UNIVERSITAS
GADJAH MADA
**Efek Penambahan Hasil Fermentasi Buah Nanas dan Rebung Terhadap Penurunan Kadar Gas Amonia dan
Kualitas Kompos Feses Kelinci**
DESTYAMAS NIRWANA, Nanung Agus Fitriyanto, S.Pt., M.Sc., Ph.D.
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

EFEK PENAMBAHAN HASIL FERMENTASI BUAH NANAS DAN REBUNG TERHADAP PENURUNAN KADAR GAS AMONIA DAN KUALITAS KOMPOS FESES KELINCI

Destyamas Nirwana

11/317670/PT/06150

INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan produk fermentasi buah nanas dan rebung terhadap penurunan kadar gas amonia dan kualitas kompos dari feses kelinci. Penelitian ini menggunakan mikroorganisme lokal (MOL) hasil fermentasi buah nanas dan rebung. Penelitian terdiri dari empat perlakuan, yaitu perlakuan pertama tanpa penambahan MOL sebagai kontrol, perlakuan kedua dengan penambahan MOL 1%, perlakuan ketiga dengan penambahan MOL 3%, dan perlakuan keempat dengan penambahan MOL 5%. Data yang diperoleh meliputi: parameter fisik fermentasi buah nanas dan rebung, pertumbuhan koloni MOL pada medium agar dan cair, pengukuran penurunan gas NH_3, perhitungan koloni MOL pereduksi gas NH_3, dan uji kualitas pupuk (fisik, kimia, mikrobiologi). Data hasil fermentasi, pengamatan pertumbuhan koloni MOL dianalisis secara deskriptif, sedangkan data pengukuran penurunan gas NH_3 dan uji kualitas pupuk dianalisis dengan analisa Rancangan Acak Lengkap Pola Searah *(One Way Anova)*, bila menunjukkan hasil yang signifikan dilanjutkan dengan analisa *Duncan's New Multiple Range Test* (DMRT). Hasil penelitian menunjukan bahwa penambahan produk fermentasi buah nanas dan rebung sebanyak 5% (P3) dari total manur memberikan hasil paling baik dalam menurunkan kadar amonia dibandingkan dengan kontrol (P0), penambahan 1% (P1), dan penambahan 3% (P2) dari total manur. Hasil uji kualitas kimia menunjukan bahwa pada level penambahan 5% memberikan pengaruh nyata terhadap peningkatan kadar N dan P serta penurunan kadar C/N rasio. Parameter kimia yang didapatkan adalah kadar air 5,16%, bahan organik 63,45% , C-organik 36,80%, P total 0,64%, K total 0,77%, N total 4,05% dan C/N Rasio 9,29%. Kesimpulan dari penelitian ini adalah semakin besar level penambahan produk fermentasi buah nanas dan rebung yang digunakan berpengaruh baik dalam menurunkan kadar gas amonia dan terhadap uji kualitas kompos feses kelinci.

Kata kunci : fermentasi, buah nanas, rebung, amonia, kompos, feses kelinci, MOL

UNIVERSITAS
GADJAH MADA
**Efek Penambahan Hasil Fermentasi Buah Nanas dan Rebung Terhadap Penurunan Kadar Gas Amonia dan
Kualitas Kompos Feses Kelinci**
DESTYAMAS NIRWANA, Nanung Agus Fitriyanto, S.Pt., M.Sc., Ph.D.
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

THE ADDITION EFFECT OF FERMENTED PRODUCTS FROM PINEAPPLE AND BAMBOO SHOOTS TO THE DECREASING OF AMMONIA GAS EMISSION AND QUALITY OF RABBIT'S FECES COMPOST

Destyamas Nirwana

11/317670/PT/06150

ABSTRACT

This study aimed to determine the effect of the addition of fermented products of pineapple and bamboo shoots to the decreasing of ammonia gas content and the quality of compost from rabbit's feces. This study uses local microorganisms (MOL) of fermented fruit from pineapple and bamboo shoots. The study consisted of four treatments, first treatment was without MOL addition as control, second treatment with the addition of 1% MOL, third treatment with addition of 3% MOL, and fourth treatment with 5% MOL addition. The data obtained were: physical parameter of fermentation of pineapple and bamboo shoot, MOL'S colony growth on agar and liquid medium, measurement of NH_3 gas reduction, calculation of MOL colony of NH_3 gas reducer, quality test of compost include physical parameter, chemical, and microbiology test. The data of fermentation and colony observation of MOL were analyzed descriptively, while the NH_3 gas degradation data and the quality test of compost were analyzed by One Way Anova Completely Randomized Complete Design (DES), which showed significant will continue with Duncan's New Multiple Range Test (DMRT). The results showed that the addition of fermented product of pineapple and bamboo shoots of 5% (P3) of total manure gave the best result in decreasing ammonia level compared with control (P 0), addition of 1% (P1), and addition of 3% (P2) of the total manure. The result of chemical quality test showed that the level addition of 5% fermentation gave a significant effect with the increase of N and P concentration and decrease in C / N ratio. Chemical parameters obtained data such as water content of 5,16%, organic matter 63,45%, C-organic 36,80%, P total 0,64%, total K 0,77%, N total 4,05% and C / N Ratio 9,29%. The conclusions of this study indicate that the higher addition level of pineapple and bamboo fermentation products has a good effect in reducing the levels of ammonia gas and the quality test of rabbit compost products.

Keywords: fermentation, pineapple, bamboo shoots, ammonia, compost, rabbit, MOL