DEGRADASI *IN SACCO* BUNGKIL KEDELAI YANG DIPROTEKSI DENGAN FORMALDEHID

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INTISARI

Penelitian dilaksanakan untuk mengetahui pengaruh proteksi bungkil kedelai dengan formaldehid terhadap degradasi bahan kering (BK), bahan organik (BO) dan protein (PK) secara *in sacco.* Penelitian menggunakan tiga ekor sapi yang difistulasi pada bagian rumen. Ternak diberi ransum hijauan *(Pennisetum purpureum)* dan konsentrat dengan imbangan BK 70%:30%. Bungkil kedelai yang telah digiling dengan *willey mill* diberi perlakuan formaldehid 37% v/v dengan aras 0% (I); 0,2% (II); 0,4% (III) dan 0,6% (IV) per BK bungkil kedelai. Bungkil kedelai-formaldehid diinkubasikan ke dalam rumen selama 2, 4, 8, 16, 24 dan 48 jam, dengan enam kali ulangan. Kinetik kehilangan BK, PK, BO menurut waktu inkubasi digunakan untuk menghitung nilai degradasi teori DT=a+bc/c+Kp dengan menerapkan model eksponensial $p=a+b(1-e^{-ct})$, diasumsikan keeepatan partikel pakan keluar rumen (Kp) sebesar 0,06. Penelitian dilaksanakan menggunakan rancangan acak lengkap pola searah, data yang diperoleh dianalisis menggunakan analisis variansi dan rerata hasil yang signifikan diuji dengan uji Duncan's. Hasil penelitian menunjukkan perlakuan formaldehid cenderung menurunkan nilai DT dan kehilangan BK, PK, BO sampai 24 jam inkubasi. Meningkatnya konsentrasi formaldehid (0,6%) menurunkan fraksi a PK (P<0,01), nilai DT PK (P<0,05) dan menaikkan fraksi b PK (P<0,01) berturut-turut sebesar 14,82%; 5,48% dan 4,95% bila dibandingkan control. Fraksi a dari BK dan BO tidak dipengaruhi . proteksi tetapi DT cenderung turun. Pada konsentrasi formaldehid yang tertinggi (0,6%) DT BK dan DT BO turun (P<0,01) sebesar 3,7% dan 4,44%. Disimpulkan proteksi formaldehid pada aras 0,6% menurunkan degradasi (DT) BK, BO dan PK.

Kata Kunci: Bungkil kedelai, Formaldehid, Degradasi, Proteksi

IN SACCO DEGRADATION OF FORMALDEHYDE PROTECTED SOYBEAN MEAL

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ABSTRACT

The experiment was conducted to determine *in sacco* degradation of formaldehyde protected soybean meal (SBM) on dry matter (DM), organic matter (OM) and crude protein (CP). Three rumen cannulated cows were used. They were fed grass (*Pennisetum purpureum*) and concentrate with ratio of 70%:30% in DM basis. Ground SBM was protected at four different levels (DM basis) of formaldehyde 37% v/v namely treatment 1= 0.0%; 11= 0.2%; 111= 0.4% and IV= 0.6%. SBM-formaldehyde were incubated in the rumen for 2, 4, 8, 16, 24 dan 48 hours with six replications. Kinetic *in sacco* degradation of DM, OM and CP was adjusted to exponential models $p= a+b(1-e^{-ct})$ and DT was calculated DT= a+b/c+Kp, rumen rate of passage (Kp) 0,06 was assumed. Completely randomized design one way classification was used and data was analised with analyse of variance, for significant result was determined with Duncan's multiple range test. The results showed that formaldehyde protection tend to decrease of DT value and disappearance of DM, OM and CP for 2, 4, 8 , 16 and 24 hours incubation. 0.6% Formaldehyde decreased a of CP ($P<0.01$), DT of CP ($P<0.05$) and increase b of CP ($P<0.01$) compare with control of 14.82%, 5.48% and 4.95% respectively. Treatement didn't affect a of DM and OM but tended to decrease DT value. The highest concentration of formaldehyde (0,6%) decreased of DT of DM (3.70%) and DT Of OM (4.44%) compared with control. It was concluded that formaldehyde protection at 0.6% decreased DT degradation value of DM, OM and CP.

Key word: Soybean meal, Formaldehyde, Degradation, Protection