

**THE COMPARATIVE EFFECTIVENESS BETWEEN AUTOMATIVE AND
MANUAL HARVESTING SYSTEM**

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ABSTRACT

Harvesting is one of the most importance activity for producing the estate production. The productivity of oil palm is mostly depends on age of palm (cropping level), topography, and workers' skills. Meanwhile, the efficiency of the harvesting system can increase the productivity and profit of oil palm production. Abdul et al. (2008) found that the manual harvesting system theoretically can produce about 250 to 350 bunches and meanwhile the automated harvesting system theoretically can produce about 560 to 750 bunches. This study is comparing the efficiency of two types of harvesting system which are manual and automated (SmartCUT). In the end this study, it was found that the usage of the SmartCUT is more efficient than manual harvesting system in term of oil palm productivity and cost implication of oil palm production.

TABLE OF CONTENTS

TABLE OF CONTENT

	Page
ACKNOWLEDGEMENT	iv
ABSTRACT	v
ABSTRAK	vi
TABLE OF CONTENT	vii - ix
LIST OF TABLE	x
LIST OF FIGURE	xi
LIST OF ABBREVIATION	xii

CHAPTER 1	INTRODUCTION	Page
1.0	Introduction	1
1.1	Background Study	1
1.2	Problem Statement	4
1.3	Objectives	5
1.4	Significant Of Study	5
1.5	Scope of Study	6
1.6	Hypothesis	6
CHAPTER 2	LITERATURE REVIEW	
2.1	Introduction to Oil Palm Industry	8
2.2	Fresh Fruit Bunch (FFB)	10
2.3	Harvesting	13

CHAPTER 1

1. INTRODUCTION

1.1 Background of Study

Agriculture can be define as systematized method of increasing the level of production of pants or livestock under a human management (Rimando, 2004). According to Rubenstein (2003), Agriculture is the improved of portion on the land through cultivation of plants and raising the livestock to increase the economy. Therefore, Oil palm plantation sector is one of most profitable agriculture sector among all the other of agriculture sectors. Malaysia started to plant oil palm around 1960 and the area planted increase rapidly every years. Now, Malaysia become one of the importance producer and exporter palm oil to the world. Furthermore, harvesting is the one of important item in oil palm production.

According to P.D Turner (2003), harvesting is work of collecting the fresh fruit bunch at the correct stage of ripeness that can provide a maximum oil production. A worse harvesting technique can make the yield and quality of the oil will become low such as harvest the FFB no according to the due date, long stack on FFB, and delay to transport to the mill. This is because most of companies in Malaysia are lack of manpower to harvest