PENGARUH MIKROORGANISME LOKAL (MOL) LIMBAH KULIT PISANG HOME BAKERY TERHADAP LAMA WAKTU DAN KADAR N, P, K KOMPOS

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INTISARI

Latar Belakang : Salah satu metode untuk mengolah limbah organik khususnya sampah sayuran dengan pembuatan pupuk kompos. Proses pengomposan dapat dipercepat dengan menambahkan aktivator berupa Mikroorganisme Lokal yang berasal dari limbah kulit pisang. Kandungan pada kulit pisang seperti kalium, karbohidrat, fosfor, protein, magnesium, serat dan air dapat dimanfaatkan sebagai bahan pembuatan MOL karena dibutuhkan bakteri sebagai nutrisi untuk aktivitasnya sebagai agen dekomposer.
Tujuan Penelitian : Memanfaatkan limbah kulit pisang menjadi mikroorganisme lokal untuk mempercepat lama waktu pengomposan dan kadar N, P, K kompos.
Jenis Penelitian : Jenis penelitian ini adalah *Quasy Experiment* dengan *Post Test Only With Control Group Design*. Penelitian ini menggunakan variasi konsentrasi mikroorganisme lokal limbah kulit pisang dengan perlakuan A 20%, perlakuan B 25% dan perlakuan C 30%. Data hasil penelitian diolah secara analisis deskriptif dan analisis inferensial dengan tingkat signifikan 5% (a = 0,05).
Hasil Penelitian : Hasil penelitian ini didapatkan rata-rata lama waktu terbentuknya kompos MOL limbah kulit pisang dengan konsentrasi 20% selama 32 hari, konsentrasi 25% selama 31 hari, konsentrasi 30% selama 29 hari dan kontrol 36 hari. Kadar nitrogen secara berurutan 0,7121%, 0,6822%, 0,7552% dan 0,6191%. Kadar phospor sebesar 0,9277%, 0,8187%, 0,8603% dan 0,8352%. Kadar kalium sebesar 0,3257%, 0,5102%, 0,3754% dan 0,5131%, Berdasarkan hasil uji One Away Anova diketahui nilai *p-value* pada lama waktu terbentuknya kompos 0,000 dan nilai *p-value* pada kada kalium 0,007 dimana $p < 0,05$ yang mana ada pengaruh antara ketiga konsentrasi MOL limbah kulit pisang dan kelompok kontrol dengan lama waktu dan kadar kalium. Sedangkan pada variabel kadar nitrogen nilai *p-value* 0,577 dan nilai *p-value* kadar phospor 0,639 dimana $p > 0,05$ yang berarti tidak ada pengaruh antara ketiga konsentrasi MOL dan kontrol dengan kadar nitrogen dan phospor.
Kesimpulan : Semakin tinggi konsentrasi MOL limbah kulit pisang semakin cepat lama waktu terbentuknya kompos dan mempengaruhi kualitas N, P, K kompos.

Kata Kunci : Mikroorganisme Lokal, Limbah Kulit Pisang, Kompos

EFFECT OF LOCAL MICROORGANISMS (MOLES) OF HOME BAKERY BANANA PEEL WASTE ON THE LENGTH OF TIME AND N, P, K CONTENT OF COMPOST

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ABSTRACT

Background : One method to process organic waste, especially vegetable waste, is by making compost. The composting process can be accelerated by adding an activator in the form of Local Microorganisms derived from banana peel waste. The content in banana peels such as potassium, carbohydrates, phosphorus, protein, magnesium, fiber and water can be used as ingredients for making MOL because bacteria are needed as nutrients for their activities as decomposer agents.
Research Objectives: Utilizing banana peel waste to become an of local microorganisms to accelerate the length of composting time and N, P, K levels of compost.
Research Type : This type of research is Quasy Experiment dengan Post Test Only With Control Group Design. This study used variations in the concentration of local microorganisms of banana peel waste with A treatment of 20%, treatment B of 25% and treatment of C of 30%. The data from the study were processed by descriptive analysis and inferential analysis with a significant level of 5% (a = 0.05).
Research Results : The results of this study obtained the average length of time for the formation of MOL compost for banana peel waste with a concentration of 20% for 32 days, a concentration of 25% for 31 days, a concentration of 30% for 29 days and a control of 36 days. Nitrogen levels were respectively 0.7121%, 0.6822%, 0.7552% and 0.6191%. The phospor content was 0.9277%, 0.8187%, 0.8603% and 0.8352%. Potassium levels of 0.3257%, 0.5102%, 0.3754% and 0.5131%, Based on the results of the One Away Anova test, it is known that the p-value at the length of time the compost was formed was 0.000 and the p-value in the potassium cadaver was 0.007 where p < was 0.05 where there was an influence between the three concentrations of MOL of banana peel waste and the control group with the length of time and potassium content. Meanwhile, in the variable nitrogen level, the p-value value is 0.577 and the p-value of the phospor level is 0.639 where the p > is 0.05 which means that there is no influence between the three MOL concentrations and controls with nitrogen and phospor levels.
Conclusion : The higher the MOL concentration of banana peel waste, the faster the time for compost to form and affect the quality of N, P, K compost.

Keywords : Local Microorganisms, Banana Peel Waste, Compost