

KONTRIBUSI EKSKRESI BASAL PURIN TERHADAP TOTAL EKSKRESI DERIVAT PURIN DALAM URIN DOMBA EKOR GEMUK DAN DOMBA EKOR TIPIS

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INTISARI

Penelitian ini bertujuan untuk mengetahui perbedaan kontribusi ekskresi basal purin terhadap total ekskresi derivat purin dalam urin domba ekor tipis (DET) dan domba ekor gemuk (DEG). Percobaan ini menggunakan design *Independent Student t-test* untuk membandingkan ekskresi derivat purin DET dan DEG. Pakan yang diberikan adalah jerami kacang tanah. Dalam penelitian ini digunakan DET dan DEG masing-masing 6 ekor. Penelitian dibagi menjadi 2 tahap penelitian yaitu tahap 1 penentuan ekskresi total derivat purin (DP) dalam urin dan tahap 2 penentuan ekskresi basal DP dalam urin. Tahap 1 dilakukan koleksi urin selama 24 jam dengan pemberian pakan secara *ad libitum* selama 8 hari. Tahap 2 dilakukan koleksi urin 24 jam saat ternak dipuaskan selama 5 hari. Selama tahap penelitian dilakukan juga koleksi pakan, sisa pakan, dan feses yang akan dianalisis untuk menentukan kandungan bahan kering dan bahan organik. Sampel urin yang diambil pada pemeliharaan akan dilakukan pengukuran derivat purin yaitu allantoin, asam urat dan xantin hipoxanthin. Hasil penelitian diperoleh ekskresi total DP dengan pemberian pakan secara *ad libitum* pada DET 376,67 dan DEG 265,67 $\mu\text{mol}/\text{W}^{0,75}/\text{hari}$ ($P < 0,05$), sedangkan untuk DP endogen pada DET sebesar 143 dan DEG 91 $\mu\text{mol}/\text{W}^{0,75}/\text{hari}$ ($P < 0,05$). Dapat diambil kesimpulan adanya kontribusi ekskresi basal purin terhadap total ekskresi DP dalam urin DET dan DEG, didapatkan model persamaan pada DET dan DEG yaitu $Y = 0,84X + (0,143W^{0,75}e^{-0,25X})$ dan $Y = 0,84X + (0,091W^{0,75}e^{-0,25X})$. Nilai efisiensi sintesis protein mikrobia yang dihasilkan pada DET dan DEG yaitu sebesar 7.33 dan 5.00 g N/kg/DOMR.

Kata kunci: Ekskresi, Derivat Purin, Domba Ekor Tipis, Domba Ekor Gemuk

CONTRIBUTION OF BASAL PURINE EXCRETION ON TOTAL EXCRETION OF PURINE DERIVATES IN URINE OF FAT TAIL SHEEP AND THIN TAIL SHEEP

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ABSTRACT

This study was aimed to examine contribution of on total excretion of purine derivates in the urine of fat tail sheep (FTS) and thin tail sheep (TTS). The Independent Student t-test was used to compare the excretion of purine derivates (PD) between FTS and TTS. The diet was peanut straw. This research used 6 male FTS and TTS. The experiment was divided into two periods. The first periods was collection period were ad libitum diet for 8 days to total excretion PD, and second periods collection fasted for 5 days to basal excretion PD. During the collection period the samples of feed, feed remains and feces were analyzed to determine the contain of dry matter and organic matter. The urine collected when sheep were fed ad libitum and fasted for measuring PD allantoin, uric acid dan xanthin hipoxanthin. Based on the research that excretion of total PD on the TTS and FTS were 376.67 and 265.67 $\mu\text{mol}/\text{W}^{0.75}/\text{day}$ ($P < 0,05$), while excretion of basal PD on the TTS and FTS were 143 and 91 $\mu\text{mol}/\text{W}^{0.75}/\text{day}$ ($P < 0,05$). It could be concluded there was contribution of basal purine excretion on the total excretion of PD in the urine of FTS and TTS, with equation model of contribution basal PD excretion on TTS and FTS were $Y = 0.84X + (0.143\text{W}^{0.75}e^{-0.25X})$ and $Y = 0.84X + (0.091\text{W}^{0.75}e^{-0.25X})$. Microbial protein synthesis efficiency for TTS were 7.33 and FTS were 5.00 g N/kg/DOMR.

Keywords: Excretion, Purine Derivates, Thin Tailed Sheep, Fat Tailed Sheep