PENGARUH ARAS AHOHIASI UREA TERHADAP NUTRITIF BATANG JAGUNG

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INTISARI

Penelitian ini bertujuan mengetahui pengaruh aras urea untuk amoniasi batang jagung terhadap nutritifnya. Nutritif yang dimaksud ini meliputi kadar protein kasar, kecernaan bahan kering dan bahan organik secara in vitro dan neutral detergent fibre (NDF) serta kecernaan bahan kering secara in situ. Materi yang digunakan adalah batang jagung Hibrida C-l yang setelah dicacah diperlakukan dengan larutan urea. Urea yang digunakan adalah aras 2, 4 dan 6% berdasar bahan kering dan dilarutkan dalam air dengan perbandingan 1 : 1 terhadap bahan kering batang jagung, sehingga kadar air akhir batang jagung amoniasi 50%. Larutan urea disiramkan pada batang jagung secara merata, kemudian disimpan dalam kantong plastik selama 2 minggu, masing-masing menggunakan 3 ulangan. Untuk mengetahui kualitas mula-mula batang jagung sebelum diamoniasi, dilakukan analisis kimia pada materi yang sama. Setiap ulangan digunakan 3 kg batang jagung. Untuk analisis kecernaan in situ digunakan sample ± 2 g dengan ukuran saringan 1 mm kemudian diinkubasikan ke dalam rumen sapi PO yang berfistula dengan lama inkubasi 8, 16, 24, 36, 48 dan 72 jam. Data yang diperoleh diuji dengan analisis variansi completely randomized design (CRD) dan apabila ada perbedaan nyata dilakukan analisis Duncant1s new multiple range test (DMRT). Hasil penelitian menunjukkan kadar protein mula-mula, aras urea 2, 4 dan 6% rata-rata adalah 2,22; 3,67; 3,73 dan 3,89%, 7% berturut-turut 132,48; 115,32; 112,40 dan 110,54 jam, serta kecernaan bahan kering in situ berturut-turut 29,55; 32,01; 32,23 dan 32,55%. Hasil analisis statistik amoniasi urea tidak menunjukkan perbedaan yang nyata terhadap kadar protein, TH serta kecernaan bahan kering in situ. Hasil kecernaan bahan organik in vitro berturut-turut adalah 29,80; 32,56; 38,39 dan 39,03%, kecernaan bahan kering in yitxo berturut-turut adalah 27,12; 28,60; 33,01 dan 33,73%, sedangkan hasil analisis NDF berturut-turut 84,49; 83,94; 83,82 dan 82,52%. Hasil analisis statistik menunjukkan bahwa aras urea 4% dapat meningkatkan kecernaan bahan organik dan bahan kering in vitro serta aras urea 6% menurunkan neutral detergent fibre (P<0,01). (Kata kunci : aras urea, amoniasi, nutritif, batang jagung)

THE EFFECT OF LEVEL OF UREA-AMMONIA TREATMENT ON NUTRITIVE OF CORN STALK

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ABSTRACT

The experiment was conducted to evaluate the effect of urea-ammonia treatment on nutritive value of corn stalk. The nutritive value means the crude protein, in vitro dry matter and in vitro organic matter digestibility and the neutral detergent fibre (NDF) and in situ dry matter digestibility. Corn stalk of Hibrida C-l were chopped and treated by urea dilution. The level of urea were 2, 4 and 6% based on dry matter of corn stalk. Urea was well diluted into the water until the final water contents of corn stalk was 50%. The corn stalk was packed into a plastic bags for 2 weeks. Each treatment consisted of 3 replicates of 3 kg of corn stalk. The nutritive value of untreated corn stalk was analysed as a control. Using rumen fistulated cattle 2 g of each treatment sample were incubated 8, 16, 24, 36 48 and 72 hours to evaluate in situ dry matter digestibility. The data was tested completely randomized design (CRD) and the significant means were tested by Duncants new multiple range test (DMRT). The results indicated the weight of crude protein contents of Θ, 2, 4 and 6% level of urea were 2,22; 3,67; 3,73 and 3,89%, the T½ were 132,48; 115,32; 112,40 and 110,54 hours, dry matter digestibility in situ were 29,55; 32,01; 32,23 and 32,55% respectively. In vitro organic matter digestibility were 29,80; 32,56; 38,39 and 39,03%, in vitro dry matter digestibility were 27,12; 28,60; 33,01 and 33,73, and NDF was 84,49; 83,94; 83,82 and 82,52% respectively. Analysed data showed that there were no effect of treatments on crude protein, T½ and in situ dry matter digestibility, on the other hand 4% level of urea treatment increased in vitro organic and dry matter digestibility but 6% level of urea decreased NDF content (P<Θ,01)

(Key words : urea treatment, ammoniation, nutritive, corn stalk)