

ABSTRAK

PENGARUH PEMBERIAN KOMBINASI HERBAL (*Allium sativum*, *Zingiber officinale*, *Curcuma domestica*, *Zingiber aromaticum*) DAN LISOZIM TERHADAP PROFIL HEMATOLOGI DAN PERFORMA BROILER

Farah Alifah
22/493521/KH/11221

Penggunaan *Antibiotic Growth Promoter* (AGP) pada ayam broiler saat ini semakin dibatasi karena berpotensi menimbulkan residu pada produk ternak serta meningkatkan risiko resistensi antimikroba. Oleh karena itu, diperlukan bahan aditif alami yang aman dan efektif sebagai alternatif pengganti AGP. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian kombinasi herbal bawang putih (*Allium sativum*), jahe (*Zingiber officinale*), kunyit (*Curcuma domestica*), lempuyang (*Zingiber aromaticum*), dan lisozim terhadap performa produksi serta status hematologi ayam broiler. Penelitian menggunakan 75 ekor Day Old Chicken (DOC) strain COBB 500 yang dibagi menjadi tiga kelompok perlakuan ($n=25$), yaitu kelompok normal (pakan basal), kelompok AGP (pakan basal + AGP), dan kelompok perlakuan (pakan basal + kombinasi herbal dosis 20 g/kg dan lisozim 10 ml/kg). Ayam dipelihara selama 28 hari. Parameter yang diamati meliputi pertambahan bobot badan (PBB), Feed Conversion Ratio (FCR), serta profil hematologi berupa WBC, monosit, limfosit, heterofil, eosinofil, RBC, PCV, MCV, MCH, MCHC, dan rasio heterofil/limfosit. Pengambilan sampel darah dilakukan pada minggu ke-4 dan dianalisis secara manual. Bobot badan diukur pada minggu ke-0, 1, 2, 3, dan 4, sedangkan nilai FCR dihitung pada minggu ke-4. Data PBB dianalisis secara deskriptif, sedangkan data FCR dan hematologi dianalisis menggunakan SPSS melalui uji One-way ANOVA yang dilanjutkan dengan uji Tukey HSD atau uji Kruskal-Wallis dilanjutkan Mann-Whitney sesuai karakteristik data. Hasil penelitian menunjukkan bahwa kelompok perlakuan memiliki nilai PBB lebih tinggi dibandingkan kelompok AGP maupun kelompok normal. Nilai FCR pada kelompok perlakuan tidak menunjukkan perbedaan yang signifikan dibandingkan kelompok AGP, namun lebih baik dibandingkan kelompok normal. Selain itu, kombinasi fitobiotik dan lisozim menunjukkan potensi dalam meningkatkan kondisi kesehatan dan respons fisiologis ayam broiler sehingga dapat dipertimbangkan sebagai alternatif alami pengganti AGP, meskipun pengaruhnya terhadap efisiensi pakan masih memerlukan penelitian lebih lanjut.

Kata kunci: Broiler, Herbal, Hematologi, Lisozim, Performa.

ABSTRACT

THE EFFECT OF A COMBINATION OF HERBS (*Allium sativum*, *Zingiber officinale*, *Curcuma domestica*, *Zingiber aromaticum*) AND LYSOZIME ON THE HEMATOLOGICAL PROFILE AND PERFORMANCE OF BROILERS

Farah Alifah
22/493521/KH/11221

The use of Antibiotic Growth Promoters (AGPs) in broiler chickens is increasingly restricted due to the risk of residue accumulation in animal products and the development of antimicrobial resistance. Therefore, safe and effective natural feed additives are needed as alternatives to AGPs. This study aimed to evaluate the effects of a combination of herbal phytobiotics consisting of garlic (*Allium sativum*), ginger (*Zingiber officinale*), turmeric (*Curcuma domestica*), lempuyang (*Zingiber aromaticum*), and lysozyme on the production performance and hematological status of broiler chickens. A total of 75 Day Old Chickens (DOC) strain COBB 500 were randomly divided into three groups (n=25): the normal group (basal feed), the AGP group (basal feed + AGP), and the treatment group (basal feed + herbal combination at a dose of 20 g/kg and lysozyme 10 ml/kg). The chickens were reared for 28 days. Observed parameters included body weight gain (BWG), Feed Conversion Ratio (FCR), and hematological profiles including WBC, monocytes, lymphocytes, heterophils, eosinophils, RBC, PCV, MCV, MCH, MCHC, and heterophil/lymphocyte ratio. Blood samples were collected at week 4 and analyzed manually. Body weight measurements were taken at weeks 0, 1, 2, 3, and 4, while FCR was calculated at week 4. BWG data were analyzed descriptively, whereas FCR and hematological data were analyzed using SPSS through One-way ANOVA followed by Tukey HSD test or Kruskal–Wallis followed by Mann–Whitney test according to data characteristics. The results showed that the treatment group had higher BWG values compared to both the AGP and normal groups. The FCR value of the treatment group was not significantly different from the AGP group but was better than the normal group. In addition, the phytobiotic and lysozyme combination demonstrated potential to improve the health condition and physiological response of broiler chickens, indicating its possible use as a natural alternative to AGPs, although further studies are still required to evaluate its effect on feed efficiency.

Key words: Broiler, Herbs, Hematology, Lysozyme, Performance.