

KESEIMBANGAN NITROGEN PADA KAMBING KACANG YANG DIBERI RANSUM BASAL RUMPUT RAJA DAN PAKAN TAMBAHAN BERBASIS KANGKUNG KERING

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INTISARI

Kangkung merupakan hijauan sumber serat yang banyak ditemukan di Indonesia dengan jumlah yang melimpah. Jenis tanaman ini memiliki potensi sebagai hijauan pakan ternak berdasarkan kandungan nutrisi yang dimiliki. Penelitian ini bertujuan untuk mengetahui keseimbangan nitrogen pada kambing Kacang dengan perlakuan pakan basal rumput raja dan pakan tambahan berbasis kangkung kering. Penelitian dilaksanakan di Kelompok Wanita Tani Gama Sumber Rejeki Wonolagi, Ngler, Playen, Gunungkidul. Fokus penelitian pada pengamatan keseimbangan N kambing Kacang menggunakan metode *in vivo*. Perlakuan pakan berlangsung selama 2 bulan termasuk total koleksi selama 10 hari. Rumput raja diberikan secara *ad libitum* untuk semua perlakuan. Total 12 ekor kambing Kacang betina dengan berat badan $\pm 20,25$ kg dibagi menjadi 3 perlakuan pakan dengan ulangan 4 ekor kambing. Perlakuan pakan yaitu K (kontrol: kangkung kering 100%), P1 (kangkung kering 70%+bungkil sawit 30%) dan P2 (kangkung kering 70%+konsentrat 30%). Data hasil penelitian dianalisis statistik dengan menggunakan bantuan aplikasi SPSS versi 26.0 pola searah (*one-way analysis of variance*) dan apabila menunjukkan perbedaan nyata, dilanjutkan dengan Uji Duncan Multiple Range Test. Hasil penelitian menunjukkan bahwa konsumsi nutrisi BK, BO dan PK berbeda tidak nyata ($P>0,05$) dan konsumsi nitrogen ($P>0,05$), berbeda nyata pada ekskresi nitrogen feses ($P<0,05$), nitrogen tercerna ($P<0,05$) dan ekskresi nitrogen urin ($P<0,05$) antar perlakuan K, P1 dan P2, dan keseimbangan nitrogen berbeda tidak nyata ($P>0,05$). Nilai keseimbangan N dalam g/ekor/hari perlakuan K: $3,47\pm 0,67$, P1: $4,51\pm 1,18$ dan P2: $5,09\pm 1,67$. Keseimbangan N dalam $g/W^{0,75}$ /hari perlakuan K: $0,33\pm 0,06$, P1: $0,38\pm 0,09$ dan P2: $0,56\pm 0,17$. Berdasarkan hasil penelitian pemberian pakan tambahan berbasis kangkung kering mampu memberikan nilai keseimbangan N yang positif pada kambing Kacang.

(Kata kunci: Kangkung, Rumput Raja, Kambing Kacang, Keseimbangan N)

**NITROGEN BALANCE IN KACANG GOATS FEED WITH BASALT
RATION OF KING GRASS AND ADDITIONAL FEED BASED ON DRIED
WATER SPINACH**

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ABSTRACT

Water spinach is a forage source of fiber that is found in Indonesia in abundance. This type of plant has potential as forage for livestock based on its nutrient content. This study aims to determine the nitrogen balance in Kacang goats treated with basal feed of king grass and additional feed based on dried water spinach. The research was carried out in the Gama Sumber Rejeki Women Farmer Group, Wonolagi, Ngleri, Playen, Gunungkidul. The focus of the research was on observing the N balance of Kacang goats using the in vivo method. The feed treatment lasted for 2 months including the total collection for 10 days. King grass was given ad libitum for all treatments. A total of 12 female Kacang goats weighing \pm 20.25 kg were divided into 3 feed treatments with 4 goats replicated. The feed treatments were K: (control: 100% dried water spinach), P1 (70% dried water spinach + 30% oil palm cake) and P2 (70% dried water spinach + 30% concentrate). The research data were statistically analyzed using the SPSS version 26.0 application, one-way analysis of variance and if there was a significant difference, continued with Duncan Multiple Range Test. The results showed that the nutrient consumption of DM, OM and CP was not significantly different ($P > 0.05$) and nitrogen consumption ($P > 0.05$), significantly different in feces nitrogen excretion ($P < 0.05$), digested nitrogen ($P < 0.05$), urinary nitrogen excretion ($P < 0.05$) between K, P1 and P2 treatments and nitrogen balance were not significantly different ($P > 0.05$). The balance value of N in g/tail/day of treatment K: 3.47 ± 0.67 , P1: 4.51 ± 1.18 and P2: 5.09 ± 1.67 . Balance N in g/W0.75/day treatment K: 0.33 ± 0.06 , P1: 0.38 ± 0.09 and P2: 0.56 ± 0.17 . Based on the results of the study, supplementary feeding based on dried water spinach was able to provide a positive N balance value in Kacang goat.

(Keywords: Water spinach, King Grass, Peanut Goat, N Balance)