

PENGARUH IMBANGAN BUNGKIL KELAPA SAWIT, BUNGKIL KEDELAI DAN TEPUNG GAPLEK FERMENTASI TERHADAP KECERNAAN DAN PARAMETER FERMENTASI RUMEN SECARA IN VITRO

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INTISARI

Penelitian ini bertujuan untuk mengetahui imbangan terbaik campuran bahan pakan berupa bungkil kelapa sawit, bungkil kedelai dan tepung gaplek terhadap pencernaan dan parameter fermentasi rumen secara *in vitro*. Penelitian terdiri dari tujuh perlakuan pakan dengan komposisi bungkil sawit, tepung gaplek dan bungkil kedelai dengan perbandingan (P₁) 70%:25%:5%, (P₂) 75%:20%:5%, (P₃) 80%:15%:5%, (P₄) 85%:10%:5%, (P₅) 80%:10%:10%, (P₆) 80%:20%:0%, (P₇) 85%:15%:0%. Campuran bahan pakan difermentasi dengan penambahan molasses 500ml dan kadar air 40%. Proses fermentasi dilakukan dengan memasukkan campuran formulasi bahan pakan ke dalam toples dengan kondisi anaerob. Hasil campuran pakan fermentasi konsentrat disimpan didalam suhu ruang dan diperam selama 3 hari. Setiap perlakuan terdiri dari empat pengulangan. Sampel dianalisis secara *in vitro*. Data penelitian dianalisis dengan menggunakan Rancangan Acak Lengkap Pola Searah (*One Way ANOVA*). Hasil analisis menunjukkan bahwa imbangan bungkil sawit, tepung gaplek dan bungkil kedelai 70%:25%:5% (P₁) dapat menghasilkan pencernaan 77,66 ± 1,25 dan 74,35 ± 5,07 (bahan kering dan bahan organik), amonia 80,86 ± 10,33 dan VFA 8,89 ± 0,9 yang lebih tinggi (P<0,05) dibandingkan perlakuan yang lain sehingga imbangan tersebut dapat digunakan sebagai formulasi pakan yang ideal untuk ternak karena memiliki nilai pencernaan yang paling tinggi.

Kata kunci: Bungkil Sawit, Tepung Gaplek, Bungkil Kedelai, Kecernaan *In Vitro*. Parameter Fermentasi Ruminansia

THE EFFECT OF FERMENTED PALM KARNEL MEAL, SOYBEAN MEAL, AND CASSAVA MEAL ON IN VITRO DIGESTIBILITY AND RUMINAL FERMENTATION PARAMETERS

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ABSTRACT

This study aims to determine the effect of fermented palm kernel meal, soybean meal and cassava meal on in vitro digestibility and ruminal fermentation parameters. The study consisted of seven feed treatments with the composition of palm kernel meal, cassava meal and soybean meal with a ratio (P1) 70%: 25%: 5%, (P2) 75%: 20%: 5%, (P3) 80%: 15% : 5%, (P4) 85%: 10%: 5%, (P5) 80%: 10%: 10%, (P6) 80%: 20%: 0%, (P7) 85%: 15% 0% . The mixture of feed ingredients was fermented by adding 500 ml of molasses and 40% moisture content. The fermentation process was carried in a jar under anaerobic conditions. The mixture of concentrate fermented feed was stored at room temperature and ripened for 3 days. Each treatment consisted of four repetitions. Samples were analyzed in vitro Menke and Steingass method. The research data were analyzed using a completely randomized design with unidirectional patterns (One Way ANOVA). The results of the analysis showed that the balance of palm kernel meal, cassava meal and soybean meal 70%: 25%: 5% (P1) could produce 77.66 ± 1.25 and 74.35 ± 5.07 digestibility (dry matter and organic matter), ammonia 80.86 ± 10.33 and VFA 8.89 ± 0.9 which were higher ($P < 0,05$) than other treatments so that the balance could be used as an ideal feed formulation for livestock because it had the highest digestibility value.

Keywords: Palm Karnel Meal, Cassava Meal, Soybean Meal, In Vitro Digestibility, Ruminal Fermentation Parameters