PENGARUH PEMBERIAN PAKAN CAMPURAN RUMPUT GAJAH DAN DEDAK HALOS (70:30) TERHADAP SINTESIS PROTEIN MIKROBIA SAPI PERANAKAN ONGOLE

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh pemberian pakan campuran rumput Gajah dan dedak halus (70:30) terhadap sintesis protein mikrobia sapi Peranakan Ongole (PO). Ternak yang digunakan adalah 4 ekor sapi PO jantan berumur antara 5,5-6 tahun dan berat badan sekitar 440kg. Penelitian dibagi menjadi dua tahap yaitu tahap pertama pemberian pakan tunggal rumput Gajah dan tahap kedua pakan campuran rumput Gajah dan dedak halus (70:30). Setiap tahap terdiri 2 periode yaitu periode adaptasi selama 11 hari dan periode koleksi selama 8 hari. Pakan diberikan menurut level *voluntary intake* terendah. Selama periode koleksi diambil sampel pakan, sisa pakan, feses untuk dianalisis kadar BK, BO, PK dan SK dan sampel urin dianalisis kadar allantoin dan asam urat. Data yang diambil meliputi konsumsi nutrien, ekskresi allantoin, asam urat, derivat purin (DP), estimasi N mikrobia (ENM) dan sintesis protein mikrobia (SPM) kemudian dilakukan analisis *t-test*. Hasil penelitian menunjukkan konsumsi BK, BO, dan ekskresi asam urat sapi yang diberikan pakan tunggal dibandingkan pemberian pakan campuran tidak menunjukkan perbedaan (63,89 vs 66,71g/kg BBM/hari; 55,14 vs 57,49g/kg BBM/hari; 11,00 vs 10,02mmol/hari). Ekskresi allantoin sapi dengan pemberian pakan tunggal, lebih tinggi dibandingkan pemberian pakan campuran (P<0,05; 82,07 vs 71,38mmol/hari). Konsumsi PK dan SK sapi dengan kedua perlakuan pakan menunjukkan perbedaan sangat nyata (6,76 vs 7,45g/kg BBM/hari; 21,77 vs 1.8,88g/kg BBM/hari). Ekskresi DP, ENM, dan SPM sapi dengan pemberian pakan tunggal, secara nyata lebih tinggi daripada pada pemberian pakan campuran (93,07 vs 81,40mmol/hari; 68,85 vs 58,74g N/hari; 33,42 vs 24,55g N/kg BOTR). Berdasarkan hasil tersebut dapat disimpulkan bahwa pemberian pakan campuran rumput Gajah dan dedak halus (70:30) tidak mampu meningkatkan nilai sintesis protein mikrobia sapi PO.

Kata kunci : Sintesis Protein Mikrobia, Sapi Peranakan Ongole, Rumput Gajah, Dedak Halus.

THE EFFECT OF ELEPHANT GRASS AND RICE BRAN (70:30) ON MICROBIAL PROTEIN SYNTHESIS OF GNGOLE CROSSBRED CATTLE

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ABSTRACT

The experiment was conducted to determine the effect of Elephant grass and rice bran (70:30) on microbial protein synthesis of Ongole Crossbred (OC) cattle. Four male OC cattle of about 5,5-6 years old and body weight average 440kg used in this experiment. The experiments were ordered in two stages. Single feed (Elephant grass) in the first stage while mix feed (Elephant grass and rice bran) in the second stage. Every stages was consisted of 11 days adaptation and 8 days of collection periods. Feed was supplied with lowest voluntary intake level. During collection period, feedstuff samples as well as, refusal feed and feces samples were collected everyday for dry matter (DM), organic matter (OM), crude protein (CP), and crude fiber (CF). Urine samples were analyzed for allantoin and uric acid contents. The data of nutrient consumption, excretion of allantoin, uric acid, and purin derivative (PD) as well as microbial N estimation (MNE) and microbial protein synthesis (MPS) were analyzed using t-test. The result of experiment showed that DM, OM intake and uric acid excretion of the cattle received the single feed compared with the cattle received mix feed were not significantly different (63.89 vs 66.71g/kg $W^{0,75}$/day; 55.14 vs 57.49g/kg $W^{0,75}$/day; 11.00 vs 10.02mmol/day). Allantion excretion of the cattle fed by the single feed was higher than that of the cattle fed by the mixed feed (82.07 vs 71.38mmol/day; PC0.05). CP and CF intake of the both groups of the cattle were different significantly (6.76 vs 7.45g/kg $W^{0,75}$/day; 21.77 vs 18.88g/kg $W^{0,75}$/day). PD excretion, MNE and MPS of the cattle received single feed significantly higher (P<0.01) than that of the cattle received mixed feed (93.07 vs 81.40mmol/day; 68.85 vs 58.74g N/day; and 33.42 vs 24.55g N/kg DOMR). It could be concluded that mixed Elephant grass and rice bran overed to the OC cattle, was not able to increased microbial protein synthesis.

Key Word : Microbial Protein Synthesis, Ongole Crossbred Cattle, Elephant Grass, Rice Bran