

ABSTRAK

Siska Rizkyawati Hartanto. 24020120120015. Eritrogram Ayam Pedaging (*Gallus gallus domesticus*) setelah Pemberian Tepung Spirulina dan Nanokitosan Cair sebagai Aditif Pakan. Di bawah bimbingan Sunarno dan Muhammad Anwar Djaelani.

Penggunaan aditif sintetis pada pakan dapat mengganggu proses hematopoiesis yang berdampak pada penurunan eritrogram ayam pedaging. Tepung spirulina mengandung senyawa fenolik dan nanokitosan cair mengandung gugus penyusun yang berperan dalam peningkatan eritrogram ayam pedaging. Penelitian ini bertujuan menganalisis pengaruh aditif pakan tepung spirulina, nanokitosan cair, dan interaksinya terhadap status eritrogram pada ayam pedaging yang ditunjukkan dengan variabel jumlah eritrosit, kadar hemoglobin, persentase hematokrit, MCV, MCH, dan MCHC. Hewan uji yang digunakan adalah ayam pedaging sebanyak 24 ekor dengan kisaran bobot badan antara 118 – 144 g. Penelitian ini menggunakan rancangan acak lengkap faktorial yang terdiri atas dua perlakuan utama, yaitu tepung spirulina dan nanokitosan cair. Tepung spirulina terdiri atas 3 taraf, meliputi 0%, 3%, dan 6%. Nanokitosan cair terdiri atas 2 taraf, yaitu 0% dan 5%. Jumlah total perlakuan adalah 6 dengan 4 kali ulangan. Pengambilan sampel darah pada hewan uji dilakukan pada hari ke-41 dan dianalisis di Laboratorium Kesehatan Hewan, Semarang. Hasil penelitian menunjukkan tepung spirulina dan nanokitosan cair berpengaruh tidak nyata terhadap jumlah eritrosit, kadar hemoglobin, persentase hematokrit, MCV, MCH, dan MCHC. Kombinasi tepung spirulina dengan nanokitosan cair berpengaruh nyata terhadap kadar hemoglobin dan persentase hematokrit, namun berpengaruh tidak nyata terhadap jumlah eritrosit, MCV, MCH, dan MCHC. pada ayam pedaging. Kesimpulan penelitian ini adalah kombinasi tepung spirulina dengan nanokitosan cair dapat meningkatkan kadar hemoglobin dan persentase hematokrit tanpa diikuti dengan peningkatan jumlah eritrosit, MCV, MCH, dan MCHC pada ayam pedaging.

Kata Kunci: eritrosit, hematokrit, hemoglobin, MCV, MCH

ABSTRACT

Siska Rizkyawati Hartanto. 24020120120015. Broiler Erythrogram (*Gallus gallus domesticus*) after Feeding Spirulina Flour and Liquid Nanochitosan as Feed Additives. Under the guidance of Sunarno and Muhammad Anwar Djaelani.

The use of synthetic additives in feed can disrupt the process of hematopoiesis which results in a decrease in broiler erythrogram. Spirulina flour contains phenolic compounds and liquid nanocytosan contains constituent groups that play a role in increasing the erythrogram of broilers. This study aimed to analyze the effect of feed additives spirulina flour, liquid nanocytosan, and their interaction on the erythrogram status of broilers as indicated by the variables of erythrocyte count, hemoglobin content, hematocrit percentage, MCV, MCH, and MCHC. The test animals used were 24 broiler chickens with a body weight range between 118 - 144 g. This study used a randomized complete factorial design. This study used a randomized complete factorial design consisting of two main treatments, namely spirulina flour and liquid nanochitosan. Spirulina flour consisted of 3 levels, including 0%, 3%, and 6%. Liquid nanochitosan consisted of 2 levels, namely 0% and 5%. The total number of treatments was 6 with 4 replicates. Blood sampling of the test animals was conducted on the 41st day and analyzed at the Animal Health Laboratory, Semarang. The results showed that spirulina flour and liquid nanochitosan had no significant effect on erythrocyte count, hemoglobin content, hematocrit percentage, MCV, MCH, and MCHC. The combination of spirulina flour with liquid nanochitosan had a significant effect on hemoglobin content and hematocrit percentage but had no significant effect on erythrocyte count, MCV, MCH, and MCHC in broilers. The conclusion of this study was combination spirulina flour and liquid nanocytosan could increase hemoglobin levels and hematocrit percentage without being followed by an increase in the number of erythrocytes, MCV, MCH, and MCHC in broilers.

Keywords: erythrocyte, hematocrit, hemoglobin, MCV, MCH