

## ABSTRAK

### **STRES TRANSPORTASI AYAM BROILER (*Gallus gallus domesticus*): ANALISIS BOBOT BADAN, HEMATOLOGI, DAN KORTISOL PADA RUTE KOMBINASI JALAN NASIONAL DAN PROVINSI**

**Putri Ihsanul Mizan**

**21/481945/KH/11000**

Transportasi merupakan salah satu faktor yang dapat mempengaruhi kesejahteraan dan kondisi fisiologis ayam broiler. Stres akibat transportasi dapat menyebabkan perubahan bobot badan, gambaran hematologi, dan kadar hormon kortisol. Penelitian ini bertujuan untuk menganalisis pengaruh transportasi melalui kombinasi jalan nasional dan provinsi terhadap gambaran bobot badan, gambaran hematologi, dan kadar kortisol ayam broiler yang diangkut pada siang dan malam hari. Penelitian ini menggunakan 240 ayam broiler strain Cobb betina berumur 28 hari. Ayam diangkut menggunakan mobil bak terbuka dengan rute Fakultas Kedokteran Hewan Universitas Gadjah Mada menuju Armada Town Square Magelang dan kembali lagi ke FKH UGM selama 2 jam perjalanan. Sampel darah diambil sebanyak 2 ml sebelum dan sesudah transportasi untuk analisis hematologi dan kadar kortisol menggunakan metode ELISA. Data dianalisis menggunakan perangkat lunak Microsoft Excel dan SPSS Statistic 16. Hasil penelitian menunjukkan bahwa transportasi berpengaruh signifikan sebelum dan sesudah transportasi baik pada siang maupun malam hari pada beberapa parameter fisiologis termasuk bobot badan dan parameter hematologi. Penurunan bobot badan lebih besar terjadi pada transportasi malam dibandingkan siang hari. Selain itu, beberapa parameter hematologi seperti Mean Corpuscular Hemoglobin (MCH), Total Protein Plasma (TPP), leukosit, heterofil, dan limfosit mengalami perubahan signifikan ( $P < 0,05$ ). Transportasi siang hari menyebabkan anemia regeneratif ringan dengan karakteristik makrositik-normokromik. Sementara itu, transportasi malam hari menyebabkan anemia yang lebih jelas dengan karakteristik makrositik-hipokromik. Namun, kadar hormon kortisol tidak menunjukkan perbedaan signifikan ( $P > 0,05$ ). Kesimpulan dari penelitian ini adalah transportasi ayam broiler menyebabkan perubahan fisiologis yang signifikan, baik pada siang maupun malam hari. Transportasi malam hari cenderung menyebabkan stres yang lebih besar dibandingkan siang hari. Hal tersebut ditunjukkan dengan adanya perubahan bobot badan dan hematologi yang lebih mencolok. Hasil ini dapat menjadi pertimbangan dalam optimalisasi manajemen transportasi ayam broiler guna mengurangi dampak stres dan mempertahankan kualitas ayam.

Kata kunci: *stres transportasi, hematologi, ayam broiler, kortisol*

## ABSTRACT

### **TRANSPORTATION STRESS OF BROILER CHICKENS (*Gallus gallus domesticus*): BODY WEIGHT, HEMATOLOGY, AND CORTISOL ANALYSIS ON COMBINED NATIONAL AND PROVINCIAL ROAD ROUTES**

**Putri Ihsanul Mizan**  
**21/481945/KH/11000**

Transportation is one of the factors that can affect the welfare and physiological condition of broiler chickens. Stress due to transportation can cause changes in body weight, hematological features, and cortisol hormone levels. This study aims to analyze the effect of transportation through a combination of national and provincial roads on body weight, hematological features, and cortisol levels of broiler chickens transported during the day and night. This study used 240 28-day-old female Cobb strain broilers. Chickens were transported using a pickup truck with a route from Faculty of Veterinary Medicine, Gadjah Mada University to Armada Town Square Magelang and back to Faculty of Veterinary Medicine UGM for about 2 hours. Blood samples were taken before and after transportation for hematological analysis and cortisol levels using the ELISA method. Data were analyzed using Microsoft Excel and SPSS Statistic 16 software. The results showed that transportation had a significant effect before and after transportation both during the day and night on several physiological parameters including body weight and hematological parameters. The decrease in body weight was greater during night transportation than during the day. In addition, several hematological parameters such as Mean Corpuscular Hemoglobin (MCH), Total Plasma Protein (TPP), leukocytes, heterophils, and lymphocytes had significant changes ( $P < 0.05$ ). Daytime transport caused mild regenerative anemia with macrocytic-normochromic characteristics. Meanwhile, nighttime transport caused more pronounced anemia with macrocytic-hypochromic characteristics. However, cortisol hormone levels showed no significant difference ( $P > 0.05$ ). The conclusion of this study is that broiler transportation causes significant physiological changes, both during the day and night. Nighttime transportation tends to cause greater stress than daytime. This is indicated by more striking changes in body weight and hematology. These results can be taken into consideration in optimizing broiler transportation management to reduce the impact of stress and maintain chicken quality.

Key words: transportation stress, broiler chicken, hematology, cortisol.