Pengaruh Pemberian Campuran Tepung Sumber Tanin Terhadap Sintesis Protein Mikroba Rumen Domba Ekor Tipis

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan campuran sumber tanin dari daun akasia, nangka, dan mahoni terhadap ekskresi derivat purin (DP) dalam urin dan sintesis protein mikroba rumen pada domba ekor tipis. Penelitian ini menggunakan 12 ekor domba ekor tipis dengan rata-rata berat 20,58 kg dan umur 10 sampai 12 bulan. Campuran tanin diberikan pada kadar yang berbeda yaitu 0%, 1,5%, dan 3% dari volume rumen. Penelitian ini berlangsung selama 21 hari yang dibagi menjadi 14 hari periode adaptasi dan 7 hari periode koleksi. Sampel yang dikoleksi yaitu urin total, pakan, sisa pakan, dan sampel feses selama 24jam. Sampel urin dianalisis kadar derivat purin yang terdiri dari alantoin, asam urat, xantin, dan hipoxanthin. Sampel pakan diambil sebanyak 50gr dan sampel sisa pakan dan feses diambil 10% untuk analisis kadar bahan organik dan bahan kering yang kemudian digunakan untuk mengetahui Bahan Organik Tercerna (BOT) dan Bahan Organik Tercerna di Rumen (BOTR) yang kemudian data digunakan untuk mengetahui sintesis mikroba rumen. Data yang diperoleh dianalisis variansi pola searah dan apabila ada perbedaan antar nilai rerata dilanjutkan dengan uji *Duncan Multiple Range Test* (DMRT). Berdasarkan hasil penelitian diketahui bahwa penambahan campuran sumber tanin pada level 0%, 1,5%, dan 3% tidak berpengaruh nyata ($P<0.05$) terhadap kadar dan ekskresi DP, BOT, BOTR, EMNS, dan EMNS/BOTR pada domba ekor tipis. Dari hasil penelitian dapat diambil kesimpulan bahwa pemberian tanin dari campuran daun sumber tanin sampai 3% tidak mempengaruhi pasokan mikroba rumen terhadap ternak inangnya.

Kata kunci: tanin, campuran sumber tanin, mahoni, nangka, akasia, derivat purin, BOT, BOTR, EMNS, estimasi suplai N, domba ekor tipis,

Effect of Mixture of leaves powder as a source of tannins on Thin-tailed Sheep Rumen microbial protein synthesis

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ABSTRACT

This study aimed to figure out the effect of adding a mixture of tannin sources from acacia, jackfruit, and mahogany leaves to the excretion of purine derivatives (PD) in urine and rumen microbial protein synthesis in thin tailed sheep. This study used twelve thin tailed sheep with an average weight of 20.58 kg and an age of 10 to 12 months. The mixture of tannins were gave at various levels, namely 0%, 1.5%, and 3% of the rumen volume. This study lasted for 21 days which was divided into 14 days of adaptation period and 7 days of collection period. The samples collected were urine , feed, leftover feed, and feces for 24 hours. Urine samples were analyzed for purine derivates content that is allantoin, uric acid, xanthine, and hypoxanthine. The feed sample was taken as much as 50gr and 10% of the remaining feed and feces samples were taken. Feed overed and fecal samples were analyzed for organic matter and dry matter content which were then used calculate the Digested Organic Matter Intake (DOMI) and Digested Organic Matter in the Rumen (DOMR) which were then used to measure the estimation of rumen microbial nitrogen supply. The data obtained were analyzed for variance with a unidirectional pattern and if there was a difference between the mean values, it was continued with the Duncan Multiple Range Test (DMRT). Based on the results of the study, it found that the addition of a mixture of tannin sources at the levels of 0%, 1.5%, and 3% had no significant effect ($P<0.05$) on the purine derivates content and excretions as well as DOMI and DOMR,EMNS and EMNS/ DOMR in thin-tailed sheep. It could be concluded that the addition of a leaf mixture containg 3% tannin does not affect the supply of rumen microbes to the host animal.

Keywords: tannins, mahogany, jackfruit, acacia, purine derivatives, estimated N supply, thin-tailed sheep,