

PENGARUH PENGGUNAAN TONG DAN PLASTIK SEBAGAI FERMENTOR TERHADAP KANDUNGAN NUTRIEN DAN KUALITAS *FERMENTED COMPLETE FEED* (FCF)

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INTISARI

Fermentor merupakan tempat untuk fermentasi pakan yang menentukan kualitas fermentasi. Kualitas tersebut dipengaruhi oleh kemampuan fermentor dalam mencapai dan menjaga kondisi anaerob. Tujuan penelitian ini adalah mengetahui pengaruh fermentor terhadap kualitas *Fermented Complete Feed* (FCF). Pada skala peternak rakyat, umumnya jenis fermentor yang digunakan adalah tong plastik dan kantong plastik vakum. Perlakuan yang dilakukan pada penelitian kali ini berupa perbedaan jenis fermentor yang digunakan yaitu tong plastik dan kantong plastik vakum. Proses fermentasi dilakukan selama 21 hari dengan setiap perlakuan fermentor diulang sebanyak 4 kali dan setiap unit fermentor diisi sebanyak ± 20 kg *complete feed* (CF). Parameter yang diamati dalam penelitian ini adalah kandungan bahan kering (BK), bahan organik (BO), serat kasar (SK), protein kasar (PK), lemak kasar (LK), kehilangan nutrisi setiap fraksi, pH, angka asam, kadar asam laktat, kadar gula, dan kadar amonia. Data penelitian dianalisis dengan uji Independent Sample T-Test dalam program SPSS. Hasil penelitian menunjukkan FCF tong memiliki kadar PK, SK, BO dan BK tidak berbeda ($P > 0,05$) dengan FCF plastik vakum dan kadar LK yang lebih rendah ($P < 0,05$) dibandingkan FCF plastik vakum. FCF tong mengalami kehilangan nutrisi PK, SK, LK, BO dan BK lebih tinggi ($P < 0,05$) dibandingkan FCF plastik vakum. FCF tong memiliki kandungan asam laktat, angka asam, dan kadar gula tidak berbeda ($P > 0,05$) dengan FCF plastik vakum dan kadar amonia dan pH yang lebih rendah ($P < 0,05$) dibandingkan FCF plastik vakum. Kesimpulan penelitian ini adalah penggunaan fermentor tong dan kantong plastik vakum menghasilkan FCF yang baik dengan kualitas kimia fermentasi yang sesuai standar, namun kehilangan nutrisi pada FCF dengan fermentor tong lebih banyak dibandingkan fermentor plastik vakum sehingga penggunaan fermentor plastik vakum lebih baik dibandingkan fermentor tong ditinjau dari kualitas FCF.

Kata kunci : *Fermented Complete Feed* (FCF), fermentor, kualitas dan kandungan nutrisi

EFFECT OF USING BARREL AND PLASTIC BAG AS FERMENTERS ON NUTRIENS CONTENT AND QUALITY OF FERMENTED COMPLETE FEED (FCF)

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ABSTRACT

The place for feed fermentation is called fermenter, one of the factors that determines the quality of fermented feed. Fermented feed quality is influenced by the ability of the fermenter to achieve and maintain anaerobic conditions. The aim of this study was to study the effect of fermenter on Fermented Complete Feed (FCF) quality. On a smallholder scale, generally the types of fermenters used are barrels and vacuum plastic bags. The treatment carried out in this research was the different type of fermenter used, namely barrels and vacuum plastic bags. The fermentation process was carried out for 21 days with each fermenter's treatment repeated 4 times and each fermenter unit was filled with recorded weight ± 20 kg of complete feed (CF). The parameters observed in this study were dry matter (DM), organic matter (OM), crude fiber (CF), crude protein (CP), nitrogen free extract (NFE), nutrient loss each of fraction, pH, acid number, lactic acid content, reducing sugar content, and ammonia content. Research data were analyzed with Independent Sample T-Test using the SPSS program. The results showed that barrel's FCF had DM, OM, CP and CF levels that were not different ($P > 0.05$) from vacuumed plastic's FCF and lower NFE content ($P < 0.05$) than vacuumed plastic's FCF. Barrel's FCF had higher nutrient losses of DM, OM, CP, CF, and NFE ($P < 0.05$) than vacuumed plastic's FCF. Barrel's FCF had lactic acid, acid number, and reducing sugar content not different ($P > 0.05$) from vacuumed plastic's FCF and lower ammonia and pH ($P < 0.05$) than vacuumed plastic's FCF. The conclusion of this study is that the use of barrel and vacuumed plastic as fermenter produces FCF with fermentation chemical quality that meets standards, but nutrient losses in barrels's FCF are greater than in vacuumed plastic's FCF, thus using a vacuum plastic fermenter is better compared to a barrel fermenter in terms of FCF quality.

Keywords: Fermented Complete Feed (FCF), fermenter, quality and nutrient content.