

**POPULATION OF SOIL MICROORGANISM
IN DIFFERENT DEPTH
OF PEAT SOIL**

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**Final Year Project Report Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Plantation
Management and Technology
in the Faculty of Plantation and Agrotechnology
Universiti Teknologi MARA**


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CANDIDATES DECLARATION

This Final Year Project is a partial of the requirement for a Degree of Bachelor of Science (Hons.) Plantation Technology and Management, Faculty of Plantation and Agrotechnology, Universiti Teknolgi MARA.

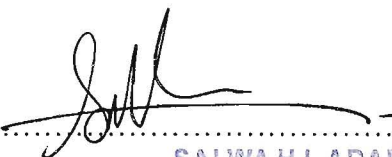
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TABLE OF CONTENTS

	PAGE
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF FIGURE	vi
LIST OF TABLES	vii
LIST OF ABBREVIATIONS	Viii
ABSTRACT	x
ABSTRAK	xi
<u>CHAPTER</u>	
1 INTRODUCTION	
1.1 Background of study	1
1.2 Problem Statement	4
1.3 Research Objective	5
1.4 Hypotheses	5
1.5 Significant of study	6
 2 LITERATURE REVIEW	
2.1 Malaysian soil	7
2.2 Peat soil	8
2.3 Distribution of peat soil in Malaysia	12
2.4 Physical properties of peat soil	14
2.5 Chemical properties of peat soil	18
2.6 Biological properties of peat soil	20
2.7 Function of soil microorganism	22
 3 METHODOLOGY	
3.1 laboratory analysis	24
3.2 Location of Soil sampling	24
3.3 Sampling method	25
3.4 Apparatus and Equipment	26
3.4.1 Soil sampling	26
3.4.2 Microbial count in laboratory	26
3.4.3 Determination of soil pH	26
3.4.4 Determination of soil nutrient	27
3.5 Preparation of growth media PDA and NA	28
3.6 Dilution samples and isolation of soil microbe	28
3.6.1 Dilution sample and isolation of soil fungi	28
3.6.2 Dilution sample and isolation of soil bacteria	29
3.7 The microbial population count	30
3.8 Determination of chemical properties of peat soil	30
3.8.1 Determination of soil moisture content	30
3.8.2 Determination of soil pH	31
3.8.3 Determination of soil Nutrient	31
3.9 Data Analysis	32

4	RESULT	
4.1	Determination soil Microorganism population in different depths of peat soil	33
4.2	Identification the factor that most effect the bacteria and fungi	37
4.3	Determination of peat soil chemical properties at different depths of peat soil	41
5	DISCUSSION	43
6	CONCLUSION AND RECOMMENDATION	46
	CITED REFFERENCES	47
	APPENDICES	53
	CURRICULUM VITAE	69

ABSTRACT

Peat soil contains high organic matter and mineral for support plant growth. The soil contain a million number of microorganism either bacteria or fungi. There is a bio- indicator that used to determine the soil fertility and enhance plant productivity. Bacteria and fungi play an important role in mineralization process to supply the nutrient for plant the nutrient are such as N, P, K, Mg, Ca and Zn. The population of bacteria and fungi in peat soil is influenced by various factor that was conductive their growth and development such as moisture content, temperature, nutrient status and peat soil properties. This study was to determine the population of soil microorganism and to identify factors that attributes to the population of soil microbe at different depth of peat soil. Soil sample were sampled at Ladang FELCRA Sri Mendapat, Jasin Melaka. The population of microbe were determine through colony forming unit (CFU), the nutrient content were determine using ICP – OES and the pH was determine using water (1:2.5). The moisture also was determined through Gravimetric Measurement (weight basis). Parameter in this study consists of population of microbe, soil pH, soil nutrient (P, K, Mg, Ca, and Zn) and moisture content. Result shows the population of bacteria was significant at the T3 (30- 45 cm) and fungi at T1 (0 - 15 cm) compare to others depth. Population of microbe was decreasing along with soil depth. Bacteria shown there was strong relationship correlated with K, Mg, and pH. Whereby there was no relationship between population of fungi and other factors. The good water level was important in oil palm plantation in order to ensure the population of microorganism is optimum to done their mineralization process.