

**PENGARUH PENGGUNAAN STARTER HASIL FERMENTASI  
BUAH NANAS UNTUK MENURUNKAN GAS AMONIA  
FESES SAPI POTONG**

**Maharuddin  
10/301906/PT/05913**

**INTISARI**

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan mikrobial lokal dari hasil fermentasi buah nanas terhadap reduksi gas amonia feses sapi potong. Materi yang digunakan dengan memanfaatkan buah nanas yang difermentasi. Data yang diperoleh meliputi sifat kimia, sensoris hasil fermentasi, pertumbuhan mikrobial pada medium padat dan cair, pengukuran *optical density* (OD) 600 nm dan pengukuran produksi gas amonia pada panjang gelombang 425 nm dengan level penambahan hasil fermentasi berbeda yaitu 0% (kontrol), 1%, 3%, 5%, dan Em4 1%. Data sifat fisik, kimia sensoris hasil fermentasi, pertumbuhan mikrobial pada medium padat dan cair, *optical density* (OD) 600 nm, pertumbuhan mikrobial setelah perlakuan pengukuran kadar amonia dianalisis secara deskriptif. Dengan mengamati tampilan fisik cairan MOL. Data pengukuran kadar amonia dianalisis dengan analisis variansi pola *Split Plot*, bila menunjukkan hasil yang signifikan dilanjutkan dengan analisa *Duncan's New Multiple Range Test* (DMRT). Hasil penelitian menunjukkan bahwa hasil fermentasi mempunyai karakter kimia pH: 4,2, suhu 31°C. Sensoris warna kuning cerah, aroma segar, sedikit asam, wangi. Mikrobial hasil fermentasi dapat tumbuh pada medium padat dan cair. Mikrobial lokal hasil fermentasi buah nanas dapat berpengaruh nyata ( $P < 0,01$ ) terhadap produksi gas amonia. Kesimpulan dari penelitian ini adalah penambahan fermentasi buah nanas dengan konsentrasi 5% memiliki hasil terbaik untuk menurunkan amonia.

(Kata kunci : Mikroorganismes lokal, Fermentasi buah nanas, Reduksi amonia, Feses sapi potong)

## THE EFFECT OF USING STARTER FROM PINEAPPLE FERMENTATION TO THE AMMONIA GAS REDUCTION IN CATTLE FECES

**Maharuddin**  
**10/301906/PT/05913**

### ABSTRACT

This study aims to determine the effect of addition local microbial of pineapple fermentation products to the ammonia gas reduction in cattle feces. Data obtained were the chemical characteristics, sensories of fermentation product, microbia growth in solid and liquid media, measurement of optical density (OD) 600 nm and measurement of ammonia production at wave length of 425 nm with different level of addition fermentation product were 0% (control), 1%, 3%, 5%, and EM4 1%,. Descriptive analysis performed on fermentation product chemical characteristics, sensories, microbial growth in solid and liquid media, *optical density* (OD) 600 nm, microbia growth after treatment measurement ammonia level. Completely randomized design of *Split plot*, and Duncan's New Multiple Range Test (DMRT) analysis was performed on data measurment of ammonia level. Results of the experiment showed chemical characteristic (pH : 4,2 temperature: 31 °C). Sensories yellow color, fresh aroma, tend to acid, and fine smell. The microbial of fermentation product could be growth in solid and liquid media. The local microbial of fermentation product has affected significantly ( $P < 0.01$ ) on ammonia gas production. There were signification interaction between level of local microbial addition and incubation time ammonia gas production. The conclusion of the research local microbial pineapple fermentation could reduce amonia gas production.

(Keywords : Local microbial, Fermentation of pinneapple fruit, Amonia reduction, Cattle feces)