

EVALUASI KANDUNGAN TANIN DALAM BEBERAPA BAHAN PAKAN UNTUK PENINGKATAN EFISIENSI KECERNAAN *IN VITRO* NUTRIEN PADA DOMBA EKOR TIPIS

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INTISARI

Beberapa bahan pakan seperti daun nangka (*Artocarpus heterophyllus*), sengon (*Paraserianthes falcataria*) dan kaliandra (*Calliandra calothyrsus*) mengandung tanin yang dapat digunakan sebagai agensia pemroteksi protein dalam pakan dari degradasi mikrobia dalam rumen. Penelitian ini bertujuan untuk mengetahui pengaruh penambahan ketiga bahan pakan tersebut terhadap pencernaan protein pakan di dalam rumen secara *in vitro*. Pakan terdiri dari 60% rumput odot (*Pennisetum purpureum* cv. *Mott*) dan 40% bekatul dengan level penambahan bahan pakan yang mengandung tanin sebesar 0%, 2%, 4%, dan 6% dari bahan kering (BK) pakan. Variabel yang diamati adalah pencernaan bahan kering (KcBK), pencernaan bahan organik (KcBO), pencernaan protein kasar (KcPK), dan nilai pH. Data yang diperoleh dianalisis secara faktorial dan dilanjutkan dengan *Duncan's Multiple Range Test* (DMRT) untuk mengetahui perbedaan di antara perlakuan. Hasil penelitian menunjukkan penambahan daun nangka, sengon dan kaliandra sebagai bahan pakan sumber tanin memberikan pengaruh nyata ($P < 0,05$) pada substrat. Pencernaan protein kasar yang dihasilkan yakni 51,52%, 51,44% dan 49,25% lebih rendah dibanding kontrol (64,35%); nilai pencernaan bahan kering 59,73%, 54,35%, 48,88% dibanding kontrol (68,38%); nilai pencernaan bahan organik 65,66%, 54,58%, 47,78% dibanding kontrol (74,87%). Dari hasil penelitian dapat disimpulkan bahwa penambahan tanin dapat menurunkan KcBK, KcBO, KcPK, dan nilai pH. Dari hasil itu dapat disimpulkan sumber tanin yang mampu mengikat protein paling kuat adalah daun kaliandra dengan level 6%.

Kata kunci: Daun nangka, daun sengon, daun kaliandra, tanin, proteksi protein, pencernaan pakan

EVALUATION OF TANNIN CONTENT IN SOME FEEDSTUFFS TO IMPROVE EFFICIENCY OF *IN VITRO* NUTRIENT DIGESTIBILITY ON THIN TAILED SHEEP

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ABSTRACT

Some feedstuff such as jackfruit leaves (*Artocarpus heterophyllus*), sengon leaves (*Paraserianthes falcataria*), and caliandra leaves (*Calliandra calothyrsus*) contain tannin which can be used as a protective agent of feed nutrient from microbial degradation in rumen. The purpose of this research was to determine the effect of these feedstuffs as a source of tannins on the efficiency of feed digestibility in the rumen by *in vitro* degradation. Feed was consisted of 60% dwarf king grass (*Pennisetum purpureum* cv. *Mott*) and 40% rice bran with the addition of tannin levels of 0, 2, 4, and 6% of dry matter (DM). Variables measured were dry matter digestibility (DMD), organic matter digestibility (OMD), crude protein digestibility (CPD), and pH value. The collected data was analyzed using factorial design and followed by *Duncan's Multiple Range Test* (DMRT) to determine the difference between mean. The result showed that addition of jackfruit leaves, sengon leaves, and caliandra as tannin sources decreased ($P < 0,05$) the value of CPD that were 58.39%, 53.61% and 50.43% compared to control (64.35%); DMD value were 60.04%, 57.05%, 56.41% compared to control (68.38%); OMD value were 59.24%, 65.50%, 57.43%, compared to control (74.87%). It could be concluded that the addition of tannins can reduce DMD, OMD, CPD, and pH value. Tannin sources which could bind protein most strongly were 6% caliandra leaves.

Key words : Jackfruit leaves, sengon leaves, caliandra leaves, tannin, protein protection, feed digestibility