



DEGRADASI IN SACCO JERAMI PADI AMONIASI DENGAN ARAS UREA BERBEDA YANG MENDAPATKAN TRICHODERMA REESEI

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INTISARI

Penelitian ini dilakukan untuk mengetahui degradasi *in sacco* jerami padi amoniasi dengan aras urea berbeda yang mendapatkan *Trichoderma reesei*. Pada penelitian ini digunakan 3 ekor sapi perah Peranakan Friesien Holstein kering yang difistulasi pada bagian rumen, diberi pakan terdiri dari *Pennisetum purpureum* dan konsentrat denganimbangan bahan kering 70:30 serta kandungan protein kasar 12,56%, pemberian air minum secara *ad libitum*. Jerami padi amoniasi diperam selama 4 minggu. Jerami padi (I), jerami padi amoniasi 2%+*T. reesei* 5% (II), jerami padi amoniasi 4%+*T. reesei* 5% (III), jerami padi amoniasi 6%+*T. reesei* 5% (IV) diinkubasikan dalam rumen selama 2, 4, 8, 16, 24 dan 48 jam dan setiap waktu diadakan 6 kali ulangan. Residu pakan setelah inkubasi dianalisis kandungan BK (bahan kering), BO (bahan organik), dan PK (protein kasar). Kinetik kehilangan BK, BO dan PK dihitung dengan model eksponensial, $p=a+b(1-\exp^{-ct})$. Nilai a, b, c yang diperoleh untuk menghitung nilai degradasi dengan $kp=0,06$ dalam rumus $DT=a+(b.c/c+0,06)$. Nilai a, b, c, dan DT dianalisis dengan analisis variansi Rancangan Acak Lengkap (RAL) pola searah, jika terdapat perbedaan dilakukan uji Duncan. Hasil penelitian menunjukkan peningkatan ($P<0,01$) nilai b dan DT dari BK, BO, PK. Nilai DT dari BK I, II, III, IV berturut-turut 30,21%; 37,91%; 42,89%; 40,87%. Nilai DT dari BO berurutan yaitu 23,76%; 29,40%; 32,94%; 31,62% sedang nilai DT dari PK ialah 27,25%; 51,93% 56,33%; 55,24%. Rerata perbedaan masing-masing perlakuan untuk nilai DT menunjukkan peningkatan ($P<0,01$) dengan uji Duncan's, kecuali untuk nilai DT PK III vs IV (56,33% vs 55,24%) tidak meningkat secara nyata.

Kata kunci: *Trichoderma reesei*, jerami padi, amoniasi, degradasi, *in sacco*.



IN SACCO DEGRADATION OF DIFFERENT UREA-AMMONIATED LEVELS OF RICE STRAW TREATED WITH *TRICHODERMA REESEI*

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ABSTRACT

This research was conducted to investigate *in sacco* degradation of different urea-ammoniated levels of rice straw treated with *Trichoderma reesei*. There were four treatments of different levels of urea (dry matter basis) namely treatment I without treatment as control, treatment II rice straw + 2% urea; treatment III rice straw + 4% urea and treatment IV rice straw + 6% urea. Ammoniation was done four weeks. All treatments excepts treatment I was mixed 5% of *T. reesei*. *In sacco* study was done using three fistulated Friesien Holstein Crossed breeds cows for 2; 4; 8; 16; 24; and 48 hours of six replication each treatment. The cows were fed *Pennisetum purpureum* and concentrate 70:30 DM ratio, CP content 12.56% to satisfy their maintenance nutrient requirements. Degradation kinetics was adjusted to exponential model, $p=a+b(1-\exp^{-ct})$. The result of a, b, c parameters were used to calculate degradation theory (DT). Rumen out-flow rate (kp) of 0.06/h were used to calculate DT, in which $DT=a+(b.c/c+kp)$. Data were then analized using one way Completely Randomized Design. The results showed that b and DT of DM (Dry Matter), OM (Organic Matter), and CP (Crude Protein) of treated straw increased $P<0.01$). DT of DM of treatment I, II, III and IV 30.21%; 37.91%; 42.89%; 40.87% in which DT of OM was 23.76%; 29.40%; 32.94%; 31.62% while DT of CP was 27.25%; 51.93%; 56.33%; 55.24% respectively. Duncan's test showed that the results of four treatments of DT was highly significant ($P<0.01$) except DT of CP treatment III vs IV (56.33% vs 55.24%) was not significant.

Key words: *Trichoderma reesei*, rice straw, ammoniation, degradation, *in sacco*.