

PENGARUH AMONIASI UREA PADA JERAMI PADI TERHADAP DEGRADASI *IN SACCO* DI DALAM RUMEN SAPI PERANAKAN FRIESIAN HOLSTEIN

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INTISARI

Penelitian ini bertujuan untuk mengetahui perbedaan degradasi *in sacco* fraksi bahan leering (BK), bahan organik (BO), protein kasar (PK), *neutral detergent fibre* (NDF), *acid detergent fibre* (ADF) dan hemiselulosa dari palcan jerami padi amoniasi (IPA) dan jerami padi kontrol (JPK) di dalam rumen sapi Peranakan Friesian Holstein (PFH) yang mendapat pakan basal sesuai dengan pakan yang diteliti degradasinya. Untuk masing-masing pakan digunakan dua ekor sapi betina PFH yang berumur sekitar empat sampai lima tahun, dalam keadaan leering dan mempunyai fistula di bagian rumennya. Pakan basal JPA dan JPK diberilean secara *ad libitum*, sedangkan tambahan leonsentrat untuk setiap sapi diberikan sebanyak 2 kg/hari. Kehilangan fraksi BK, BO, PK, NDF, ADF dan hemiselulosa di dalam rumen berdasarkan waletu inleubasi 2, 4, 8, 16, 24, 48 dan 72 jam digunakan untuk menentulean nilai fraksi yang mudah larut (a), fraksi yang tidale mudah larut tapi potensial terdegradasi (b), dan laju degradasi fraksi yang potensial terdegradasi (c) berdasarkan persamaan eksponensial: $P = a + b(1 - e^{-ct})$. Nilai a, b dan c selanjutnya digunakan untuk menghitung nilai degradabilitas efeletif atau degradasi teori dengan rumus: $DT = a + \{bc/(c + lep)\}$, dengan asumsi laju aliran partileel pakan leeluar dari rumen (lep) sebesar 5% per jam. Nilai a, b, c dan DT dianalisis variansinya berdasarkan rancangan acale lengleap pola searah. Hasil penelitian menunjulelean bahwa nilai DT fraksi BK, BO, PK, NDF, ADF dan hemiselulosa dari JPA lebih besar dibanding JPK (BK: 40,32 vs 28,58%; BO: 41,77 vs 27,68%; PK: 65,07 vs 43,57%; NDF: 29,16 vs 18,48%; ADF: 29,84 vs 23,50%; hemiselulosa: 27,19 vs 11,97%), dan secara statistik menunjulelean perbedaan yang sangat nyata ($P < 0,01$) untuk fraksi BK, BO, PK dan NDF, sedangkan untuk fraksi ADF dan hemiselulosa menunjulelean perbedaan yang tidak nyata. Nilai a, b dan c fraksi BK, BO dan PK dari JPA lebih tinggi dibanding JPK, sedangkan nilai b dan c pada NDF, ADF dan hemiselulosa antara JPA dan JPK memberilean hasil yang bervariasi.

(KataKunci: Jerami Padi, Amoniasi Urea, Degradasi, *In Sacco*)

EFFECT OF RICE STRAW AMMONIATED ON *IN SACCO* DEGRADATION IN THE RUMEN OF FRIESIAN HOLSTEIN CROSSBRED COWS

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ABSTRACT

This research was conducted to evaluate the difference *in sacco* degradability of dry matter (DM), organic matter (OM), crude protein (CP), neutral detergent fibre (NDF), acid detergent fibre (ADF) and hemicelluloses between urea-ammoniated rice straw (URS) and non urea-ammoniated rice straw (NRS). Two-ruminal fistulated non-lactating Friesian Frolstein Crossbred (FHC) cows (about 4 - 5 years old) for each feed were determined by the degradation that was used in this experiment. The basal feed was given equals to the feed that were determined by its degradation and were consumed *ad libitum*, while concentrate supplementation for each cow was 2 kg/day. The disappearances of DM, OM, CP, NDF, ADF, and hemicelluloses fractions based on incubation time in 2, 4, 8, 16, 24, 48 and 72 hours that were used to calculate the soluble fraction (a), the insoluble but degradable fraction (b) and the rate of degradation of degradable fraction (c) by using an exponential model: $P = a + b(1 - e^{-ct})$ and theoretical degradation was calculated using a formula: $DT = a + (bc/(c + kp))$ with the assumption that the rate of passage is about 5%/hour. The differences value of a, b, c and DT between URS and NRS were analysed statistically using one-way analysis of variance. Results of this experiment showed that the DT value of DM, OM, CP, NDF, ADF and hemicelluloses fractions was higher in URS than NRS (DM: 40.32 v 28.58%; OM: 41.77 v 27.68%; CP: 65.07 v 43.57%; NDF: 29.16 v 18.48%; ADF: 29.84 v 23.50%; hemicelluloses: 27.19 v 11.97%), and different significantly ($P < .01$) in DM, OM, CP, and NDF fractions, but not significant in ADF and hemicelluloses fractions. The value of a, b, and c of DM, OM and CP fractions in URS were higher than NRS, but in b and c values of NDF, ADF and hemicelluloses fractions have a variation value between URS and NRS.

(Key Words: Rice Straw, Urea-ammoniated, Degradation, *In Sacco*)