

EFISIENSI PROTEIN DAN ENERGI PAKAN AYAM PEDAGING YANG MENDAPATKAN AIR MINUM DENGAN PENAMBAHAN ADITIF SARI BUAH BELIMBING WULUH (*Averrhoa bilimbi*)

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan sari buah belimbing wuluh (*Averrhoa bilimbi*) dalam air minum terhadap efisiensi protein dan energi pakan ayam pedaging. Sebanyak 90 ekor Day Old Chicks ayam pedaging jantan strain New Lohmann seri MB-202 digunakan dalam penelitian ini selama 35 hari. Setiap ayam dalam penelitian ini mendapatkan ransum basal yang sama dan salah satu dari perlakuan: air minum tanpa suplementasi aditif (R0; kontrol negatif), air minum + 100 ppm Tetrasiklin (R1; kontrol positif), atau air minum + 0,45% sari buah belimbing wuluh (R2). Setiap kelompok perlakuan dalam penelitian ini terdiri dari 5 replikasi, masing-masing replikasi terdiri 6 ekor ayam. Variabel yang diamati meliputi konsumsi pakan, konsumsi protein, konsumsi energi, pertambahan bobot badan, efisiensi penggunaan protein, dan efisiensi penggunaan energi. Data yang diperoleh selanjutnya dianalisis statistik menggunakan Completely Randomized Design Pola Searah, dengan taraf signifikansi 5% atau nilai P kurang dari 0,05. Data dengan perbedaan yang nyata diuji lanjut menggunakan Duncan's new multiple range test. Hasil analisis statistik menunjukkan bahwa penambahan 0,45% sari buah belimbing wuluh dalam air minum tidak mempengaruhi konsumsi pakan, pertambahan bobot badan, konsumsi protein, konsumsi energi, efisiensi protein, dan efisiensi energi. Namun demikian, penambahan air minum dengan 100 ppm antibiotik Tetrasiklin menurunkan konsumsi pakan, konsumsi protein, dan konsumsi energi ($P < 0,05$), tanpa mempengaruhi efisiensi penggunaan protein dan energi pakannya. Dapat disimpulkan bahwa penambahan 0,45% sari buah belimbing wuluh dalam air minum tidak mempengaruhi efisiensi penggunaan protein dan energi pakan ayam pedaging.

Kata kunci: Ayam pedaging, Efisiensi penggunaan energi, Efisiensi penggunaan protein, Sari buah belimbing wuluh

PROTEIN AND ENERGY EFFICIENCIES OF BROILER CHICKENS GIVEN DRINKING WATER SUPPLEMENTED WITH *Averrhoa bilimbi* FRUIT EXTRACT

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ABSTRACT

This study was aimed to determine the effect of *Averrhoa bilimbi* fruit extract supplementation through drinking water on protein and energy efficiency ratios in broiler chickens. The study was conducted using 90 male day old New Lohmann MB-202 chicks that were reared for 35 days. Each chicken in this study received a same basal diet with one of the following treatments: drinking water without any addition (R0; negative control), drinking water + tetracycline (R1; positive control), or drinking water + 0.45% belimbing wuluh fruit extract (R2). All chickens were divided into 3 treatments, 5 replications, and 6 chickens in each replicate pen. The variable data observed included feed consumption, body weight gain, protein consumption, protein efficiency ratio, energy consumption, and energy efficiency ratio. The obtained data were analyzed statistically using Completely Randomized Design with oneway arrangement based on the value of $P < 0.05$. Data with significant different were further analysed using Duncan's new multiple range test. Result showed that supplementation of 0.45% *Averrhoa bilimbi* fruit extract via drinking water did not affect feed intake, body weight gain, protein consumption, protein efficiency ratio, energy consumption, nor energy efficiency ratio. However, 100 ppm antibiotic tetracycline supplementation reduced ($P < 0.05$) feed intake, protein intake, and energy intake without any effect on protein and energy efficiency ratios. It can be concluded that supplementing drinking water with low dose *Averrhoa bilimbi* fruit extract did not give beneficial effect on protein and energy efficiency ratios of broiler chickens.

Keyword: *Averrhoa bilimbi* fruit extract, Broiler chickens, Energy efficiency ratio, Protein efficiency ratio