ABSTRAK

RESPON FISIOLOGIS AYAM BROILER (*Gallus gallus domesticus*) TERHADAP TRANSPORTASI: STUDI BERAT BADAN, HEMATOLOGI, DAN HORMONAL PADA RUTE KABUPATEN

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Unggas merupakan salah satu jenis ternak yang memiliki kontribusi signifikan dalam memenuhi kebutuhan daging nasional dimana transportasi merupakan bagian penting dapat menyebabkan dampak buruk bagi kesejahteraan dan kesehatan ayam. Tujuan penelitian ini adalah untuk mengetahui pengaruh transportasi melalui jalur kabupaten pada siang dan malam hari terhadap berat badan, gambaran hematologi, dan kadar kortisol ayam. Penelitian ini menggunakan 240 ekor ayam yang dianalisis untuk mengukur berat badan, parameter hematologi (eritrosit, hemoglobin, PCV, MCV, MCH, MCHC, TPP, fibrinogen, retikulosit, leukosit, heterofil, limfosit, eosinofil, monosit, dan basofil), serta kadar kortisol sebelum dan sesudah perlakuan transportasi. Ayam dibagi menjadi tiga kelompok, masing-masing terdiri dari 80 ekor: kontrol, transportasi siang, dan transportasi malam. Transportasi dilakukan menggunakan mobil bak terbuka pada rute kabupaten dari Fakultas Kedokteran Hewan menuju Pasar Desa Ngluwar, dengan rute yang dirancang melalui software AnyLogic dan waktu tempuh sekitar dua jam. Hasil penelitian menunjukkan bahwa transportasi siang dan malam menyebabkan penurunan berat badan yang signifikan. Selain itu, terdapat perubahan bermakna pada parameter hematologi, seperti peningkatan nilai MCV dan MCH, penurunan MCHC, serta peningkatan jumlah retikulosit dan TPP. Kadar kortisol juga meningkat setelah transportasi, yang menunjukkan adanya respon stres fisiologis. Transportasi pada siang hari cenderung menyebabkan stres lebih tinggi dibandingkan malam hari, ditunjukkan oleh kadar kortisol yang lebih tinggi dan perubahan hematologi yang lebih mencolok. Kesimpulannya, transportasi pada siang dan malam hari berdampak signifikan terhadap kondisi fisiologis ayam. Diperlukan strategi manajemen transportasi yang lebih baik untuk meminimalkan stres dan meningkatkan kesejahteraan ayam selama proses pengangkutan.

Kata kunci: ayam broiler, hematologi, rute kabupaten, stres, transportasi

ABSTRACT

PHYSIOLOGICAL RESPONSE OF BROILER CHICKENS (*Gallus gallus domesticus*) TO TRANSPORTATION: A STUDY ON BODY WEIGHT, HEMATOLOGY, AND HORMONAL RESPONSE ON DISTRICT ROUTES

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Poultry is one of the types of livestock that significantly contributes to meeting national meat demands, in which transportation plays an important role but can negatively impact the welfare and health of chickens. The aim of this study was to determine the effects of transportation via a district route during the day and night on body weight, hematological profiles, and cortisol levels in chickens. This study involved 240 chickens analyzed to measure body weight, hematological parameters (erythrocytes, hemoglobin, PCV, MCV, MCH, MCHC, TPP, fibrinogen, reticulocytes, leukocytes, heterophils, lymphocytes, eosinophils, monocytes, and basophils), and cortisol levels before and after transportation treatment. The chickens were divided into three groups of 80 each: control, daytime transportation, and nighttime transportation. The transport was conducted using an open-back truck along a district route from the Faculty of Veterinary Medicine to Ngluwar Village Market. The route was designed using AnyLogic software, with an estimated travel time of approximately two hours. The results showed that transportation during both day and night significantly reduced body weight. Furthermore, there were notable changes in hematological parameters, such as increased MCV and MCH values, decreased MCHC, and elevated levels of reticulocytes and TPP. Cortisol levels also increased post-transportation, indicating a physiological stress response. Daytime transportation tended to cause higher stress levels compared to nighttime, as evidenced by higher cortisol concentrations and more prominent changes in hematological profiles. In conclusion, transportation during both the day and night significantly affects the physiological condition of chickens. Therefore, improved transportation management strategies are necessary to minimize stress and promote animal welfare during the transport process.

Key words: chicken, district route, hematology, stress, transportation