



PENGARUH PERBEDAAN LEVEL KALSIMUM PADA PAKAN TERHADAP PROFIL DARAH ITIK PENGGING UMUR 33 MINGGU

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INTISARI

Itik Pengging dikenal memiliki produktivitas telur yang cukup tinggi, sehingga telah menjadi fokus pengembangan untuk memenuhi kebutuhan konsumsi masyarakat. Pemberian tingkat kalsium pada ayam petelur telah meningkat dalam beberapa dekade terakhir, diikuti dengan peningkatan produksi telur. Oleh karena itu, diperlukan penelitian untuk mengetahui apakah tren peningkatan kalsium serupa dapat diterapkan pada itik petelur. Sebelum menerapkan hal tersebut, penting untuk memastikan keamanannya melalui evaluasi profil darah. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pakan dengan level kalsium berbeda terhadap profil darah (total eritrosit, total leukosit, kadar hemoglobin, dan nilai hematokrit) Itik Pengging umur 33 minggu. Enam puluh Itik Pengging dipelihara 4 bulan dalam kandang baterai. Itik dibagi acak menjadi 3 kelompok (K, C3, dan C4, masing-masing 20 ekor) dan diulang 5 kali (4 ekor/ulangan). Setelah masa pemeliharaan, 36 Itik Pengging (12 ekor/kelompok) diambil sampel darahnya pada 3 waktu (pagi, siang, malam). Tiga jenis pakan dengan kadar kalsium berbeda (K: 3%, C3: 3,5%, C4: 4%) diberikan kepada ketiga kelompok perlakuan. Data yang normal dan homogen dianalisis dengan ANOVA faktorial, dilanjutkan dengan uji Duncan menggunakan IBM SPSS 29.0. Sementara itu, data yang tidak normal dan tidak homogen dianalisis dengan uji Kruskal-Wallis dan dilanjutkan dengan uji Mann-Whitney. Peningkatan kalsium dari 3% ke 3,5% berpengaruh nyata ($P < 0,05$) terhadap total eritrosit. Peningkatan level kalsium dari 3,5% ke 4% berpengaruh nyata ($P < 0,05$) terhadap total leukosit. Waktu *sampling* pagi hari berpengaruh nyata ($P < 0,05$) terhadap total eritrosit. Berdasarkan penelitian ini dapat disimpulkan bahwa pemberian level kalsium 3,5% dan 4% tidak berpengaruh negatif terhadap profil darah Itik Pengging.

Kata kunci: Itik pengging, kalsium itik, pakan kalsium dan profil darah itik

THE EFFECT OF VARYING CALCIUM LEVELS IN FEED ON THE BLOOD PROFILE OF 33-WEEK-OLD PENGGING DUCK

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ABSTRACT

Pengging ducks are developed to suit community consumption needs due to their great egg-laying production. In recent decades, there has been an increase in the administration of calcium levels to laying hens, which has been accompanied by a corresponding growth in egg output. Research is needed to discover if laying ducks can follow a similar calcium rise trend. Before implementation, it is essential to guarantee safety by conducting a blood profile assessment. The objective of this study is to examine the impact of varying calcium levels on the blood composition (including total erythrocytes, total leukocytes, hemoglobin levels, and hematocrit values) of 33-week-old Pengging ducks. This study investigates the effects of various calcium levels on the total number of red blood cells, the total number of white blood cells, levels of hemoglobin, and values of hematocrit in 33-week-old Pengging ducks. A total of sixty Pengging ducks were reared in battery cages for a duration of four months. The ducks were separated into three groups (K, C3, and C4), with each group consisting of 20 ducks. This division was done randomly. Additionally, the experiment was duplicated five times, with each replicate containing four ducks. Following the raising period, blood samples were obtained from 36 Pengging ducks, with 12 ducks per group, at three different time points (morning, afternoon, evening). Three treatment groups were given three types of feed with varying quantities of calcium (K: 3%, C3: 3.5%, C4: 4%). The data, which was both normal and homogenous, was analyzed using factorial ANOVA. Subsequently, Duncan's test was conducted using IBM SPSS 29.0. Non-normal and non-homogeneous data were evaluated using the Kruskal-Wallis test, followed by the Mann-Whitney test. The increase in calcium concentration from 3% to 3.5% had a statistically significant impact ($P < 0.05$) on the total number of erythrocytes. The increase in calcium concentration from 3.5% to 4% had a statistically significant impact ($P < 0.05$) on the total number of leukocytes. The time of day at which the sampling was conducted had a notable impact ($P < 0.05$) on the overall count of red blood cells. According to this study, it can be inferred that the injection of calcium levels at 3.5% and 4% did not adversely impact the blood profile of Pengging ducks.

Keywords: Calcium feed, duck blood profile, duck calcium, pengging duck