

ABSTRAK

GAMBARAN TOTAL LEUKOSIT DAN DIFERENSIAL LEUKOSIT AYAM *BROILER* PADA PEMBERIAN TAPAK LIMAN (*Elephantopus scaber L.*)

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Penelitian ini bertujuan untuk mengetahui pengaruh dan dosis optimum pemberian tapak liman (*Elephantopus scaber L.*) terhadap gambaran total leukosit dan diferensial leukosit *broiler*. Penelitian dilaksanakan Februari--Maret 2022 di Unit Kandang Jurusan Peternakan, Fakultas Pertanian, Universitas Lampung. Analisis total leukosit dan diferensial leukosit di Laboratorium Patologi Klinik, Fakultas Kedokteran Hewan, UGM. Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan 4 perlakuan dan 3 ulangan, setiap petak berisi 8 ayam. Perlakuan yang diberikan yaitu air minum tanpa tapak liman (P0), 120 mg/kg bb/hari tapak liman (P1), 240 mg/kg bb/hari tapak liman (P2), 480 mg/kg bb/hari tapak liman (P3). Peubah yang diamati total leukosit dan diferensial leukosit. Data dianalisis menggunakan analisis ragam pada taraf 5% dan uji lanjut *polynomial orthogonal*. Hasil penelitian pemberian tapak liman sampai dosis 480 mg tidak berpengaruh nyata ($P>0,05$) terhadap total leukosit dan diferensial leukosit *broiler*. Uji *polynomial orthogonal* didapatkan Leukosit dipengaruhi secara kubik dengan $\hat{Y} = -0,00000002475 X^3 + 0,00001721 X^2 - 0,002 X + 4,237$ dan $R^2 = 0,236$, neutrofil dipengaruhi secara linear dengan $\hat{Y} = 1,049 X + 1419,667$ dan $R^2 = 0,007$, eosinofil dipengaruhi secara kubik dengan $\hat{Y} = -0,00008 X^3 + 0,016 X^2 + 13,045 X + 351,333$ dan $R^2 = 0,433$, basofil dipengaruhi secara kubik dengan $\hat{Y} = -0,00009 X^3 + 0,052 X^2 - 1,738 X + 280,000$ dan $R^2 = 0,183$, monosit tidak dipengaruhi nyata, dan limfosit dipengaruhi secara kubik dengan $\hat{Y} = -0,00000002831 X^3 + 0,00001827 X^2 - 0,002 X + 3,929$ dan $R^2 = 0,480$. Dosis optimum pemberian tapak liman pada total leukosit, eosinofil, basofil, dan limfosit berturut-turut yaitu 378,575 mg, 309,146 mg, 367,574 mg, 365,87 mg.

Kata Kunci: Ayam *Broiler*, Diferensial Leukosit, Tapak Liman, Total Leukosit.

ABSTRACT

OVERVIEW OF TOTAL LEUKOCYTES AND DIFFERENTIAL LEUKOCYTES IN *BROILER* ON GIVING OF TAPAK LIMAN (*Elephantopus scaber* L.)

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This research aimed to determine the effect and the optimum dose of tapak liman (*Elephantopus scaber* L.) on the total and differential leukocyte counts of *broilers*. The research was conducted from February to March 2022 in the Animal Husbandry Department, Faculty of Agriculture, University of Lampung. Analysis of total and differential leukocytes at the Clinical Pathology Laboratory, Faculty of Veterinary Medicine, UGM. The study used a completely randomized design with 4 treatments with 3 replications, each plot containing 8 chickens. The treatments given were drinking water without tapak liman (P0), 120 mg/kg bw/day tapak liman (P1), 240 mg/kg bw/day tapak liman (P2), 480 mg/kg bw/day tapak liman (P3). The observed variables were total leukocytes and leukocyte differential. Data were analyzed using analysis of variance at the 5% level and further test of orthogonal polynomials. The results of the study that giving tapak liman up to a dose of 480 mg had no significant effect ($P > 0.05$) on total leukocytes and *broiler* leukocyte differential. The orthogonal polynomial test showed that Leukocytes had a cubic effect with $\hat{Y} = -0.00000002475X^3 + 0.00001721 X^2 - 0.002 X + 4.237$ and $R^2 = 0.236$, neutrophils had a linear effect with $\hat{Y} = 1.049 X + 1419.667$ and $R^2 = 0.007$, eosinophils had a cubic effect with $\hat{Y} = -0.00008 X^3 + 0.016 X^2 + 13.045 X + 351.333$ and $R^2 = 0.433$, basophils have a cubic effect with $\hat{Y} = -0.00009 X^3 + 0.052 X^2 - 1.738 X + 280,000$ and $R^2 = 0.183$, monocytes had no significant effect, and lymphocytes had a cubic effect with $\hat{Y} = -0.00000002831 X^3 + 0.00001827 X^2 - 0.002 X + 3.929$ and $R^2 = 0.480$. The optimum dose of tapak liman for total leukocytes, eosinophils, basophils, and lymphocytes was 378,575 mg, 309,146 mg, 367,574 mg, 365,87 mg.

Keyword: *Broiler* Chicken, Differential Leukocyte, Tapak Liman, Total Leukocyte