PENGARUH PEMBERIAN DAUN SINGKONG TERHADAP KUALITAS KIMIA DAN KECERNAAN *IN VITRO* PADA *FERMENTED COMPLETE FEED* BERBASIS KULIT KACANG TANAH

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INTISARI

Salah satu penggunaan biaya terbesar dalam beternak ialah penggunaan pakan ternak. Bahan pakan yang berasal dari limbah pertanian seperti kulit kacang tanah dan daun singkong dapat menjadi alternatif bahan pakan lokal. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh pemberian daun singkong dengan level yang berbeda terhadap kualitas kimia dan nilai kecernaan *in vitro fermented complete feed* (FCF) berbasis kulit kacang tanah. *Fermented complete feed* dibagi ke dalam empat grup perlakuan dengan level penambahan daun singkong yang berbeda, yaitu: P1 (pakan basal); P2 (pb+5%); P3 (pb+10%); dan P4 (pb+15%). Masing-masing grup menggunakan empat kali ulangan. Waktu fermentasi selama 14 hari secara fakultatif anaerob. Parameter yang diamati adalah kandungan kimia FCF yaitu: kadar air (KA), bahan kering (BK), bahan organik (BO), protein kasar (PK), serat kasar (SK), lemak kasar (LK), dan bahan ekstrak tanpa nitrogen (BETN). Parameter nilai kecernaan secara *in vitro* yaitu derajat keasaman (pH) cairan rumen pasca *gas test* dan produksi gas. Data dianalisis menggunakan Rancangan Acak Lengkap (RAL) pola searah dengan uji lanjutan *Duncan Multiple Range Test*. Hasil penelitian menunjukkan bahwa penambahan daun singkong dalam FCF hingga 15% mampu menurunkan kadar KA dan SK ($P<0.05$) berturut-turut sebesar 4,8% dan 20,9% serta meningkatkan kadar BK, BO, PK, LK, dan BETN ($P<0,05$) berturut-turut sebesar 1,13%; 1,13%; 26,9%; 55,54%; dan 3,14% jika dibandingkan dengan grup P1. Rerata nilai pH dari cairan rumen yang dihasilkan berkisar antara 6,76 hingga 6,87. Hasil penelitian juga menunjukkan bahwa penambahan daun singkong hingga 15% dalam FCF mampu meningkatkan nilai kecernaan secara *in vitro* grup P2, P3, dan P4 dengan parameter laju produksi gas ($P<0,05$) bila dibandingkan dengan grup P1 berturut-turut 11,59%; 31,88%; dan 20,29%. Berdasarkan hasil tersebut dapat disimpulkan bahwa penambahan daun singkong hingga 15% pada FCF berbasis kulit kacang tanah secara efektif meningkatkan kualitas kandungan kimia, meningkatkan laju produksi gas, dan tidak mempengaruhi nilai pH dari cairan rumen.

Kata kunci : daun singkong, kulit kacang tanah, *fermented complete feed*, kualitas kimia, kecernaan *in vitro*.

EFFECT OF CASSAVA LEAVES ADDITION ON THE CHEMICAL QUALITY AND IN VITRO DIGESTIBILITY OF THE PEANUT HULLS BASED FERMENTED COMPLETE FEED

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ABSTRACT

One of the largest cost uses in animal livestock is the use of animal feed. Feed materials come from agricultural waste such as peanut hulls and cassava leaves can be alternative local feed ingredients. The aim of this study was to determine the effect of cassava leaves addition with the different levels on the chemical quality and in vitro digestibility of peanut hull-based fermented complete feed (FCF). The FCF were divided into four grups of different levels of cassava leaves addition, which are: P1 (basal feed); P2 (bf+5%); P3 (bf+10%); and P4 (bf+15%). Each treatments using four replication. The fermentation time was 14 days using facultative anaerobic method. Parameters observed were the chemical content of FCF, which are: moisture content (MC), dry matter (DM), organic matter (OM), crude protein (CP), crude fiber (CF), ether extract (EE), and nitrogen free extract (NFE). The in vitro digestibility parameters were pH value of the rumen fluid after the gas test and gas production. Data were analyzed using one way ANOVA design, the significancy of different was tested by Duncan Multiple Range Test. The results showed that the addition of cassava leaves up to 15% on the FCF was able to reduce the MC and CF content ($P<0.05$) respectively 4.8% and 20.9% and increase the levels of DM, OM, CP, EE, and NFE content ($P< 0.05$) respectively 1.13%; 1.13%; 26.9%; 55.54%; and 3.14% compared to P1 group. The mean of the rumen fluid's pH value was ranged from 6.76 to 6.87. The results also showed that the addition of cassava leaves up to 15% on the FCF was able to increase the in vitro digestibility values of the P2, P3, and P4 groups with gas production rate ($P <0.05$) parameter when compared to P1 group respectively 11.59%; 31.88%; and 20.29%. Based on these results, it can be concluded that the addition of cassava leaves up to 15% on the peanut hull-based FCF effectively improves the chemical quality contents, increases the rate of gas production, and does not affect the pH value of the rumen fluid.

Keywords : cassava leaves, peanut hulls, fermented complete feed, chemical quality, in vitro digestability