

PENGARUH PENGGUNAAN EMPAT MACAM BAHAN PAKAN SUMBER ENERGI TERHADAP KUALITAS KIMIA DAN KUALITAS FISIK UREA MOLASSES MULTINUTRIENT BLOCK

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INTISARI

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh dari penggunaan empat macam bahan pakan sumber energi dalam formulasi *urea molasses multinutrient block* (UMMB) terhadap kualitas fisik dan kualitas kimia UMMB yang dihasilkan. Penelitian ini dilaksanakan di Laboratorium Teknologi Makanan Ternak, Departemen Nutrisi Makanan Ternak, Fakultas Peternakan, Universitas Gadjah Mada, Yogyakarta. Penelitian ini menggunakan empat perlakuan yang berbeda, yaitu: perlakuan BG (15% bekatul dan 20% daun gamal (*Gliricidia sepium*), perlakuan PG (15% *bran pollard* dan 20% daun gamal), perlakuan GG (15% gaplek dan 20% daun gamal); serta perlakuan OG (15% onggok dan 20% daun gamal). Setiap perlakuan dilakukan tiga replikasi. Parameter yang diamati meliputi: kualitas fisik (warna, tekstur, kekerasan, kontaminasi, aroma, dan absorpsi air) serta kualitas kimia (bahan kering, bahan organik, protein kasar, NDF, dan ADF). Data kualitas fisik berupa warna, tekstur, kontaminasi, aroma, dan data kualitas kimia dianalisis secara deskriptif, sedangkan data absorpsi air dan kekerasan dianalisis secara statistik dengan menggunakan *analysis of variance* dengan derajat signifikansi 5%. Hasil analisis yang menunjukkan perbedaan kemudian dianalisis lanjutan dengan menggunakan uji *Duncan's multiple range test*. Hasil penelitian menunjukkan bahwa perlakuan GG menghasilkan UMMB dengan kualitas terbaik dari semua perlakuan ($P < 0,05$). Kesimpulan dari penelitian ini yaitu perlakuan GG telah memenuhi kedua indikator yang dicari yaitu tingkat absorpsi air sebesar 6,02% dan tingkat kekerasan sebesar 0,27 kg/cm².

Kata kunci: *Urea molasses multinutrient block*, *Bran pollard*, Onggok, Gaplek, Bekatul, Daun gamal, Kualitas fisik, Kualitas kimia

The Effect of Using Four Types of Energy Source Feed Materials on Chemical Quality and Physical Quality of Urea Molasses Multinutrient Block

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ABSTRACT

The purpose of this research is to determine the effect of using four types of feed materials as energy sources in the formulation of urea molasses multinutrient block (UMMB) on the physical and chemical quality of the resulting UMMB. This study was conducted at the Animal Feed Technology Laboratory, Department of Animal Nutrition, Faculty of Animal Husbandry, Gadjah Mada University, Yogyakarta. The study consisted of four different treatments: BG treatment (15% rice bran and 20% *Gliricidia sepium* leaves), PG treatment (15% bran pollard and 20% *Gliricidia sepium* leaves), GG treatment (15% cassava chips and 20% *Gliricidia sepium* leaves), and OG treatment (15% tapioca byproduct and 20% *Gliricidia sepium* leaves). Each treatment was replicated three times. The parameters observed included physical quality (color, texture, hardness, contamination, aroma, and water absorption) and chemical quality (dry matter, organic matter, crude protein, NDF, and ADF). Data on physical quality such as color, texture, contamination, aroma, as well as data on chemical quality, were analyzed descriptively, while water absorption and hardness data were analyzed statistically using analysis of variance with a significance level of 5%. The analysis results showing differences were further analyzed using Duncan's multiple range test. The results of the study showed that the GG treatment produced UMMB with the best quality among all treatments ($P < 0.05$). The conclusion of this research is that the GG treatment has met both desired indicators, which are the water absorption rate of 6.02% and the hardness level of 0.27 kg/cm².

Keywords: Urea molasses multinutrient block, Bran pollard, Cassava pulp, Cassava flour, Rice bran, *Gliricidia* leaves, Physical quality, Chemical quality.