

THE RATE OF DECOMPOSITION AND NUTRIENT CONTENT IN DIFFERENT MATERIAL OF VERMICOMPOST

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PROGRAMME: FOREST PLANTATION AND AGROFORESTRY

2017

ABSTRACT

The study was conducted at the Forestry Nursery Complex, Faculty of Science and Natural Resources (FSSA) located in the region of University Malaysia Sabah. The study was conducted in early August until early November that lasted for 84 days. The objective of this study was to identify the decay rates in different materials and also to study the nutrient content in vermicompost. In this study, the method used vermicompost container. Vermicompost is a product derived from biological degradation of organic waste is accelerated by interactions between earthworms and microorganisms. Earthworms feed on and break down organic waste into finer particles to dispose of waste through grinding gizzard, and they obtain food from microorganisms that grow on organic materials. From the results of this study, it was concluded that treatment A is used as the main ingredient of goat dung compost shows the percentage of the highest decay rate of 50.16%. In addition, treatment with nutrient content highest is treatment based on goat dung as a primary source of treatment A, namely Nitrogen (N) of 0.90%, the content of phosphorus (P) of 0.00034%, content of potassium (K) of 0.00023%, content Calcium (Ca) of 0.00640%, the content of magnesium (Mg) of 0.00019%, the content of sulfur (S) of 0.136%, and the content of sodium (Na) is 0.00042%. While treatment C using a mixture of goat dung and dried leaves with a ratio of 50%: 50% had the highest nutrient content of carbon (C) of 9.08% and aluminum (Al) of 0.00076%.