

UNIVERSITI TEKNOLOGI MARA

**INFLUENCE OF EFFECTIVE
MICROORGANISMS (EM) ON THE
COMPOSTING OF PINEAPPLE LEAVES
WITH GOAT MANURES**

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Final year project report submitted in partial fulfilment of the
requirements for the degree of
**Bachelor of Science (Hons.) Plantation Technology and
Management**

Faculty of Plantation and Agrotechnology

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APPROVAL SHEET

This Final Year Project Report entitled “**Influence of Effective Microorganisms (EM) on the Composting of Pineapple Leaves with Goat Manures**” was submitted by **Amirah Binti Abdul Manap**, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Plantation Technology and Management, in the Faculty of Plantation and Agrotechnology, and was approved by

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CANDIDATE'S DECLARATION

I declare that the work in this Final Year Project was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. The final year project report has not been submitted to any other academic institution or non-academic institution for any other degree or qualification.

In the event that my Final Year Project is found to violate the conditions mention above, I voluntarily waive the right of conferment of my bachelor degree and agree to be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

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ABSTRACT

Burning is a common practice in clearing the pineapple wastes for land preparation in Malaysia thus; lead to the environmental pollution and limit the land spaces. In addition, the application of excessive chemical input making the soil become unfertile. Therefore, inputs are increasing to cover the weakening soil quality that increases the production costs to maintain the high yields. One of the strategies applied to minimize these problems is composting which process the waste of organic materials by microorganisms through degradation of its biodegradable components. During this process, organic material wastes will be converted into stable products relatively used as fertilizers for soil amendments. The pineapple leaves along with goat manures will be used as raw materials of composting. Effective microorganisms (EM) will be added to evaluate the effect of them towards physical and chemical changes of composting process. This study will be conducted in the rain shelter of Plantation Office at the Campus of UiTM Jasin in Melaka by applying Completely Randomized Design (CRD) statistical tools. Different amounts EM will be added into the treatments with EM all of the treatments will be composted for 90 days. Physiochemical analysis will be conducted to analyse the compost. Temperatures and pH will be measured for physical analysis meanwhile the mineral elements content in the compost will be measured for chemical analysis. The production of compost will be tested for variance analysis using the paired sample t-test only for Nitrogen and 1-way ANOVA for the rest at 5% of significant level. Through this study, composting application is expecting to minimize the environmental pollution due to utilization of input chemicals in crop production and large amounts of agricultural wastes that limit our landfill space. The farmers also will increase the crop productivity and quality at the same time as well as increase their incomes by decreasing the production costs in crop production.

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