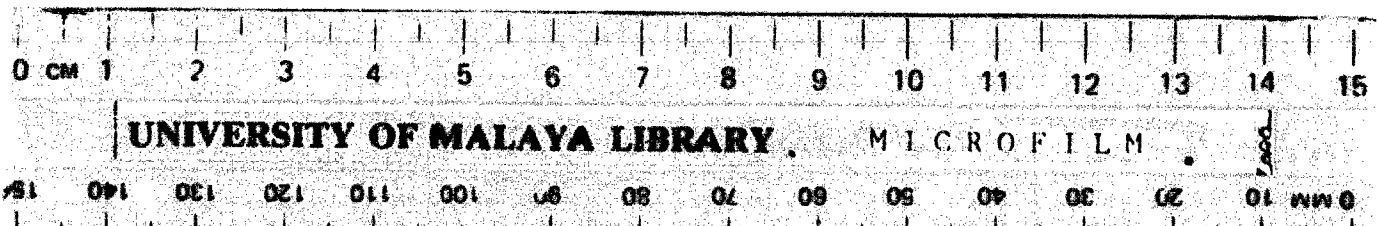


TABLE OF CONTENTS

	Page
LIST OF TABLES	v
LIST OF DIAGRAMS	vi
 Chapter	
I. INTRODUCTION	1
II. THE IMPORTANCE OF THE RUBBER INDUSTRY TO THE MALAYAN ECONOMY	3
(a) Importance to Malaya	3
(b) Employment Statistics	3
(c) Government Revenue	5
(d) International Statistics	7
(e) Production Statistics	7
(f) Price Determinants	8
(g) Introduction of Synthetic Rubber	9
(h) Effect of Rising Prices	10
III. AN ANALYSIS OF THE SUPPLY ELASTICITY OF NATURAL RUBBER	13
(a) Supply Factors	13
(b) Elasticity of Production	14
(c) Elasticity of Smallholders' Production	15
(d) Conclusions Derived	16
(e) Elasticity of Estate Production	17
(f) Elasticity of Export Supply	19
(g) Inventory Behaviour at Various Levels	19
(h) Practical Considerations	21
(i) Production Efficiency	23
IV. DEMAND ANALYSIS - THE ELASTICITY OF NATURAL RUBBER CONSUMPTION	24
(a) Introduction	24
(b) Nature of the Demand Schedule	25
(c) Reduction of Inelasticity	25
(d) The Relationship of Synthetic and Natural	25
(e) Shift Factors for Natural Rubber	27

	(f) Geographical Distribution of Usage	30
	(g) Expanding Usage of Rubber	32
V.	COST AND PROFIT ANALYSIS	34
	(a) General Introduction	34
	(b) Cost of Production	35
	(c) The Effect of Price Movements on Profits	42
	(d) An Analysis Through the Theoretical View Point	44
	(e) Effect on Price Movements on Profits and Costs	44
VI.	COMPETITION BETWEEN NATURAL AND SYNTHETIC	46
	(a) Introduction	46
	(b) Factor Substitution Between Synthetic and Natural	46
	(c) General Classification of Synthetics	48
	(d) Technical Superiority of Synthetics	48
	(e) Technical Superiority of Natural	49
	(f) Advancement of Synthetics	50
	(g) Price Considerations	50
	(h) Cost Considerations	51
	(i) Long Run Determinants	53
VII.	PROBLEMS AND SOLUTIONS	54
	(a) A General Picture of Present Competition	54
	(b) Solutions	
	(1) Costs as Prime Factor in Future competition	56
	(2) Replanting with High Yielding Clones	57
	(3) Lowering of Production Costs	58
	(4) Expansion of Production Facilities to Meet Increased Consumption	59
	(5) Expansion of Plantations	61
	(6) Expansion of Facilities for Synthetic	62
	(c) Research Facilities	
	(1) Science in Industrial Development	63
	(2) Profit Motive	63
	(3) Science in Plantation Development	63
	(4) Plantation Research	64

VIII.	FUTURE PROSPECTS FOR THE MALAYAN NATURAL RUBBER INDUSTRY	68
	(a) Introduction	68
	(b) An Economic approach	68
	(c) The Basis of Future Competition	
	(1) Cost Considerations	70
	(2) Marketing Considerations	72
	(3) Technical Improvements in the Product - Rubber	72
	(d) Conclusion	74



LIST OF TABLES

Table	page	
2-1.	Rubber as Percentage of Exports and Gross Domestic Product 1955-1956	4
2-2.	Employment Statistics in Rubber and Rubber Products Industries (1945 & 1957)	5
2-3.	Details of Duty Collected on Export of Rubber - Federation of Malaya 1959 . . .	6
2-4.	Estimated Monetary Supply in Malaya 1959	6
3-1.	Acreage Tapped, Production of Yield per Acre for High Yielding Material and Unselected Seedlings 1954 to 1961 . . .	22
4-1.	Rubber Consumption in 1959 by Country in Percent of Estimated Total World Usage .	51
4-2.	World Annual Consumption of Rubber at Ten Year Intervals and Increase in Annual Rate of Consumption for Each Decade . .	32
5-1.	The Profitability of Rubber per Acre with Price at 50 cents and Cost at 44.93 cents	42
7-1.	Consumption of Rubber, 1959, in Tyre and Non-Tyre Industries in Canada, France, United Kingdom and the United States . .	55

LIST OF DIAGRAMS

Figure		Page
1.	Graphical Presentation of United States Consumption of Reclaimed Rubber	11
2.	World Output of Rubber	24
3.	Motor Vehicles in Service	24
4.	Zonal Relationship of Synthetic and Natural	26
5.	Graphic Presentation to Show Rubber Yield Throughout its 26 Years of Operation . .	41
6.	Zonal Relationship Between Natural and Synthetic	47