PRODUKSI PROTEIN MIKROBIA PADA FERMENTASI CAMPURAN KITIN KEPALA UDANG DAN JAGUNG MENGGUNAKAN CAIRAN RUMEN KERBAU

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INTISARI

Penelitian ini bertujuan untuk mengetahui konsentrasi protein mikrobia pada fermentasi kitin kepala udang dengan jagung menggunakan cairan rumen kerbau. Bahan pakan yang difermentasi adalah campuran tepung kitin kepala udang (TU) dan tepung jagung (TJ) dengan perbandingan 100%TU : 0%TJ; 75%TU : 25%TJ; 50%TU : 50%; 25%TU : 75%TJ dan 0%TU : 100%TJ) berturut-turut untuk perlakuan Pi, P2, P3, P4, dan P5. Sumber mikrobia diperoleh dari cairan rumen kerbau. Pengamatan dilakukan pada awal dan akhir fermentasi. Data yang diperoleh dianalisis dengan menggunakan analisis variansi pola faktorial (5x2). Pada hasil rata-rata dengan perbedaan yang nyata dilanjutkan dengan uji *Duncan's New Multiple Range Test* (DMRT). Hasil penelitian menunjukkan bahwa konsentrasi amonia untuk perlakuan PI, P2, P3, P4 dan P5 berturut-turut adalah 25,46; 22,00; 21,87; 21,87 dan 18,62 (mg/100 ml)sedangkan protein mikrobia sebesar 16,61; 15,01; 13,21; 11,689,78 dan 16,61 (mg/ml). Dari hasil penelitian ini dapat diambil suatu kesimpulan bahwa dengan penambahan tepung jagung pada fermentasi campuran kitin kepala udang, tidak dapat meningkatkan kosentrasi protein mikrobia.

Kata kunci : Protein Mikrobia, Kitin Kepala Udang, Jagung, Fermentasi

MICROBIAL PROTEIN PRODUCE ON THE FERMENTATION OF SHRIMP HEAD EXTRACTION CHITIN AND MAIZE MIXTURE BY BUFFALO'S RUMEN FLUID

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ABSTRACT

The objective of this research was to know the microbial protein concentration in the fermentation of chitin of shrimp head and maize by buffalo's rumen fluid. The mixtures of chitin extracted from shrimp head (MS) and maize meal (MM) with the ratio of 100:0; 75:25; 50:50; 25:75; and 0:100 were used as substrate for the treatment of PI, P2, P3, P4 and P5. Rumen fluid of buffalo were used as the source of microbes. The fermentation was lasted for 48 hours. The samples of fermentation mixture were taken at the beginning and the end of fermentation for ammonia and microbial protein analyzed. The data obtained were analyzed by *factorial completely randomized design* (5x2). The means with significant differences were analyzed using *Duncant's New Multiple Range Test* (DMRT). The result of the research indicated that the concentration of ammonia concentration were 25,46; 22,00; 21,87; 18,84 and 8,62 (mg/lOOml) while the microbial protein concentration were 16,61; 15,01; 13,21; 11,68 and 9,75 (mg/ml). It could be concluded that the increasing of maize meal contain in the fermentation of chitin decreased the concentration of microbial protein.

Key Word : Microbial Protein, Chitin of Shrimp Head, Maize, Fermentation