

UNIVERSITI TEKNOLOGI MARA

**STUDY ON THE EFFECT OF ORGANIC
MATERIALS ON THE GROWTH
PERFORMANCE OF COCOA SEEDLING**

SITI ZUBAIDAH BINTI AZIZAN

final year project report submitted in partial fulfillment of the
requirements for the degree of
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Management**

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Name of Candidate : SITI ZUBAIDAH BINTI AZIZAN

Candidate's ID No. : 2012480678

Programme : Bachelor of Science (Hons.) Plantation
Technology and Management

Faculty : Plantation and Agrotechnology

Title : Study On The Effects Of Organic Materials On
The Growth Performance Of Cocoa Seedling

Signature of Candidate :

Date : 31st January 2015

ABSTRACT

STUDY ON THE EFFECTS OF ORGANIC MATERIALS ON THE GROWTH PERFORMANCE OF COCOA SEEDLING

A nursery experiment was carried out in rain shelter of Universiti Teknologi MARA, Jasin Campus, Melaka to study on the effect(s) of some organic wastes on soil nutrient content and growth performance of cocoa seedlings (*Theobroma cacao* L.). The experiment comprised of six treatments: cocoa pod husk ash (CPHA), rice husk ash (RHA), chicken dung, cow dung, NPK15-15-15 and control (no fertilizer application). Each treatment was mixed with 10 g of soil filled in polythene bags containing cocoa seedlings. The experiment was arranged in completely randomized design (CRD) with four replications. Cocoa seedling performances such as plant height, number of leaves, stem girth were the parameters recorded in a week interval while dry root weights and soil nutrient content were recorded at the end of the experiment. The NPK fertilizer increased significantly ($P>0.05$) the plant height, number of leaves of cocoa seedlings. However, there is no significant different in stem girth and dry root weight. The treatments also showed significant difference ($P>0.05$) for soil nutrient content (N, P, K, Ca, Mg, Na) relative to the control treatment. NPK was the most effective fertilizer for cocoa seedling growth while organic materials alone did not give any promising effects on the growth of cocoa seedlings.

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