

ABSTRAK

Penggunaan pakan konsentrat berlebih berisiko ternak mengalami gangguan keseimbangan metabolisme rumen yang kemudian akan mengganggu proses metabolisme dan performa ternak. Flavonoid memiliki kemampuan memanipulasi kondisi rumen sehingga proses fermentasi dalam rumen berjalan optimal. Flavonoid ditemukan pada daun Waru (*Hibiscus tiliaceus*) dan daun Bambu (*Gigantochloa apus*), namun belum ada penelitian yang menggunakan kedua bahan tersebut secara bersamaan. Penelitian ini bertujuan mengkaji pengaruh suplementasi tepung daun Waru (TDW) dan daun Bambu (TDB) terhadap metabolisme energi dan performa domba lokal yang diberi pakan jerami padi amoniasi dan konsentrat. Tepung daun Waru dan daun Bambu dibuat dari bagian daun yang berwarna hijau yang dikeringkan di bawah sinar matahari dan digiling menjadi bentuk tepung. Penelitian ini menggunakan 16 ekor domba lokal jantan berumur 12–18 bulan dengan rata-rata bobot badan awal sebesar 27.00 ± 2.36 kg (koefisien keragaman 7.78%). Domba diacak secara sempurna sesuai rancangan acak lengkap (RAL) untuk menerima salah satu perlakuan berikut: P0 (jerami padi amoniasi + pakan konsentrat); P1 (P0 + 2,4 gram TDW); P2 (P0 + 1,8 gram TDW + 0,3 gram TDB); P3 (P0 + 1,2 gram TDW + 0,6 gram TDB) dengan 4 ulangan untuk setiap perlakuan. Konsentrat diberikan sebanyak 3% dari bobot hidup ternak dan jerami padi amoniasi secara *ad libitum* terkontrol. Data dianalisis menggunakan analisis variansi serta uji lanjut Beda Nyata Jujur (BNJ). Hasil analisis variansi menginformasikan bahwa suplementasi TDW dan TDB berpengaruh sangat nyata ($P < 0,01$) terhadap energi tercerna (ET), energi termetabolis (EM), retensi energi (RE), efisiensi RE terhadap KE, efisiensi RE terhadap ET, konversi pakan, kecepatan makan dan berpengaruh nyata ($P < 0,05$) terhadap pertambahan bobot badan harian (PBBH). Namun perlakuan tidak berpengaruh nyata ($P > 0,05$) terhadap konsumsi bahan kering dan konsumsi energi. Suplementasi 1.8 gram tepung daun Waru dan 0.3 gram tepung daun Bambu per kg konsentrat lebih baik dibandingkan perlakuan lainnya dalam meningkatkan metabolisme energi dan performa domba lokal.

Kata kunci: Metabolisme, energi, Konversi pakan, Flavonoid, Pertumbuhan domba

ABSTRACT

Excessive use of concentrate feed poses a risk of rumen imbalance, which can disrupt metabolism and animal performance. Flavonoids have the ability to stabilize rumen conditions, supporting effective fermentation processes. Flavonoids are found in Waru (*Hibiscus tiliaceus*) and bamboo leaves (*Gigantochloa apus*), but no research has yet evaluated the combined use of both. This study aimed to evaluate the effects of Waru leaf meal (WLM) and bamboo leaf meal (BLM) supplementation on energy metabolism and the performance of local sheep fed ammoniated rice straw and concentrate. Waru and bamboo leaves were harvested from green leaf parts, sun-dried, and ground into meal form. Sixteen male local sheep aged 12–18 months with an initial average body weight of 27.00 ± 2.36 kg (7.78% coefficient of variation) were allotted to four treatments in a completely randomized design (CRD): P0 (ammoniated rice straw + concentrate feed); P1 (P0 + 2.4 g WLM); P2 (P0 + 1.8 g WLM + 0.3 g BLM); and P3 (P0 + 1.2 g WLM + 0.6 g BLM), each treatment was replicated four times. Concentrate feed was provided at 3% of live weight, and ammoniated rice straw was available on a controlled ad libitum. Data were analyzed using analysis of variance followed by the honest significant difference (HSD) test. Analysis of variance indicated that WLM and BLM supplementation affected ($P < 0.01$) digestible energy (DE), metabolizable energy (ME), energy retention (ER), efficiency of ER to energy intake (EI), efficiency of ER to DE, feed conversion ratio (FCR), and consumption rate (CR) and ($P < 0.05$) average daily gain (ADG). However, the treatments did not affect ($P > 0.05$) dry matter intake or energy intake. Supplementation with 1.8 g WLM and 0.3 g BLM per kg concentrate was more effective than the other combinations in improving energy metabolism and performance of local sheep.

Keywords: Metabolism, energy, feed conversion, flavonoid, sheep growth