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RAMAI TRI WALUYO, Nanung Agus Fitriyanto, S.Pt., M.Sc., Ph.D.; Yuny Erwanto, S.Pt.,M.P., Ph.D.,
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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan mikrobia lokal hasil fermentasi buah maja dan rebung terhadap reduksi gas amonia feses sapi potong**.** Data yang diperoleh meliputi sifat kimia, sensoris hasil fermentasi, pertumbuhan mikrobia 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 1%, 0% (kontrol), 1%, 3%, 5%, dan Em4 1% pertumbuhan mikrobia setelah perlakuan pengukuran kadar amonia. Data sifat fisik, kimia sensoris hasil fermentasi, pertumbuah mikrobia pada medium padat dan cair, *optical density* (OD) 600 nm, pertumbuhan mikrobia setelah perlakuan pengukuran kadar amonia dianalisis secara deskriptif. Data pengukuran kadar amonia dianalisis dengan analisa Rancangan Acak Lengkap Pola Faktorial (5x4), 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: 3,05, suhu 26°C. Sensoris warna coklat kehitaman, aroma segar, sedikit asam, wangi. Mikrobia hasil fermentasi dapat tumbuh pada medium padat dan cair. Mikrobia lokal hasil fermentasi dan lama berpengaruh nyata ($P<0,01$) terhadap produksi gas amonia. Kesimpulan dari penelitian ini mikrobia lokal hasil fermentasi buah maja dan rebung dapat mengurangi produksi gas amonia.

(Kata kunci : Mikroorganisme lokal, Fermentasi buah maja dan rebung, Reduksi amonia, Feses sapi potong)

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THE EFFECT OF LOCAL MICROBIAL FROM MAJA FRUIT AND BABY BAMBOO FERMENTATION TO THE AMMONIA GAS REDUCTION IN CATTLE FECES

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ABSTRACT

This study aims to determine the effect of addition local microbial maja fruit and baby bamboo 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 EM4 1%, 0% (control), 1%, 3%, 5%, microbial were growth after treatment measurement ammonia level. 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 Factorial (5x4), 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 : 3.05 temperature: 26 ^{o}C). Sensories dark brown 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 and length of fermentation affected significanthly ($P<0.01$) 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 maja fruit and baby bamboo fermentation could reduce amonia gas production.

(Keywords : Local microbial, Fermentation of maja fruit and baby bamboo, Amonia reduction, Cattle feces)