

PENGARUH PENAMBAHAN EKSTRAK KAYU MANIS (*Cinnamomum burmannii*) PADA AIR MINUM TERHADAP EFISIENSI PENGGUNAAN ENERGI DAN PROTEIN PADA AYAM PEDAGING

Ihsan Zain Nida
16/399131/PT/07249

INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan ekstrak kayu manis (*Cinnamomum burmannii*) pada air minum terhadap efisiensi penggunaan energi dan protein pada ayam pedaging. Materi penelitian ini adalah 200 ekor ayam pedaging jantan strain Lohmann W99 Grade-A. Penelitian menggunakan rancangan acak lengkap (RAL) dengan 5 perlakuan dan 5 ulangan, masing-masing 8 ekor ayam. Perlakuan yang digunakan adalah KN= kontrol negatif, air minum tanpa penambahan ekstrak kayu manis; AT= kontrol positif, air minum + antibiotik *tetracycline* 45 mg/L; NK1= air minum + ekstrak kayu manis 0,025 ml/L; NK2= air minum + ekstrak kayu manis 0,05 ml/L; dan NK3= air minum + ekstrak kayu manis 0,1 ml/L. Pakan yang diberikan berupa pakan formulasi yang disusun berdasarkan kebutuhan nutrisi ayam pedaging menurut *National Research Council* (NRC, 1994). Pakan dan air minum diberikan secara *ad libitum*. Variabel yang diamati dalam penelitian ini berupa konsumsi minum, rasio konsumsi minum dan konsumsi pakan, konsumsi energi, konsumsi protein, efisiensi penggunaan energi dan efisiensi penggunaan protein. Data yang diperoleh dianalisis menggunakan ANOVA (*Analysis of Variance*) dan data yang berbeda antar perlakuan diuji lanjut menggunakan uji Duncan pada taraf probabilitas 5%. Hasil penelitian menunjukkan bahwa penambahan ekstrak kayu manis pada air minum meningkatkan efisiensi penggunaan energi dan protein pada ayam pedaging ($p < 0,05$). Semua perlakuan dengan penambahan ekstrak kayu manis (NK1, NK2, NK3) serta perlakuan kontrol positif berupa antibiotik (AT) memiliki hasil efisiensi penggunaan energi dan protein yang lebih tinggi dari perlakuan kontrol negatif (KN). Disimpulkan bahwa penambahan ekstrak kayu manis pada air minum pada level terendah pun (0,025 ml/L) memiliki hasil yang sama dengan penambahan antibiotik untuk dapat meningkatkan efisiensi penggunaan energi dan protein pada proses pemeliharaan ayam pedaging.

Kata kunci: Ekstrak kayu manis, *Cinnamomum burmannii*, Ayam pedaging, Efisiensi penggunaan energi dan protein

EFFECT OF CINNAMON EXTRACT (*Cinnamomum burmannii*) ON ENERGY AND PROTEIN UTILIZATION EFFICIENCY OF BROILERS

Ihsan Zain Nida
16/399131/PT/07249

ABSTRACT

The present study aimed to determine the effect of cinnamon extract (*Cinnamomum burmannii*) in drinking water on energy and protein utilization efficiency of broilers. The study used 200 Lohmann W99 Grade-A broilers. They were randomly divided into 5 treatments and 5 replications, and each replication contained 8 chickens. The treatments were KN= negative control, water without addition of cinnamon extract; AT= positive control, water + tetracycline antibiotic 45 mg/L; NK1= water + cinnamon extract 0.025 ml/L; NK2= water + cinnamon extract 0.05 ml/L; and NK3= water + cinnamon extract 0.1 ml/L. The formulated diet was to meet or exceed the nutritional requirements of broiler chickens using NRC (1994) recommendation. Feed and drinking water were provided ad libitum. The variables observed in this study were water intake, water and feed intake ratio, energy intake, protein intake, energy utilization efficiency and protein utilization efficiency. All data were analyzed using ANOVA (Analysis of Variance) and the differences among the treatments mean were detected using Duncan's new multiple range test at 5% probability level. The results showed that the addition of cinnamon extract on drinking water increase energy and protein utilization efficiency of broilers ($p < 0.05$). All treatments with the addition of cinnamon extract (NK1, NK2, NK3) as well as positive control treatments with addition of antibiotics (AT) had higher energy and protein utilization efficiency values than negative control treatments (KN). It was concluded that the addition of cinnamon extract to drinking water at the lowest level (0.025 ml/L) had the same results as the addition of antibiotics to be able to increase energy and protein utilization efficiency in the poultry production process.

Key words: Cinnamon extract, *Cinnamomum burmannii*, Broiler, Energy and protein utilization efficiency