

**PENGARUH PEMBERIAN *ESSENTIAL OIL* (EO) YANG BERBEDA
DALAM PAKAN TERHADAP *PERFORMANCE* DAN GAMBARAN
HISTOLOGI HEPAR AYAM BROILER**

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INTISARI

Pakan merupakan salah satu komponen yang berpengaruh dalam performa ayam broiler. Peningkatan performa ayam broiler yang kurang maksimal diakibatkan salah satunya adalah mikroorganisme patogen yang menyebabkan kondisi tubuh ayam broiler menurun. Salah satu upaya yang dilakukan adalah dengan penambahan *feed additive* berupa *essential oil* dalam pakan untuk meningkatkan performa ayam broiler. Proyek Akhir ini bertujuan untuk mengetahui pengaruh penambahan *essential oil* (EO) yang berbeda sebagai *feed additive* dalam pakan terhadap *performance* dan gambaran histologi hepar ayam broiler. Sejumlah 75 ekor ayam broiler jantan berumur satu hari dibagi kedalam lima kelompok perlakuan yaitu kelompok kontrol negatif: Pakan Basal (PB) (T0); kontrol positif: PB+antibiotik 0,05% (T1); PB+EO cengkeh 15% (T2); PB+ EO serai 15% (T3); PB+ EO kunyit 15% (T4). Setiap perlakuan menggunakan tiga kali ulangan dan setiap ulangan menggunakan lima ekor ayam. Parameter yang diamati antara lain data performans ayam broiler, meliputi: total konsumsi pakan, pertambahan bobot badan harian, total pertambahan bobot badan, konversi pakan, dan gambaran histologi hepar pada ayam. Data parameter performans kemudian diolah menggunakan rancangan acak lengkap (RAL) pola searah, dilanjutkan uji *least significant different* (LSD). Gambaran histologi hepar diamati menggunakan mikroskop dan dianalisis secara deskriptif. Hasil analisis statistika menunjukkan bahwa penambahan EO cengkeh, kunyit dan serai dalam pakan tidak berpengaruh nyata ($P>0,05$) terhadap total konsumsi pakan, pertambahan bobot badan harian, konversi pakan, dan total pertambahan bobot badan. Gambaran histologi hepar menunjukkan tidak adanya abnormalitas akibat pemberian EO cengkeh, kunyit dan serai. Berdasarkan hasil tersebut, dapat disimpulkan bahwa penambahan EO cengkeh, kunyit, dan serai sebagai *feed additive* dalam pakan ayam broiler tidak memberikan efek negatif terhadap *performance* dan status kesehatan hepar ayam broiler umur 35 hari.

Kata kunci: *Essential oil*, cengkeh, serai, kunyit, ayam broiler, *performance*, histologi hepar

**THE EFFECT OF SUPPLEMENTATION OF DIFFERENT ESSENTIAL
OIL (EO) IN FEED ON PERFORMANCE AND LIVER HISTOLOGICAL
DESCRIPTION OF BROILER**

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ABSTRACT

Feed is one of the components that affect the performance of broiler chickens. Improved performance of broiler chickens that are less than optimal is caused by one of them being pathogenic microorganism that cause the body condition of broiler chickens to decrease. One of the efforts made is by adding a feed additive in form of essential oil in the feed to improve the performance of broiler chickens. This final project research aims to determine the effect of the different essential oil (EO) as feed additive in feed to performance and histological changes in the liver of broiler. The total of 75 males broiler's day old chick (DOC) were divided into five different treatments groups, respectively negative control group: Basal Feed (BF) (T0); positive control: BF+antibiotics 0,05% (T1); BF+EO cloves 15% (T2); BF+ EO lemongrass 15% (T3); BF+ EO turmeric 15% (T4). Each treatment used three replication and each replication used five chickens. Parameters observed were performances, respectively: total feed intake, average daily body gain, total body weight gain, feed conversion ratio, and hepar histology. Data were analyzed using One-way ANOVA design, followed by the least significant different (LSD) test for the performance parameters The histology of the liver was observed using a microscope and analyzed descriptively. The results of statistical analysis showed that the addition of the EO from cloves, turmeric and lemongrass in the feed had no significant effect ($P>0.05$) on total feed intake, average daily gain, total body weight gain, and feed conversion ratio. Histological picture of the liver showed that there were no abnormalities due to the addition of the clove, turmeric and lemongrass's EO. Based on these results, it can be concluded that the addition of the EO from cloves, turmeric, and lemongrass as feed additives in broiler chicken feed does not have a negative effect on the performances and liver health status of 35 days old broiler.

Keywords: *Essential oil*, clove, lemongrass, tumeric, broiler, performance, hepar histology