKAN TERKONTAMINASI MIKOTOKSIN TERHADAP PRODUKTIVITAS DAN KANDUNGAN MINERAL DARAH BROILER

Reni Nur Safitri
19/446064/PT/08318

INTISARI

Biji-bijian khususnya jagung menyusun ransum broiler dengan proporsi terbesar yaitu 55%-60%. Jagung rentan terkontaminasi oleh mikotoksin antara lain aflatoksin B₁ (AFB₁), okratoksin A (OTA) dan trikotesena (T-2). Dampak mikotoksin menyebabkan penyerapan nutrisi dalam pakan berkurang, sehingga produktivitas akan menurun. Mikotoksin yang masuk ke saluran pencernaan juga dapat mengganggu penyerapan kalsium (Ca) dan fosfor (P). Penelitian ini bertujuan untuk mengetahui efek *toxin binder* pada pakan yang terkontaminasi mikotoksin jenis aflatoksin B₁ (AFB₁), okratoksin A (OTA), dan trikotesena (T-2) terhadap produktivitas dan kandungan mineral darah broiler. Total 60 *day old chicken* (DOC) jantan Indian River ditempatkan pada 12 kandang koloni. Perlakuan dalam penelitian terdiri dari P0 (Kontrol, basal diet, tanpa penambahan AFB₁, OTA, T-2), P1 (Kontrol + 100 µg/kg AFB₁ + 200 µg/kg OTA + 100 µg/kg T-2), dan P2 (P0 + 4 g/kg Mycosorb + 100 µg/kg AFB₁ + 200 µg/kg OTA + 100 µg/kg T-2). Setiap perlakuan terdiri dari 4 ulangan dengan 5 ekor broiler setiap ulangan. Pakan perlakuan diberikan pada broiler fase *grower* (hari 11-21) dan *finisher* (hari 22-35). Analisis data menggunakan metode rancangan acak lengkap pola searah (*One way ANOVA*), dan dilanjutkan dengan uji duncan multiple range test, perbedaan antar perlakuan ditunjukkan oleh nilai $p < 0,05$. Hasil penelitian menunjukkan bahwa konsumsi pakan, bobot akhir, pertambahan bobot badan, pertambahan bobot badan harian (ADG), indeks performa (IP) dan mineral fosfor (P) dalam darah broiler tidak berbeda antar perlakuan ($p > 0,05$). Akan tetapi, kandungan mineral dalam darah pada perlakuan mikotoksin (P1) dan mikotoksin + *toxin binder* (P2) lebih tinggi dibanding kontrol. Berdasarkan hasil penelitian, dapat disimpulkan bahwa kontaminasi mikotoksin pada level 100 ppb AFB₁, 200 ppb OTA dan 100 ppb T-2 tidak berpengaruh terhadap produktivitas broiler.

Kata kunci: broiler, mikotoksin, pakan, *toxin binder*, jagung

EFFECT ADDITION OF TOXIN BINDER IN MYCOTOXIN CONTAMINATED FEED ON PRODUCTIVITY AND BLOOD MINERAL CONTENT OF BROILER

Reni Nur Safitri
19/446064/PT/08318

ABSTRACT

Corn constitutes the largest proportion of the broiler feed, around 55 to 60%. Corn is easily contaminated by mycotoxins, including aflatoxin B₁ (AFB₁), ochratoxin A (OTA), and trichothecenes (T-2). The impact of mycotoxins results in reduced nutrient absorption from the feed, leading to decreased productivity. Mycotoxins that enter the digestive tract can also disrupt the absorption of calcium (Ca) and phosphorus (P). This research was aimed to determine the effects of toxin binder on feed contaminated with AFB₁, OTA, and T-2 on the productivity and blood mineral content of broilers. A total of 60-day-old male Indian River broilers were placed in 12 colony cages. The treatments in the study were as follows: P0 (Control, basal diet), P1 (Control + 100 µg/kg AFB₁ + 200 µg/kg OTA + 100 µg/kg T-2), and P2 (P0 + 4 g/kg Mycosorb + 100 µg/kg AFB₁ + 200 µg/kg OTA + 100 µg/kg T-2). Each treatment had four replications, with five broilers in each replication. The treatment diets were given to the broilers during the grower phase (days 11–21) and the finisher phase (days 22–35). Data analysis was performed using the one-way analysis of variance (ANOVA) method, followed by the Duncan multiple range test, and differences between treatments were indicated by a p-value < 0.05. The results of the study indicated that feed consumption, final weight, body weight gain, daily body weight gain (ADG), performance index, and phosphorus (P) mineral in the blood of broilers did not significant among the treatment groups (p > 0.05). However, the mineral content in the blood of broilers in the mycotoxin treatment group (P1) and mycotoxin + toxin binder treatment group (P2) was higher compared to the control group. Based on the study, it can be concluded that the contamination of mycotoxins at the levels of 100 ppb AFB₁, 200 ppb OTA, and 100 ppb T-2 did not significantly affect the productivity of broilers.

Key words: broiler, mycotoxin, feed, toxin binder, corn