

PROFIL BIOKIMIA DARAH DAN KADAR HORMON PROGESTERON INDUK KAMBING SAANEN PADA AWAL KEBUNTINGAN YANG DIBERI *FLUSHING* PAKAN TINGGI PROTEIN

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INTISARI

Penelitian ini bertujuan untuk mengetahui profil biokimia darah dan kadar hormon progesteron induk kambing Saanen pada awal kebuntingan yang diberi *flushing* pakan tinggi protein. Sepuluh ekor induk kambing Saanen berumur 4 tahun dengan BCS 2,5 - 3,0 dan pernah beranak sebanyak 2 kali, digunakan dalam penelitian ini. Induk dipelihara di Pusat Pengembangan Ternak (PPT) Fakultas Peternakan, Universitas Gadjah Mada. Induk diberi pakan konsentrat komersial dan hijauan dengan perbandingan 30:70. Induk dibagi menjadi dua kelompok yaitu kelompok kontrol (T0) tanpa *flushing*, sedangkan kelompok perlakuan (T1) diberi *flushing* bungkil kedelai (*Soybean meal*) sebesar 5% dari jumlah pakan total kebutuhan BK. Pengambilan sampel darah di *vena jugularis* dilakukan pada hari ke-50 kebuntingan. Kadar hormon progesteron dianalisis menggunakan metode *enzyme-linked immunosorbent assay* (ELISA). Parameter biokimia darah yang terdiri dari total protein, glukosa, kolesterol, dan *blood urea nitrogen* dianalisis menggunakan metode *photometric; atomic absorption spectroscopy* (AAS)-flame. Data dianalisis menggunakan uji statistik *Independent Sample T-test*. Hasil penelitian menunjukkan bahwa kadar hormon progesteron pada kelompok perlakuan ($7,69 \pm 1,47$ ng/mL) secara signifikan lebih tinggi dibandingkan kelompok kontrol ($3,89 \pm 1,08$ ng/mL) ($P < 0,05$). Parameter biokimia darah yang menunjukkan perbedaan signifikan ($P < 0,05$) yaitu, kadar total protein $8,77 \pm 0,66$ g/dL (perlakuan) dan $6,63 \pm 0,99$ g/dL (kontrol); kolesterol $67,52 \pm 5,97$ mg/dL dan $57,40 \pm 6,06$ mg/dL; serta BUN $14,48 \pm 1,65$ mg/dL dan $9,86 \pm 1,23$ mg/dL. Hasil penelitian ini menunjukkan bahwa pakan *flushing* tinggi protein meningkatkan kadar hormon progesteron dan parameter biokimia darah, yaitu total protein, kolesterol, dan *blood urea nitrogen*.

(Kata kunci : Biokimia darah, *Flushing* pakan, Kambing Saanen, Progesteron, dan Umur Kebuntingan)

BLOOD BIOCHEMICAL PROFILES AND PROGESTERONE HORMONE LEVELS OF SAANEN DOES IN EARLY GESTATION FED FLUSHED WITH HIGH PROTEIN

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ABSTRACT

This study aimed to determine the blood biochemical profile and progesterone hormone levels of Saanen does in early pregnancy fed a high-protein flushing diet. Ten Saanen does, aged approximately 4 years and with BCS of 2.5-3.0 and a record of two previous lambing, were used in this study. The does were housed at the Livestock Development Center (PPT), Faculty of Animal Science, Universitas Gadjah. They were fed a diet consisting of commercial concentrate and forage in a ratio 30:70. The does were divided into two treatments based on the administration of *soybean meal* (SBM) as a source of high-protein *flushing*. The control group (T0) without flushing, while the treatment group (T1) was provided with flushing feed equivalent to 5% Soybean meal flushing. Blood samples were collected through the jugular vein on 50 days of gestation (early gestation period). Progesterone hormone levels were determined using the *enzyme-linked immunosorbent assay* (ELISA) method. Blood biochemical parameters, including total protein, glucose, cholesterol, and blood urea nitrogen (BUN), were analyzed using the photometric method and atomic absorption spectroscopy (AAS)-flame. The data were analyzed using the Independent Sample T-test. The results showed that progesterone levels in the treatment group were significantly higher than those in the control group ($P < 0.05$), with values of 7.69 ± 1.47 ng/mL and 3.89 ± 1.08 ng/mL, respectively. Significant differences ($P < 0.05$) were also observed in blood biochemical parameters between the groups. Total protein levels were 8.77 ± 0.66 g/dL in the treatment group and 6.63 ± 0.99 g/dL in the control group. Glucose levels were 48.94 ± 3.89 mg/dL in the treatment group versus 46.18 ± 2.88 mg/dL in the control group. Cholesterol levels were 67.52 ± 5.97 mg/dL in the treatment group and 57.40 ± 6.06 mg/dL in the control group. Blood urea nitrogen levels were 14.48 ± 1.65 mg/dL in the treatment group and 9.86 ± 1.23 mg/dL in the control group. The result of this study showed that high-protein flushing feed increases progesterone hormone levels and improves blood biochemistry, including total protein, glucose, cholesterol, and blood urea nitrogen.

(Keywords : Blood biochemistry, *Flushing* feed, Saanen goat, Progesterone, and Gestation.