

PENGARUH PERBANDINGAN BATANG PISANG DAN CORN STEEP LIQUOR TERHADAP KUALITAS PUPUK ORGANIK CAIR

Effect Of Ratio Of Banana Stem And Corn Steep Liquor On The Quality Of Liquid Organic Fertilizer

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Abstrak Pupuk organik cair adalah larutan dari hasil pembusukan bahan organik yang berasal dari sisa tanaman, limbah agroindustri, kotoran hewan, dan kotoran manusia yang memiliki kandungan lebih dari satu unsur hara. Tujuan dari penelitian untuk menentukan pengaruh rasio batang pisang dan CSL terhadap kualitas pupuk organik cair. Penelitian ini menggunakan desain acak lengkap (RAL) dengan satu faktorial, yang terdiri dari 5 perlakuan batang pisang dan *corn steep liquor* (P1=100% : 0%, P2=75% : 25%, P3=50% : 50%, P4=25% : 75%, P5=0% : 100%) dengan sampel diulang 4 kali, menghasilkan 20 sampel penelitian. Analisis data diuji menggunakan ANOVA (analysis of variance); jika ditemukan efek yang signifikan, akan diikuti dengan DMRT (Duncan multiple range test) dengan taraf 5%. Variabel yang diamati adalah pH, suhu, nitrogen, karbon organik, dan rasio C/N. Hasil penelitian menunjukkan bahwa perbandingan batang pisang dan CSL berpengaruh nyata terhadap nitrogen dan C-organik, tetapi tidak berpengaruh nyata terhadap suhu, pH dan rasio C/N. Perlakuan terbaik adalah perlakuan dengan 25% batang pisang dan 75% CSL, yang menunjukkan kandungan nitrogen sebesar 0,50%, C-organik sebesar 20,36%, dan rasio C/N sebesar 40,97. Saran dalam penelitian ini adalah Perlu adanya pengecekan uji lanjut kandungan unsur hara makro khususnya pada uji fosfor dan kalium.

Kata kunci: pupuk organik cair, batang pisang, *corn steep liquor*, nitrogen, c-organik

Abstrac Liquid organic fertilizer is a solution resulting from the decomposition of organic materials derived from plant residues, agro-industrial waste, animal manure, and human waste, which contains more than one nutrient element. The purpose of this study is to determine the effect of the ratio of banana stems and corn steep liquor on the quality of liquid organic fertilizer. This study used a completely randomized design (CRD) with a single factor, consisting of 5 treatments of banana stems and corn steep liquor (T1=100% : 0%, T2=75% : 25%, T3=50% : 50%, T4=25% : 75%, T5=0% : 100%) with 4 replications, resulting in 20 research samples. Data analysis was tested using ANOVA (analysis of variance); if a significant effect was found, it would be followed by DMRT (Duncan multiple range test) with a significance level of 5%. The observed variables were pH, temperature, nitrogen, organic carbon, and C/N ratio. The research results showed that the ratio of banana stems and CSL significantly affected nitrogen and organic carbon, but did not significantly affect temperature, pH, and C/N ratio. The best treatment was the one with 25% banana stems and 75% CSL, which showed nitrogen content of 0.50%, organic carbon of 20.36%, and C/N ratio of 40.97. The recommendation in this study is the need for further testing of macro nutrient content, particularly for phosphorus and potassium.

Keywords: Liquid organic fertilizer, banana stalks, corn steep liquor, nitrogen, c-organic
