

**NERACA NITROGEN PADA SAPI BALI DAN  
PERANAKAN ONGOLE YANG DIBERI PAKAN  
CAMPURAN RUMPUT RAJA DAN DEDAK HALUS**

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**INTISARI**

Penelitian dilakukan untuk mengetahui nilai neraca nitrogen pada sapi Bali jantan dan PO jantan yang diberi pakan campuran rumput Raja dan dedak halus. Empat ekor sapi Bali dan empat ekor sapi PO yang berumur antara 4-4,5 tahun, berat badan rata-rata 412 kg di tempatkan pada kandang metabolisme. Rumput Raja umur 49 hari dan dedak halus diberikan dengan perbandingan 70:30 secara *voluntary intake* terendah pada masing-masing spesies. Air minum diberikan *ad libitum*. Penelitian meliputi periode adaptasi selama 11 hari dan periode koleksi selama 10 hari. Konsumsi pakan dicatat setiap hari. Pada periode koleksi sampel pakan dan sampel sisa pakan dianalisa bahan kering (BK) dan kadar nitrogen (N). Produksi total feses dan urin di catat dan diambil sampelnya setiap hari. Sampel feses dianalisis BK dan kadar N, sedangkan urine dianalisis kadar N. Neraca N dihitung berdasarkan jumlah konsumsi N dan jumlah N yang diekskresikan melalui feses dan urin. Data yang diperoleh dianalisa statistik menggunakan uji-t. Hasil penelitian menunjukkan bahwa konsumsi BK, konsumsi N, ekskresi N melalui feses dan neraca N pada sapi Bali dan sapi PO jantan menunjukkan perbedaan yang nyata ( $P < 0,01$ ). Ekskresi N lewat urin tidak berbeda nyata ( $P < 0,05$ ). Besarnya konsumsi BK, konsumsi N, ekskresi N lewat feses, ekskresi N lewat urin dan neraca N pada sapi Bali jantan berturut-turut adalah 70,18 g/kg BBM/hari, 0,89 g/kg BBM/hari, 0,35 g/kg BBM/hari, 0,57 g/kg BBM/hari dan -0,03 g/kg BBM/hari. Sedangkan pada sapi PO adalah 81,94 g/kg BBM/hari, 1,17 g/kg BBM/hari, 0,54 g/kg BBM/hari, 0,55 g/kg BBM/hari dan 0,08 g/kg BBM/hari. Nilai neraca N pada sapi Bali lebih rendah dari sapi PO.

Kata Kunci : Neraca N, Sapi Bali, Sapi Peranakan Ongole, Rumput Raja, Dedak Halus

**NITROGEN BALANCE OF BALI CATTLE AND  
ONGOLE CROSSBRED CATTLE FED WITH  
KING GRASS AND RICE-BRAN MIXED**

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**ABSTRACT**

The experiment was conducted to determine the values of nitrogen (N) balance of male Bali cattle and male Ongole Crossbred (OC) cattle fed with King Grass and rice-bran mixed. Four Bali cattle and OC cattle of about 4 - 4,5 years old and body weight average 412121 kg were used in this experiment. The cattle were placed in individual metabolism cages, fed with King Grass 49 days age and rice-bran on the proportion 70:30 dry matter (DM) on the minimum voluntary intake on respectively species. Water was supplied *ad libitum*. This experiment was conducted in adaptation period for 11 days and collection period for 10 days. Feed intake was recorded everyday. At the collection period the feed and refused feed samples were collected for DM and nitrogen contents analysis. The amount of feces and urine were recorded everyday. The DM and N contents of feces samples were analyzed, while urine sample were analyzed for N content. Nitrogen Balance value were calculated based on N consumption and N excreted through feces and urine. The data were tested using t-test. The results of experiment showed that the differences of dry matter intake, N intake, N excreted through feces and value of N balance were significantly different ( $P < 0,01$ ). The N excreted through urine was not significant ( $P < 0,05$ ). The amount of dry matter intake, N intake, N excreted through feces, N excreted through urine and N balance. The respect of Bali cattle are 70.18, 0.89, 0.35, 0.57 and -0.03 g/kg metabolic body weight/day. While for Ongole Crossbred cattle 81.94, 1.17, 0.54, 0.55 and 0.08 g/kg metabolic body weight/day. The value of N balance for Bali cattle lower than Ongole Crossbred cattle

Key words: Nitrogen Balance, Bali Cattle, OC Cattle, King Grass, Rice-Bran.