ANATOMICAL PROPERTIES OF VARIOUS PALM FRONDS – OIL PALM, COCONUT PALM AND DATE PALM.

By

Mohd Irwan Wahab

Final Project Paper Submitted in Partial Fulfilment for the Diploma in Wood Industries, Faculty of Applied Science,
Universiti Teknologi MARA

April 2001

ACKNOWLEDGEMENT

In the name of Allah S.W.T., I wish to my express my deepest appreciation and sincere thanks to my advisor Assoc. Prof. Dr. Suhaimi Mohammed for his guidance, suggestion, advises and constructive, critic through the preparation of this project paper.

I would also like to offer my special thanks to Assoc. Prof. Dr. Jamaludin Kasim as Course Tutor and lecturer of WTE 375 and Mr. Rudaini Mohd. Nawawi for his valuable help and co-operation.

Finally, special thank to all my friends also to those who are involved either directly or indirectly for their help and moral support during the whole period of this project.

TABLE OF CONTENTS

		Page	
DEDICATION ACKNOWL LIST OF FIGURE LIST OF PL ABSTRACT ABSTRAK	SHEET. ON. EDGEMENTS. GURE. ATE.	iii iv vii viii ix	
CHAPTER			
1	INTRODUCTION. 1.1 Overview. 1.2 Objectives.	1	
2	LITERATURE REVIEW 2.1 Characteristic of Oil Palm 2.2 Characteristic of Coconut Palm 2.3 Characteristic of Date Palm 2.4 Uses 2.5 Anatomical Properties	3 4 5 7	
3	MARERIAL AND METHODS. 3.1 Preparation of Oil Palm. 3.2 Sectioning. 3.3 Staining and Mounting. 3.4 Scanning Microscope of Frond Species.		
4	RESULTS AND DISCUSSIONS. 4.1 Transverse Section of Oil Palm Frond. 4.2 Transverse Section of Coconut Palm Frond. 4.3 Transverse Section of Date Palm Fronds.	15 15 16 17	

LIST OF FIGURE

Figure	Page
1	Sampling scheme
2	Cross cut of frond11
3	Cube of frond samples11

ANATOMICAL PROPERTIES OF VARIOUS PALM FRONDS – OIL PALM, COCONUT PALM AND DATE PALM.

By

MOHD IRWAN WAHAB

April 2001

Anatomical properties of oil palm, coconut palm and date palm based on part of fronds section. The source of oil palm and coconut palm fronds were from Sungai Tekam Utara meanwhile date palm frond were from Kota Gelaggi, Pahang. Anatomical properties that had in these fronds were it has a same cell structure. There are metaxylem (vessel), metaphloem, extended protoxylem and fibre in the vascular bundle. It can be concluded, there are differences at number of vessel cell which in vascular bundle. So we can know the differences between oil palm, coconut palm and date palm.