

RINGKASAN

Ketersediaan hijauan pakan yang terbatas terutama pada musim kemarau mendorong pemanfaatan limbah pertanian sebagai bahan pakan alternatif. Salah satu limbah yang berpotensi dimanfaatkan adalah batang singkong. Batang singkong penggunaannya terbatas karena kandungan protein kasar rendah dan serat kasar tinggi sehingga diperlukan penerapan teknologi. Salah satu teknologi yang dapat diterapkan adalah fermentasi. Penelitian ini bertujuan untuk mengetahui pengaruh fermentasi batang singkong menggunakan starter Mikroorganisme Lokal (MOL) berbasis onggok dengan penambahan molasses pada berbagai level terhadap kandungan protein kasar dan serat kasar.

Penelitian dilaksanakan menggunakan rancangan acak lengkap (RAL) dengan empat perlakuan, yaitu R0 (tanpa MOL), R1 (MOL onggok + molasses 20%), R2 (MOL onggok + molasses 30%), dan R3 (MOL onggok + molasses 40%), masing-masing dengan lima ulangan. Variabel yang diamati meliputi kandungan protein kasar dan serat kasar yang dianalisis menggunakan metode proksimat. Data dianalisis menggunakan analisis variansi (ANOVA) dan dilanjutkan dengan uji *Duncan Multiple Range Test* (DMRT) apabila terdapat perbedaan nyata.

Hasil penelitian menunjukkan bahwa fermentasi batang singkong menggunakan MOL onggok dengan penambahan molasses berpengaruh nyata ($P < 0,05$) terhadap kandungan protein kasar, tetapi tidak berpengaruh ($P > 0,05$) terhadap kandungan serat kasar. Perlakuan terbaik dalam meningkatkan protein kasar diperoleh pada R1 dan R2. Fermentasi batang singkong menggunakan MOL berbasis onggok dengan ditambah level molasses 20% mampu meningkatkan kualitas nutrisi, khususnya kandungan protein kasar, sehingga berpotensi sebagai pakan alternatif ternak ruminansia.

Kata kunci: batang singkong, fermentasi, MOL onggok, molasses, protein kasar, serat kasar.

SUMMARY

The limited availability of green fodder, especially during the dry season, encourages the use of agricultural waste as an alternative feed ingredient. One potential waste product is cassava stems. Their use is limited due to their low crude protein and high crude fiber content, necessitating the application of technology. One such technology is fermentation. This study aimed to determine the effect of cassava stem fermentation using a cassava-based Local Microorganism (CMC) starter with the addition of molasses at various levels on crude protein and crude fiber content.

The study was conducted using a completely randomized design (CRD) with four treatments: R0 (no CMC), R1 (CMC + 20% molasses), R2 (CMC + 30% molasses), and R3 (CMC + 40% molasses), each with five replications. Observed variables included crude protein and crude fiber content, which were analyzed using the proximate method. Data were analyzed using analysis of variance (ANOVA) and followed by the Duncan Multiple Range Test (DMRT) if significant differences were found.

The results showed that fermentation of cassava stems using onggok-based MOL with the addition of molasses had a significant effect ($P < 0.05$) on crude protein content, but had no effect ($P > 0.05$) on crude fiber content. The best treatment in increasing crude protein was obtained in R1 and R2. Fermentation of cassava stems using onggok-based MOL with the addition of 20% molasses level was able to improve nutritional quality, especially crude protein content, so it has the potential as an alternative feed for ruminant livestock.

Keywords: *cassava stems, fermentation, onggok-based MOL, molasses, crude protein, crude fiber.*