

**DETERMINATION OF NUTRIENT AVAILABILITY IN SOIL TREATED
WITH AGRICULTURAL CHEMICAL IN COCOA PLANTATION
(R&D OF MALAYSIAN COCOA BOARD HILIR PERAK)**

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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
in the Faculty of Plantation and Agrotechnology
Universiti Teknologi MARA**

JULY 2016

DECLARATION

This Final Year Project is a partial fulfilment of the requirements for a degree of Bachelor of Science (Hons.) Plantation Technology and Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

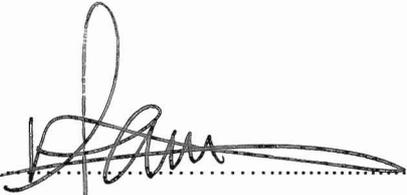
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I hereby declare that I have checked this project and in my opinion, this project is adequate in terms of scope and quality for the award of the degree of Bachelor of Science (Hons.) Plantation Technology and Management, Faculty of Plantation and Agrotechnology, Universiti Teknologi MARA.

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ACKNOWLEDGEMENTS

Bismillah-hir-Rahman-nir-Rahim

With the name of Allah swt, The most Gracious and Merciful. Praise to Allah Almighty for giving us the will and strength to go through conduct this research to fulfill of the requirement to finish my Bachelor of Science (Hons) Plantation Management and Technology. First of all, I would like to express special thanks to my supervisor Madam Nur Firdaus binti Abdul Rashid, Faculty of Plantation and Agro-technology, University Technology Mara for her support, guidance, caring, encouragement and cooperation by giving an idea in carrying out this project.

This special thanks also I credit for management of Cocoa Research and Development Centre, Malaysian Cocoa Board Hilir Perak because give me a chance and opportunity to conduct my research in their field. Then this thanks, I would like to dedicate to Dr. Alias Bin Awang, Central Executive Branch R&D Malaysian Cocoa Board Hilir Perak for giving me the information that I need for my research. Also, thanks to Tn Hj Zulkifli Hj Muhammad, manager of cocoa field because give me a lot of valuable knowledge about cocoa plantation.

Lastly, we would like to convey my gratitude towards my parents & friends for their kind cooperation and encouragement which help me upon the completion of this project. I am sincerely grateful to them for sharing their truthful and illuminating views on a number of issues related to the project.

NOR' AQILAH BINTI MAT NAWAWI

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ABSTRACT

DETERMINATION OF NUTRIENT AVAILABILITY IN SOIL TREATED WITH AGRICULTURAL CHEMICAL IN COCOA PLANTATION (R&D OF MALAYSIAN COCOA BOARD HILIR PERAK)

Economics of cocoa in Malaysia was declining from time to time. The government was recommending for applying chemical such as pesticide, herbicide and fertilizer is the best way to improve quality and quantity of yield in cocoa plantations. The accumulation of trace elements in the soil to restrict the sole function, cause toxicity to plants, and contaminate the food chain. Study aim is to investigate the correlation between the before and after applying the agricultural chemical use on soil. Plot of study is 0.4hectares situated at Research and Development Malaysian Cocoa Board Hilir Perak and top soil (0-25cm) was taken as a sample. Analysis of soil sample was conducted by using Mehlich No. 1 as availability of nutrient uptake or extraction nutrient content. The result shows that, Al has a significant difference between before and after applying agricultural chemical with p-value ≤ 0.01 . Iron(Fe) and phosphorus (P) also shows that there is a significant difference in correlation in before applying agricultural chemical (p-value ≤ 0.01). The Al, Fe and P have their relationship between the three elements. Soil pH is one factor of the existing the element in the soil. High soil pH, will present high level of Al and Fe. But it can reduce the element P for plant uptake.