

UNIVERSITI TEKNOLOGI MARA

**INFLUNCE OF EFFECTIVE
MICROORGANISMS (EMs) ON THE
COMPOST QUALITY OF RICE STRAW
WITH GOAT MANURE**

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Final year project report submitted in partial fulfillment of the
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DECLARATION

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ABSTRACT

The study about composting of rice straw and goat manure were carried out due to problem of agricultural waste such as rice straw are left on the field without proper management and disposed by burning in-situ leads to the environment problem. The main purpose of this study is to evaluate the effect of EM on chemical changes towards compost quality of by using rice straw and goat manure. There are four treatment piles in which three piles treated with different % of EM solution (1%, 3% and 5%) and another one piles without EM. These four treatments were replicated three times with 90 days of composting duration. There are two parameters in this study which are physical and chemical analysis of composting process. The parameter of physical analysis consists of pH and temperature. The temperature analysis resulted treatment with 5% of EM solution shows significant difference ($p < 0.05$) compare with treatment without EM. Otherwise, the parameter of chemical analysis consists of N, P, K, Zn, Cu and Fe changes of content. The t-test conducted shows N content significant difference ($p < 0.05$) between treatment with EM and without EM. Even though the parameter of chemical analysis shows that there is no significant different ($p < 0.05$) for different % of EM solution in increase rice straw's compost quality, but can acceptable to be used.

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