

**COST EFFICIENCY ON MAIZE PRODUCTION UNDER  
CONTRACT FARMING IN KEDAH**

**AIMI BINTI ADAM**

**FINAL YEAR PROJECT REPORT SUBMITTED IN PARTIAL  
FULFILMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF BACHELOR OF SCIENCE IN  
AGROTECHNOLOGY (HONS.) HORTICULTURE  
TECHNOLOGY IN THE FACULTY OF PLANTATION AND  
AGROTECHNOLOGY  
UNIVERSITI TEKNOLOGI MARA**

**AUGUST 2020**

## DECLARATION

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

It is entirely my own work and has not been submitted to any other University or higher education institution, or for any other academic award in this University. Where use has been made of the work of other people it has been fully acknowledged and fully referenced.

I hereby assign all and every rights in the copyright to this Work to the Universiti Teknologi MARA (“UiTM”), which henceforth shall be the owner of copyright in this work and that, any reproduction or use in any form or by any means whatsoever is prohibited without a written consent of UiTM.

Candidate’s signature :

Date : 16 August 2020

Name : AIMI BINTI ADAM

Student I.D. No : 2017462614

## **ABSTRACT**

### **COST EFFICIENCY ON MAIZE PRODUCTION UNDER CONTRACT FARMING IN KEDAH**

The state of Kedah is also one of the maize growing states but not produce more production like Perak, Johor and Sarawak (Department of Agriculture, 2018). Less production could be improved through enhancing the efficiency of inputs. Thus, this study is undertaken to estimate the cost efficiency of maize farmers in the study area of Kedah. The primary data were collected from 30 maize farmers from 6 districts in Kedah during March–May 2020 for the cropping year 2019–2020. Accordingly, this study was conducted using Data Envelopment Analysis (DEA) to estimate the level of Cost Efficiency (CE), of the maize farm under contract farming in Kedah as well as Tobit model to identify determinants affecting this efficiency. The mean of CE was 0.458. The mean CE implies that there exists possibility to increase production by 54.2%. The finding revealed high inefficiency among maize farmers. The Tobit model results revealed that farming experience and farm size, had a significant effect on CE. Farming experience show negative sign and significant at 10% level while farm size is found to be positive sign and significant at 5% level influencing CE. In conclusion, the findings of from this study have leads to detection of cost inefficiency among the farmers and there needs more improvement to increase efficiency of maize production. This study could produce significant knowledge and guidance to the contract farmers under FAMA in Kedah, planners of agriculture policy makers and agencies of government to in the effort to improve the cost efficiency levels of maize production in Kedah.

## TABLE OF CONTENTS

	<b>Page</b>
<b>DECLARATION</b>	<b>I</b>
<b>ABSTRACT</b>	<b>III</b>
<b>ABSTRAK</b>	<b>IV</b>
<b>ACKNOWLEDGEMENT</b>	<b>V</b>
<b>TABLE OF CONTENTS</b>	<b>VI</b>
<b>LIST OF FIGURES</b>	<b>VIII</b>
<b>LIST OF TABLES</b>	<b>IX</b>
<b>LIST OF SYMBOLS</b>	<b>X</b>
<b>LIST OF ABBREVIATIONS</b>	<b>XI</b>
<b>CHAPTER ONE: INTRODUCTION</b>	<b>1</b>
1.1 Research Background	1
1.2 Problem Statement	4
1.3 Objectives of Study	6
1.4 Scope and Limitation of Study	6
1.5 Significant of Study	6
<b>CHAPTER TWO: LITERATURE REVIEW</b>	<b>7</b>
2.1 Cost Efficiency	7
2.2 Input in Maize Production	8
2.2.1 Seed	8
2.2.2 Fertilizer	9
2.2.3 Labour	9
2.3 Determinants of Maize Production	10
2.3.1 Age	10
2.3.2 Farm size	10
2.3.3 Farming experience	11
2.4 Previous Study on The Performance of Crop Production	11

<b>CHAPTER THREE: METHODOLOGY</b>	<b>14</b>
3.1 Introduction	14
3.2 Study Area	14
3.3 Sampling Method	15
3.4 The Design of the Research Questionnaire	16
3.5 Data Collection (Primary Data Collection)	16
3.6 Data Analysis	17
3.6.1 Data Envelopment Analysis Model	17
3.6.2 Tobit Regression Model	20
<b>CHAPTER FOUR: FINDINGS AND DISCUSSION</b>	<b>22</b>
4.1 Introduction	22
4.2 Descriptive Analysis	22
4.3 Analysis of Cost efficiency by Data Envelopment Analysis (DEA)	23
4.4 Tobit Regression Analysis of Determinant of Cost Efficiency	26
<b>CHAPTER FIVE: CONCLUSION</b>	<b>29</b>
5.1 Summary	29
5.2 Recommendations	30
<b>REFERENCES</b>	<b>32</b>
<b>APPENDIX</b>	<b>35</b>
<b>AUTHOR'S PROFILE</b>	<b>43</b>