

**PROFIL BIOKIMIA DARAH SAPI PERAH *MID* LAKTASI DENGAN
CURRENT FEEDING SYSTEM DI KELOMPOK TERNAK NGUDI
MAKMUR, KOPERASI SAPI MERAPI SEJAHTERA**

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INTISARI

Penelitian ini bertujuan untuk mengetahui status nutrisi sapi perah Peranakan *Friesian Holstein* fase *mid* laktasi dengan *current feeding system* berdasarkan profil biokimia darah. Penelitian dilaksanakan pada bulan Desember 2020 sampai Februari 2021 di Kelompok Ternak Ngudi Makmur, Koperasi Sapi Merapi Sejahtera, Sleman, Yogyakarta. Materi yang digunakan dalam penelitian ini adalah 12 ekor sapi perah PFH periode laktasi ke-1 sampai 4 fase *mid* laktasi. Pakan yang diberikan adalah sesuai dengan kebiasaan pemberian pakan yang dilakukan peternak sehari-hari (*current feeding sistem*, CFS). Variabel yang diamati meliputi komposisi bahan pakan, konsumsi nutrisi pakan, dan profil biokimia darah (kadar sel darah merah, sel darah putih, hemoglobin, glukosa, urea, kolesterol, albumin, dan total protein). Analisis sampel dilakukan di Laboratorium Ilmu Ternak Perah dan Industri Persusuan Fakultas Peternakan dan Laboratorium Penelitian dan Pengujian Terpadu (LPPT), Universitas Gadjah Mada, Yogyakarta. Data yang telah terkumpul dianalisis dengan metode deskriptif. Hasil penelitian menunjukkan data pemenuhan nutrisi berupa BK (+)2,01 kg BK/ekor/hari, PK (+)0,65 kg BK/ekor/hari, SK (+)0,75 kg BK/ekor/hari, dan TDN (+)1,66 kg BK/ekor/hari. Data hasil analisis profil biokimia darah meliputi kadar sel darah merah $5,94 \pm 0,47 \times 10^6/\mu\text{L}$, sel darah putih $9,28 \pm 2,2 \times 10^3/\mu\text{L}$, hemoglobin $9,42 \pm 0,61$ g/dL, glukosa $52,84 \pm 6,90$ mg/dL, urea $29,99 \pm 5,88$ mg/dL, albumin $3,53 \pm 0,29$ g/dL, kolesterol $172,42 \pm 45,18$ mg/dL, dan total protein $7,83 \pm 0,56$ g/dL. Profil biokimia darah meliputi sel darah putih, hemoglobin, glukosa, urea, albumin, kolesterol dan total protein berada pada kisaran normal, sedangkan kadar sel darah merah di atas kisaran normal. Berdasarkan hasil penelitian dapat disimpulkan bahwa nutrisi dalam pakan (*current feeding sistem*, CFS) yang diberikan oleh peternak telah memenuhi kebutuhan ternak dari keseimbangan nutrisinya.

Kata kunci: Status nutrisi, Profil biokimia darah, Peranakan *Friesian Holstein*, Sapi perah laktasi, Peternak rakyat

**BLOOD BIOCHEMICAL PROFILE OF DAIRY COWS IN THE MID-
LACTATION PERIOD WITH A CURRENT FEEDING SYSTEM
IN NGUDI MAKMUR DAIRY FARMERS GROUP,
SAPI MERAPI SEJAHTERA COOPERATIVE**

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ABSTRACT

This research aims to determine the nutritional status of Friesian Holstein Crossbreed in the mid-lactation period based on blood biochemical profile with a current feeding system. The study was conducted in Desember 2020 until Februari 2021 in Ngudi Makmur Dairy Farmers Group, Sapi Merapi Sejahtera Cooperative, Sleman, Yogyakarta. This study used 12 Friesian Holstein Crossbreeds in the 1 to 4 mid-lactation period. The cows were fed with forages and concentrates as the farmers usually offered (current feeding system). Data collected were the composition of feed ingredients, nutrient intakes and blood biochemical profile (red blood cell, white blood cell, hemoglobin concentration, glucose, urea, cholesterol, albumin, and total protein). Samples were analyzed in the Laboratory of Dairy Science and Milk Industry, Faculty of Animal Science and the Integrated Research and Testing Laboratory of Universitas Gadjah Mada, Yogyakarta. The data obtained were analyzed descriptively. The results of the study showed that nutrient fulfillment data of DM (+)2.01 kg DM/head/day, CP (+)0.65 kg DM/head/day, CF (+)0.75 kg DM/head/day, and TDN (+)1.66 kg DM/head/day. The results of blood biochemical profile analysis showed that red blood cell was $5.94 \pm 0.47 \times 10^6/\mu\text{L}$, white blood cell $9.28 \pm 2.2 \times 10^3/\mu\text{L}$, hemoglobin 9.42 ± 0.61 g/dL, glucose 52.84 ± 6.90 mg/dL, urea 29.99 ± 5.88 mg/dL, albumin 3.53 ± 0.29 g/dL, cholesterol 172.42 ± 45.18 mg/dL, and total protein 7.83 ± 0.56 g/dL. The blood biochemical profile consists of white blood cell, hemoglobin, glucose, urea, albumin, cholesterol, and total protein are in the normal range, while red blood cell is in high level. Based on the results, it can be concluded that the nutrients in the feed (current feeding system, CFS) that the farmers usually offered proves that their ration have met the lactating dairy cows requirement based on the nutrient balance.

Keywords: Nutritional status, Blood biochemical profile, Friesian Holstein Crossbreed, Lactating dairy cows, Dairy farmers.