

**PENGARUH PENAMBAHAN METIONIN TERHADAP KONSUMSI PAKAN,  
PERTAMBAHAN BOBOT BADAN DAN KONVERSI PAKAN ITIK PEKING  
YANG DIBERI PAKAN TERCEMAR AFLATOKSIN B1**

**INTISARI**

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Penelitian ini bertujuan untuk menurunkan toksisitas AFB1 pada itik peking dengan penambahan metionin dalam pakan sehingga meningkatkan produksi *glutathione* (GSH) dan mencegah kerusakan hati, serta mengetahui pengaruhnya terhadap konsumsi pakan, pertambahan bobot badan, dan konversi pakan itik peking. Penelitian ini menggunakan rancangan acak lengkap (RAL) pola searah. Terdapat lima perlakuan, empat ulangan, dan masing-masing ulangan menggunakan lima ekor itik Peking (*Anas platyrhynchos*) betina umur 21 hari. Total itik yang digunakan yakni 100 ekor. Perlakuan terdiri atas: kontrol negatif (tanpa penambahan AFB1 dan metionin; P0), kontrol positif (penambahan 50 ppb AFB1; P1), P1 + 0,32% metionin (P2), P1 + 0,47% metionin (P3), dan P1 + 0,62% metionin (P4). Data penelitian dianalisis variansi dengan mengikuti RAL pola searah menggunakan *software* SPSS statistik versi 20. Perbedaan nyata antar perlakuan, dilakukan uji lanjut menggunakan uji DMRT. Hasil penelitian menunjukkan bahwa pemberian metionin sebanyak 0,47% (P3) dalam pakan mampu meningkatkan kadar GSH, tertinggi dibanding yang lainnya ( $P < 0,05$ ). Aktivitas enzim protease pada P3 lebih tinggi ( $P < 0,05$ ) dibanding pada P1, P2, dan P4. Adanya pengaruh yang signifikan antara P0 dan P1 pada lebar bawah vili. Hasil histopatologi hati menunjukkan adanya degenerasi melemak untuk setiap perlakuannya, degenerasi melemak berat ada pada P4. Untuk berat hati, jika dilihat dari hasil persentase berat hati dari bobot badan menunjukkan tidak adanya pengaruh yang signifikan untuk semua perlakuan. Warna hati juga tidak menunjukkan adanya pengaruh yang signifikan antar perlakuan. Konsumsi pakan P1 dan P4 menunjukkan adanya pengaruh signifikan. Pada pertambahan bobot badan dan konversi pakan menunjukkan pengaruh yang tidak signifikan. Hasil perhitungan IOFC menunjukkan bahwa itik yang diberikan pakan P2 (0,32% metionin) menempati posisi tertinggi yakni Rp.1.313/ekor/hari dibanding pakan P1, P2, P3, dan P4. Berdasarkan hasil penelitian, dapat disimpulkan bahwa pemberian tambahan metionin sebanyak 0,47% (P3) pada pakan itik peking yang dikontaminasi AFB1 50 ppb/kg dapat meningkatkan produksi GSH dan aktivitas enzim protease yang berdampak pada konsumsi pakan, pertambahan bobot badan dan konversi pakan yang tidak berpengaruh signifikan dengan perlakuan kontrol negatif. Tetapi, IOFC pakan penelitian dengan tambahan 0,32% metionin (P2) menempati urutan tertinggi dibanding pakan perlakuan lainnya.

Kata kunci : Aflatoksin B1, *Glutathione*, Itik peking, Konsumsi pakan, Konversi pakan, Metionin, Pertambahan bobot badan

**EFFECT OF ADDING METHIONINE TO FEED CONTAMINATED BY  
AFLATOXIN B1 ON FEED CONSUMPTION, BODY WEIGHT GAIN  
AND FEED CONVERSION OF PEKING DUCKS**

**ABSTRACT**

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This research aims to reduce the toxicity of AFB1 in Peking ducks by adding methionine to feed thereby increasing glutathione (GSH) levels and preventing liver damage, as well as determining its effect on feed consumption, body weight gain and feed conversion in Peking ducks. This research used a unidirectional completely randomized design (CRD). There were five treatments, four replications, and each replication used five female Peking ducks (*Anas platyrhynchos*) aged 21 days. The total number of ducks used was 100 ducks. Treatments consisted of : negative control (without addition of AFB1 and methionine; P0), positive control (addition of 50 ppb AFB1; P1), P1 + 0.32% methionine (P2), P1 + 0.47% methionine (P3), and P1 + methionine 0.62% (P4). The research data was analyzed for variance by following CRD with a unidirectional pattern using SPSS statistical software version 20. The real differences between the treatments were further tested using the DMRT test. The results of the research showed that addition of 0.47% methionine (P3) in feed was able to increase GSH levels, the highest compared to the others ( $P < 0.05$ ). Protease enzyme activity in P3 was higher ( $P < 0.05$ ) than in P1, P2, and P4. There was a significant effect between P0 and P1 on the width of villi bottom. Liver histopathology results showed fatty degeneration for each treatment, severe fatty degeneration was in P4. For liver weight, the results showed that the percentage of liver weight from body weight was no significant effect for all treatments. Liver color also did not show any significant effect between treatments. Feed consumption P1 and P4 showed a significant effect. Body weight gain and feed conversion showed an insignificant effect. The results of IOFC calculations showed that ducks given P2 feed (0.32% methionine) occupy the highest position, namely IDR 1,313/head/day compared to P1, P2, P3 and P4 feeds. Based on the research results, it can be concluded that addition of 0.47% methionine (P3) to Peking duck feed contaminated by AFB1 50 ppb/kg can increase GSH levels and protease enzyme activity which has an impact on feed consumption, body weight gain and feed conversion also there was no significant effect with the negative control treatment. However, the IOFC of the treatment feed with the addition of 0.32% methionine (P2) ranked highest compared to other treatment feeds.

**Key words :** Aflatoxin B1, Body weight gain, Feed consumption, Feed conversion, Glutathione, Methionine, Peking duck