

EVALUASI SINTESIS PROTEIN MIKROBIA PADA SAPI PERANAKAM
ONGOLE (PO) JANTAN DI KANDANG KELOMPOK
SIDO RUKUN JOGOTIRTO SLEMAN

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INTISARI

Sebelas ekor sapi Peranakan Ongole (PO) jantan berumur antara 2-4 tahun dengan berat badan 250-450kg yang dipelihara di kandang kelompok SIDO RUKUN, Jogotirto, Sleman dan diberi pakan alami (rumput Gajah, rumput lapangan, jerami padi, jerami jagung, jerami kacang tanah, Glirisidia, rumput Raja, konsentrat, onggok, ampas tahu, dedak halus) digunakan dalam penelitian untuk mengetahui suplai protein mikrobia. Air minum diberikan secara *ad libitum*. Koleksi pakan dan sisa pakan dilakukan selama 2 minggu. Koleksi urin dilakukan secara *spot sampling* bersamaan pada saat koleksi pakan dan sisa pakan pada hari ke 4 selama 3 hari, tiap pagi (06.00-09.00) dan sore (15.00-18.00) hari. Sampel pakan dan sisa pakan dianalisis kadar bahan kering (BK), bahan organik (BO) dan protein kasar (PK), sedangkan sampel urin dianalisis kadar kreatinin dan derivat purin (DP) yang terdiri dari allantoin dan asam urat. Indeks DP:kreatinin digunakan untuk menghitung total ekskresi DP dan selanjutnya digunakan untuk memprediksi sintesis protein mikrobia. Data yang diperoleh dihitung rata-rata dan standar deviasinya. Dari hasil penelitian diperoleh rerata konsumsi BK, BO dan PK pakan berturut-turut sebesar 55,82±31,62; 49,96±28,60 dan 2,80±0,59g/kg BBM/hari. Rerata kadar kreatinin, allantoin, asam urat, ekskresi total DP dan sintesis protein mikrobia berturut-turut sebesar 4,98±1,04; 5,16±2,08; 0,72±0,28; 88,9±10,46mmol/l dan 28,39±10,46g N/hari. Dari data yang ada dapat diambil kesimpulan bahwa pakan yang diberikan peternak di kandang kelompok SIDO RUKUN belum memenuhi kebutuhan dalam mensuplai protein mikrobia.

Kata kunci : Evaluasi, Sintesis Protein Mikrobia,
Sapi PO, Kandang Kelompok

EVALUATION OF MICROBIAL PROTEIN SYNTHESIS ON ONGOLE
CROSSBRED CATTLE AT SIDO RUKUN FARMER GROUP
JOGOTIRTO SLEMAN

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ABSTRACT

Eleven male Ongole Crossbred cattle, 2-4 years age weight 250-450kg at SIDO RUKUN farmer group, Jogotirto, Sleman and fed with natural feed (Elephant grass, field grass, rice straw, corn straw, peanut straw, Gliricidaeae, King grass, concentrate, cassava, soy bean residu, rice bran) were used in this experiment to determine microbial protein supply. Water was supplied *ad libitum*. Feed and refused feed samples were collected for 2 weeks. Urine sample collection were taken by spot sampling together with the collection of feed samples on 4th day for 3 days, every morning (06.00-09.00) and afternoon (15.00-18.00). Feed samples were analyzed for dry matter (DM), organic matter (OM) and crude protein (CP), and urine samples were analyzed for creatinin and purine derivatives (PD) including allantoin and uric acid content. Index PD:creatinin was used to calculate total PD excretion and microbial protein supply. Data was calculated for the average and standard deviation. The result showed that the average consumption of DM, OM and CP were 55,82±31,62; 49,96±28,60 and 2,80±0,59g/kg W^{0,75}/day, respectively the creatinin, allantoin, uric acid, total PD excretion and microbial protein supply were 4,98±1,04; 5,16±2,08; 0,72±0,28; 88,9±10,46mmol/l and 28,39±10,46g N/day. It was concluded that Ongole crossbred cattle fed with common feed given by farmers at SIDO RUKUN farmer group was not enough to fulfill the need of microbial protein supply.

Key words: Evaluation, Microbial Protein Synthesis,
Ongole Crossbred Cattle, Farmer Group.