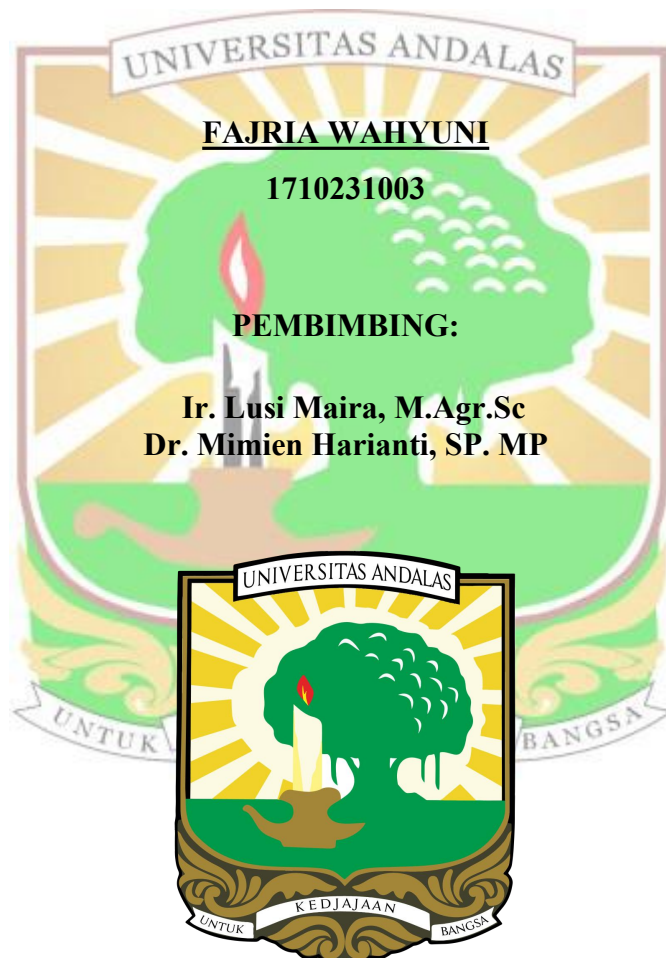


**EFEKTIVITAS BEBERAPA BIOAKTIVATOR DALAM
MENGHASILKAN KOMPOS SERASAH DAUN BAMBU
(*Dendrocalamus asper*)**

SKRIPSI

Oleh:



**DEPARTEMEN ILMU TANAH DAN SUMBERDAYA LAHAN
FAKULTAS PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2022**

EFEKTIVITAS BEBERAPA BIOAKTIVATOR DALAM MENGHASILKAN KOMPOS SERASAH DAUN BAMBU (*Dendrocalamus asper*)

Abstrak

Pelapukan atau pembusukan dari serasah daun bambu memerlukan waktu yang cukup lama. Oleh karena itu, untuk mempercepat pelapukan dilakukan pengomposan. Pengomposan limbah pada umumnya akan berlangsung lama tanpa pemberian bioaktivator. Tujuan penelitian ini yaitu untuk mendapatkan jenis bioaktivator yang paling efektif dalam pengomposan serasah daun bambu (*Dendrocalamus asper*). Penelitian telah dilakukan dari bulan Juli 2021 sampai September 2022 yang bertempat di rumah kaca Universitas Andalas, Laboratorium Jurusan Tanah dan Laboratorium Hama dan Penyakit Tumbuhan, Fakultas Pertanian, Universitas Andalas. Pengambilan serasah daun bambu dilakukan di Desa Tungkal Selatan, Pariaman Utara Kota Pariaman. Penelitian menggunakan Rancangan Acak Lengkap (RAL) dengan 4 perlakuan (kontrol, bioaktivator EM-4 20 ml, bioaktivator *Trichoderma* 20 ml, dan bioaktivator Dekomposer DD11 20 ml) dan 3 ulangan. Parameter pengamatan pada penelitian ini yaitu warna, tekstur, suhu, kecepatan terbentuknya kompos, pH, kadar air, C, N, P, K, rasio C/N, total populasi dan keragaman populasi. Analisis data dilakukan dengan sidik ragam (uji F) pada taraf 5%, jika hasil sidik ragam berbeda nyata, maka dilakukan dengan uji lanjut *Duncan's New Multiple Range Test* (DNMRT). Selanjutnya dilakukan pengujian nilai Relativitas Agronomi (*Relative Agronomic Effectiveness/RAE*). Berdasarkan penelitian yang telah dilakukan dapat disimpulkan bahwa efektivitas bioaktivator *Effective Microorganism 4* (EM-4), *Trichoderma*, dan Dekomposer DD11 memberikan pengaruh terhadap pengomposan serasah daun bambu (*Dendrocalamus asper*). Bioaktivator Dekomposer DD11 merupakan bioaktivator yang paling efektif dalam pengomposan serasah daun bambu (*Dendrocalamus asper*) berdasarkan nilai *Relative Agronomic Effectiveness/RAE*.

Kata Kunci: Bioaktivator, Bambu, Effective Microorganism 4, Trichoderma, Dekomposer DD11, Relativitas Agronomi

THE EFFECTIVENESS OF SOME BIOACTIVATORS IN PRODUCING BAMBOO (*Dendrocalamus asper*) LEAF LITTER COMPOST

Abstract

Bamboo leaf litter takes a long time to decay. Hence, to speed up the weathering process, it needs to compost it. In general, natural composting will last for a long time. This study was aimed to obtain the most effective type of bioactivator in composting bamboo (*Dendrocalamus asper*) leaf litter. This research was carried out from July 2021 to September 2022 at the Andalas University glass house, Laboratory of the Department of Soil and the Laboratory of Plant Pests and Diseases, Faculty of Agriculture, Andalas University. Bamboo leaf litter was collected in Tungkal Selatan Village, North Pariaman, Pariaman City. This study consisted of 4 treatments (control, 20 ml EM-4 bioactivator, 20 ml *Trichoderma* bioactivator, and 20 ml Decomposer DD11 bioactivator) with 3 replicates. The experimental units were allocated based on Completely Randomized Design (CRD). Parameters observed in this study were colour, texture, temperature, rate of compost formation, pH, water content, C, N, P, K, ratio of C/N, population number and diversity. Data resulted were analysed the variance using F-test at 5% level. If the results of the analysis of variance were significantly different, then Duncan's New Multiple Range Test (DNMRT) was further tested. Furthermore, the value of *Relativity Agronomic Effectiveness* (RAE) was tested. Based on this research, it could be concluded that all of the bioactivator affected the process of bamboo (*Dendrocalamus asper*) leaf litter decomposition. Bioactivator Decomposer DD11 was the most effective bioactivator in composting bamboo (*Dendrocalamus asper*) leaf litter based on the *Relative Agronomic Effectiveness*/RAE value.

Keywords: Bioactivator, Bamboo, Effective, Microorganism 4, Trichoderma, Decomposer DD11, Relative Agronomic