Keseimbangan Nitrogen Kambing Kacang Betina yang Diberi Pakan Basal dengan Penambahan Tepung Rumput
Laut Palisada perforata
Muhammad Attala Gibran, Prof. Dr. Ir. Kustantinah, DEA.
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# KESEIMBANGAN NITROGEN KAMBING KACANG BETINA YANG DIBERI PAKAN BASALDENGAN PENAMBAHAN TEPUNG RUMPUT LAUT *Palisada perforata*

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## INTISARI

Penelitian ini bertujuan untuk mengkaji pengaruh penambahan tepung rumput laut *Palisada perforata* terhadap keseimbangan nitrogen pada kambing Kacang betina. Sebanyak 12 ekor kambing Kacang betina dengan bobot badan rata-rata 25,34 ± 4,42 kg digunakan dalam penelitian ini. Ternak dibagi ke dalam tiga kelompok perlakuan berdasarkan Rancangan Acak Kelompok (RAK), yaitu: pakan basal tanpa tambahan rumput laut (P0), pakan basal dengan tambahan tepung *P. perforata* 2,5% BO (P1), dan pakan basal dengan tambahan tepung *P. perforata* 5,0% BO (P2). Variabel yang diamati meliputi konsumsi nutrien (BK, BO, PK, dan nitrogen), ekskresi nitrogen (feses dan urin), nitrogen tercerna, retensi nitrogen, *Net Nitrogen Utilization* (NNU), serta *Biological value* (BV). Hasil penelitian menunjukkan bahwa penambahan tepung rumput laut tidak memberikan pengaruh nyata ($p>0,05$) terhadap konsumsi nitrogen, nitrogen tercerna, dan retensi nitrogen. Namun, seluruh perlakuan menunjukkan nilai retensi nitrogen yang positif. Terdapat perbedaan nyata ($P<0,05$) pada ekskresi nitrogen urin baik dalam satuan g/ekor/hari maupun g/kgBB0,75/hari, di mana perlakuan P2 (5% BO) menunjukkan nilai ekskresi nitrogen urin terendah, sementara P1 (2,5% BO) justru menunjukkan nilai tertinggi dibandingkan kontrol (P0). Nilai NNU pada semua perlakuan tergolong tinggi, berkisar antara 89,05% hingga 91,23%. Disimpulkan bahwa pemberian tepung rumput laut *Palisada perforata* hingga level 5% BO mampu mempertahankan keseimbangan nitrogen yang positif dan cenderung meningkatkan efisiensi penggunaan protein pada kambing Kacang betina melalui penurunan ekskresi nitrogen urin.

(Kata kunci: Kambing Kacang betina, *Palisada perforata*, Keseimbangan nitrogen, Retensi nitrogen, *Net Nitrogen Utilization, Biological value*)

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# NITROGEN BALANCE OF FEMALE KACANG GOATS FED A BASAL DIET SUPPLEMENTED WITH *Palisada perforata* SEAWEED MEAL

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## ABSTRACT

This study aimed to examine the effect of *Palisada perforata* seaweed meal supplementation on nitrogen balance in female Kacang goats. A total of 12 female Kacang goats with an average body weight of 25.34 ± 4.42 kg were used in this study. The livestock were divided into three treatment groups based on a Randomized Block Design (RBD), namely: basal feed without seaweed supplementation (P0), basal feed supplemented with 2.5% OM *P. perforata* meal supplementation (P1), and basal feed supplemented with 5.0% OM *P. perforata* meal supplementation (P2). The variables observed included nutrient consumption (DM, OM, CP, and nitrogen), nitrogen excretion (feces and urine), digestible nitrogen, nitrogen retention, Net Nitrogen Utilization (NNU), and Biological value (BV). The results showed that the addition of seaweed meal did not have a significant effect ($p>0.05$) on nitrogen consumption, digestible nitrogen, and nitrogen retention. However, all treatments showed positive nitrogen retention values. There was a significant difference ($P<0.05$) in urinary nitrogen excretion in both g/head/day and g/kgBW0.75/day units, where treatment P2 (5% BO) showed the lowest urinary nitrogen excretion value, while P1 (2.5% BO) showed the highest value compared to the control (P0). The NNU value in all treatments was high, ranging from 89.05% to 91.23%. It was concluded that administering *Palisada perforata* seaweed meal up to a level of 5% BO was able to maintain a positive nitrogen balance and tended to increase the efficiency of protein utilization in female Kacang goats by reducing urinary nitrogen excretion.

(Key words: Female Kacang goat, *Palisada perforata*, Nitrogen balance, Nitrogen retention, Net Nitrogen Utilization, Biological value)