

PENGARUH PENGGUNAAN LEVEL *ABSORBENT* DAN MIKROBA *MULTI-PURPOSE* PADA FERMENTASI EKSKRETA AYAM SEBAGAI ALTERNATIF BAHAN PAKAN INKONVENSIONAL

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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan level *absorbent* dan mikroba *multi-purpose* terhadap kualitas fermentasi ekskreta ayam sebagai alternatif bahan pakan inkonvensional. Penelitian ini menggunakan ekskreta ayam layer, tepung ongkok sebagai *absorbent*, dan Saus Burger Pakan (SBP®) sebagai inokulum bakteri *multi-purpose*. Fermentasi ekskreta ayam dilakukan selama 14 hari. Rancangan percobaan berupa faktorial 2×2 dengan faktor 1 berupa penambahan tepung ongkok (level 10% (AL10) dan 30% (AL30)) dan faktor 2 berupa penambahan inokulum mikroba *multi-purpose* (level 1×10^5 cfu/mL (MP) dan tanpa penambahan inokulum (CON)). Setiap perlakuan menggunakan 4 ulangan. Variabel yang diamati adalah kualitas fisik, komposisi kimia, dan karakteristik fermentasi. Data kualitas fisik meliputi warna, aroma, tekstur, dan keberadaan jamur dianalisis secara deskriptif. Data kualitas kimia meliputi bahan kering (BK), bahan organik (BO), protein kasar (PK), lemak kasar (LK), dan serat kasar (SK) serta karakteristik fermentasi meliputi kehilangan BK, pH, amonia, asam laktat, asam asetat, dan asam propionat dianalisis secara variansi menggunakan PROC GLM dari SAS ver. 9,4 dengan probabilitas 5%. Apabila terdapat perbedaan yang nyata diuji lanjut menggunakan Tukey's test. Hasil penelitian fermentasi ekskreta ayam menunjukkan bahwa BK berkisar 41,02% sampai 51,61%, PK berkisar 13,27% sampai 19,45%, dan pH berkisar antara 5,64 sampai 6,15. Penambahan level *absorbent* sebanyak 30% berpengaruh nyata terhadap kualitas fisik dan kualitas kimia. Penambahan mikroba *multi-purpose* justru dapat menurunkan kualitas kimia dan karakteristik fermentasi. Berdasarkan hasil penelitian dapat disimpulkan bahwa fermentasi ekskreta ayam tanpa pemberian inokulum pada AL30 menghasilkan kualitas kimia, karakteristik fermentasi, dan kualitas fisik yang optimal.

Kata kunci: *Absorbent*, Ekskreta ayam, Fermentasi, Mikroba *multi-purpose*, Ongkok, Pakan inkonvensional.

THE EFFECT OF ABSORBENT LEVELS AND MULTI-PURPOSE MICROBES ON FERMENTED POULTRY MANURE AS AN ALTERNATIVE UNCONVENTIONAL FEED

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ABSTRACT

This study aimed to determine the effects of different absorbent levels and the application of multi-purpose microbes on the quality of fermented poultry manure as as unconventional feed. This study used layer manure, cassava solid waste as absorbent, and Saus Burger Pakan (SBP®) as multi-purpose microbes. The fermentation of poultry manure was incubated for 14 days. The experimental design was 2×2 with factor 1 being the addition of cassava solid waste (level 10% (AL10) and level 30% (AL30) and factor 2 being the addition of multi-purpose microbes (level 1×10⁵ cfu/ml (MP) and without the addition of inoculum (CON)). Each treatment used 4 replications. Variables that observed in this research were physical quality, chemical composition, and fermentation characteristics. The results of physical quality were carried out descriptively. The results of chemical quality data included dry matter (DM), organic matter (OM), crude protein (CP), crude fat (CF), and crude fiber (CF) as well as fermentation characteristics included DM loss, pH, ammonia, lactic acids, acetic acids, and propionic acids were analyzed for variance using PROC GLM from SAS ver. 9.4 with the probability of 5%. Data with significant differences were tested using Tukey's test. The results of poultry manure fermented showed that the dry matter (DM) content ranged from 41.02% to 51.61%, crude protein (CP) ranged from 13.27% to 19.45%, and pH ranged from 5.64 to 6.15. The addition of 30% absorbent level significantly affected the physical quality and chemical quality. The addition of multi-purpose microbes reduces chemical quality and fermentation characteristics. Therefore, this study concluded that fermentation of poultry manure without inoculant on AL30 is presenting higher chemical composition, fermentation characteristics, and physical quality than other treatments.

Keywords: Absorbent, Cassava solid waste, Fermentation, Multi-purpose microbes, Unconventional feed, Poultry manure