

**PENGARUH SUBSTITUSI SUMBER PROTEIN BUNGKIL KEDELAI  
OLEH DAUN *Calliandra calothyrsus* TERHADAP  
KONSUMSI DAN KECERNAAN NUTRIEN  
PADA KAMBING KACANG BETINA**

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**INTISARI**

Penelitian ini bertujuan untuk mengetahui penggunaan leguminosa *Calliandra calothyrsus* sebagai substitusi pakan sumber protein bungkil kedelai terhadap konsumsi dan pencernaan nutrisi pada kambing kacang. Penelitian menggunakan 12 ekor kambing kacang betina dengan umur rata-rata 2 - 3 tahun dengan berat rata-rata 16,54±3,57 kg. Perlakuan terbagi atas tiga kelompok (K, P1, dan P2), masing-masing perlakuan terdiri atas empat ekor ternak. Perlakuan K adalah pemberian bungkil kedelai sesuai kebutuhan protein dan rumput odot secara *ad libitum* sebagai sumber serat, perlakuan P1 adalah pemberian bungkil kedelai yang disubstitusi oleh daun *Calliandra calothyrsus* dengan perbandingan 50:50 dari kebutuhan protein dan rumput odot secara *ad libitum* sebagai sumber serat, dan P2 adalah pemberian daun *Calliandra calothyrsus* sesuai kebutuhan protein dan rumput odot secara *ad libitum* sebagai sumber serat. Hasil penelitian menunjukkan substitusi sumber protein meningkatkan konsumsi nutrisi. Konsumsi nutrisi BK, BO, PK, LK, SK, BETN, dan TDN perlakuan K adalah 64,18±2,76; 52,86±2,27; 10,73±0,43; 1,14±0,04; 14,82±0,67; 26,16±1,13; dan 37,48±1,58 g/kg BB<sup>0,75</sup>/hari, perlakuan P1, 68,43±2,50; 57,36±2,11; 10,76±0,36; 1,17±0,07; 15,20±0,56; 30,23±1,14; dan 41,02±1,52 g/kg BB<sup>0,75</sup>/hari, perlakuan P2, 73,34±2,05; 62,54±1,73; 10,36±0,39; 1,41±0,03; 16,23±0,47; 34,71±0,94; dan 44,70±1,21 g/kg BB<sup>0,75</sup>/hari. Substitusi sumber protein menurunkan koefisien cerna nutrisi. Koefisien cerna BK, BO, PK, LK, SK, BETN, dan TDN perlakuan K adalah 84,81±0,86; 87,43±0,74; 90,91±0,78; 80,11±1,81; 84,71±1,34; 87,75±0,44; dan 73,73±0,57%, perlakuan P1, 80,94±1,67; 83,23±1,54; 84,44±2,02; 67,88±1,04; 78,62±0,82; 85,70±2,18; dan 71,22±1,26%, perlakuan P2, 78,80±0,49; 81,11±0,37; 79,74±0,82; 73,47±5,43; 75,17±1,31; 84,71±0,88; dan 71,17±0,28%. Berdasarkan hasil penelitian daun *Calliandra calothyrsus* dapat menggantikan pakan sumber protein bungkil kedelai, substitusi paling baik adalah pada perlakuan P2.

Kata kunci: Kambing kacang betina, Bungkil kedelai, Daun *Calliandra calothyrsus*, Konsumsi nutrisi, Pencernaan nutrisi, Jumlah nutrisi tercerna, *Total digestible nutrients*.

**EFFECT OF SOYBEAN MEAL SUBSTITUTION AS PROTEIN SOURCE  
BY *Calliandra calothyrsus* LEAF ON FEED INTAKE  
AND NUTRIENT DIGESTIBILITY OF  
KACANG GOAT**

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**ABSTRACT**

This study was conducted to find out the utilization *Calliandra calothyrsus* leaf as soybean meal substitute on feed intake and nutrient digestibility of kacang does. This study used 12 kacang does aged 2 - 3 years with body weight average  $16.54 \pm 3.57$  kg. The treatment was divided into 3 groups (K, P1, and P2), each group were consisted of 4 does. Does in treatment K fed with soybean meal according to the protein requirement and dwarf napier grass as the fiber source *ad libitum*, treatment P1 fed with soybean meal and *Calliandra calothyrsus* leaf with 50:50 ratio according to the protein requirement and dwarf napier grass as the fiber source *ad libitum*, and treatment P2 fed with *Calliandra calothyrsus* leaf as the main protein source according to the protein requirement and dwarf grass as the fiber source *ad libitum*. The result of this study showed that protein source substitution increased feed intake of DM, OM, EE, CF, NFE, and TDN. Feed intake of DM, OM, CP, EE, CF, NFE, and TDN in the treatment K respectively are  $64.18 \pm 2.76$ ;  $52.86 \pm 2.27$ ;  $10.73 \pm 0.43$ ;  $1.14 \pm 0.04$ ;  $14.82 \pm 0.67$ ;  $26.16 \pm 1.13$ ; dan  $37.48 \pm 1.58$  g/kg  $BW^{0.75}$ /day, treatment P1,  $68.43 \pm 2.50$ ;  $57.36 \pm 2.11$ ;  $10.76 \pm 0.36$ ;  $1.17 \pm 0.07$ ;  $15.20 \pm 0.56$ ;  $30.23 \pm 1.14$ ; dan  $41.02 \pm 1.52$  g/kg  $BW^{0.75}$ /day, treatment P2,  $73.34 \pm 2.05$ ;  $62.54 \pm 1.73$ ;  $10.36 \pm 0.39$ ;  $1.41 \pm 0.03$ ;  $16.23 \pm 0.47$ ;  $34.71 \pm 0.94$ ; dan  $44.70 \pm 1.21$  g/kg  $BW^{0.75}$ /day. Protein source substitution decreased the digestibility of DM, OM, CP, EE, CF, NFE, and TDN. Digestibility of DM, OM, CP, EE, CF, NFE, and TDN in the treatment K respectively are  $84.81 \pm 0.86$ ;  $87.43 \pm 0.74$ ;  $90.91 \pm 0.78$ ;  $80.11 \pm 1.81$ ;  $84.71 \pm 1.34$ ;  $87.75 \pm 0.44$ ; dan  $73.73 \pm 0.57\%$ , treatment P1,  $80.94 \pm 1.67$ ;  $83.23 \pm 1.54$ ;  $84.44 \pm 2.02$ ;  $67.88 \pm 1.04$ ;  $78.62 \pm 0.82$ ;  $85.70 \pm 2.18$ ; dan  $71.22 \pm 1.26\%$ , treatment P2,  $78.80 \pm 0.49$ ;  $81.11 \pm 0.37$ ;  $79.74 \pm 0.82$ ;  $73.47 \pm 5.43$ ;  $75.17 \pm 1.31$ ;  $84.71 \pm 0.88$ ; dan  $71.17 \pm 0.28\%$ . According to this study *Calliandra calothyrsus* leaf able to substitute soybean meal as protein source, the best result was found in the treatment P2.

Keywords: Kacang does, Soybean meal (SBM), *Calliandra calothyrsus*, Feed intake, Digestibility, Total digestible nutrients.