

PENGARUH SIKLUS ESTRUS TERHADAP *BLOOD METABOLITE* KAMBING PERSILANGAN SAANEN DENGAN PERANAKAN ETAWAH (SAPERA)

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh siklus estrus terhadap kadar *blood metabolite* kambing Sapera. Penelitian ini menggunakan induk kambing Sapera laktasi tidak bunting sebanyak 14 ekor yang telah dipilih berdasarkan umur ternak yaitu 2 hingga 4 tahun, *body condition score* (BCS) 3 dan parturisi 2. Kambing Sapera diberi pakan berupa *completed feed* sebanyak 2 kg/ekor/hari, dengan rincian konsentrat sebanyak 50%, kangkung (*Ipomoea aquatica*) sebanyak 25%, kulit ari kedelai (*Glycine max*) sebanyak 25%, dan air minum yang diberikan secara *ad libitum*. Pengambilan sampel darah dilakukan setelah pengamatan *vaginal smear*. Data yang diamati meliputi kadar total protein, kadar kolesterol, dan kadar glukosa. Konsentrasi total protein dianalisis dengan metode *biuret*, konsentrasi kolesterol dianalisis dengan metode *cholesterol oxidase-peroxidase aminoantipirin* (CHOD-PAP), dan konsentrasi glukosa dianalisis dengan metode *glucose oxidase-peroxidase aminoantipirin* (GOD-PAP). Data yang diperoleh kemudian dianalisis dengan *Independent Sample T-Test* untuk mengetahui pengaruh siklus estrus terhadap *blood metabolite*. Hasil penelitian menunjukkan bahwa rata-rata konsentrasi total protein, kolesterol, dan glukosa pada fase folikuler dalam darah kambing Sapera secara berturut-turut yaitu $5,28 \pm 1,98$ mg/dL, $134,04 \pm 25,11$ mg/dL, dan $61,92 \pm 7,34$ mg/dL. Rata-rata konsentrasi total protein, kolesterol, dan glukosa pada fase luteal dalam darah kambing Sapera secara berturut-turut yaitu $6,66 \pm 3,58$ mg/dL, $96,74 \pm 22,67$ mg/dL, dan $61,52 \pm 4,30$ mg/dL. Nilai signifikansi fase folikuler dan fase luteal terhadap konsentrasi total protein, kolesterol, dan glukosa secara berturut-turut yaitu 0,391, 0,013, dan 0,903. Berdasarkan hasil penelitian yang dilakukan diketahui bahwa siklus estrus tidak berpengaruh terhadap kadar total protein dan glukosa, namun berpengaruh terhadap kadar kolesterol.

Kata-Kata Kunci: *Blood Metabolite*, Kambing Sapera, Siklus Estrus.

THE EFFECT OF THE ESTROUS CYCLE ON BLOOD METABOLITE OF SAANEN AND PERANAKAN ETAWAH CROSSBREED GOATS (SAPERA)

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ABSTRACT

This study aims to determine the effect of the estrous cycle on blood metabolite levels of Sapera goats. This study used 14 non-pregnant lactating Sapera goats which were selected based on the age of the livestock, namely 2 until 4 years, body condition score (BCS) 3 and parturition 2. Sapera goats were fed a completed feed of 2 kg/head/day, with details of 50% concentrate, 25% kangkong (*Ipomoea aquatica*), 25% soybean hull (*Glycine max*), and the drinking water was provided ad libitum. Blood samples were taken after observing the vaginal smear. The data observed included total protein, cholesterol, and glucose levels. The total protein concentration was analyzed by the biuret method, the cholesterol concentration was analyzed by the cholesterol oxidase-peroxidase aminoantipyrin (CHOD-PAP) method, and the glucose concentration was analyzed by the glucose oxidase-peroxidase aminoantipyrin (GOD-PAP) method. The data obtained were then analyzed by Independent Sample T-Test to determine the effect of the estrous cycle on blood metabolites. The results showed that the average concentrations of total protein, cholesterol, and glucose in the follicular phase in the blood of Sapera goats were $5,28 \pm 1,98$ mg/dL, $134,04 \pm 25,11$ mg/dL, and $61,92 \pm 7,34$ mg/dL, respectively. The average concentrations of total protein, cholesterol, and glucose in the luteal phase in the blood of Sapera goats were $6,66 \pm 3,58$ mg/dL, $96,74 \pm 22,67$ mg/dL, and $61,52 \pm 4,30$ mg/dL, respectively. The significance values of the follicular phase and the luteal phase on the concentration of total protein, cholesterol, and glucose were 0.391, 0.013, and 0.903 respectively. Based on the results of the research conducted, it is known that the estrous cycle has no effect in total protein and glucose levels, but does affect in cholesterol levels.

Keywords: Blood Metabolite, Sapera Goat, Estrous Cycle.