

TABLE OF CONTENTS

Chapter	Page
I INTRODUCTION	1
1.1. Background	1
1.2. Objectives	2
II DESCRIPTION OF THE PROJECT	3
2.1. Raw Materials	5
2.1.1. Quality Specification	5
2.1.2. Availability and Supply Situation	7
2.2. Products	10
2.2.1. Fatty Acids	10
2.2.2. Physical Properties of Fatty Acids	12
2.2.3. Chemical Properties of Fatty Acids	16
2.2.4. Fatty Acids Handling and Testing	18
2.2.5. Glycerine	22
2.3. Machinery and Equipments	23
2.3.1. Machine Supplier	23
2.3.2. List of Machinery and Equipments	23
2.4. Production Process Principle	25
2.4.1. High Pressure Fat Splitting	26
2.4.2. Glycerine Water Purification	26
2.4.3. Glycerine Water Evaporation	27
2.4.4. High Vacuum Glycerine Distillation	27
2.4.5. Fatty Acids Distillation	28
2.4.6. High Pressure Hydrogenation	28
2.4.7. Spray Cooler for Stearic Acid	29
2.4.8. Flaking and Bagging	29

2.5. Factory Location	30
2.6. Environmental Effect	31
2.7. Project Implementation	31
III MARKETING ANALYSIS	33
3.1. Fatty Acids Producers in Indonesia	33
3.2. World's Exporter of Fatty Acids	34
3.3. World's Importer of Fatty Acids	35
3.4. World's Exporter of Glycerine	37
3.5. World's Importer of Glycerine	38
3.6. The Uses of Fatty Acids and Glycerine	39
3.7. Trade Barrier Analysis	41
3.7.1. Exporting to EEC Countries	41
3.7.2. Exporting to the United States	42
3.7.3. Exporting to Japan	43
3.8. Marketing Strategy	44
3.9. SWOT Analysis	46
3.9.1. Strength	46
3.9.2. Weakness	47
3.9.3. Opportunity	48
3.9.4. Threats	48
IV FINANCIAL ANALYSIS	49
4.1. Assumptions Used in Financial Analysis	50
4.1.1. Production	50
4.1.2. Sales and Selling Price	50
4.1.3. Production Cost	51
4.1.3.1. Raw Material	51
4.1.3.2. Direct Labour	51
4.1.3.3. Manufacturing Overhead	52
4.1.4. Selling, Gen. and Adm. Expenses	55
4.1.4.1. Salaries and Allowances	55

4.1.4.2. Marketing Fee	56
4.1.4.3. Communication Expenses	56
4.1.4.4. Transport and Travelling	56
4.1.4.5. Professional Fee	57
4.1.4.6. Insurance	57
4.1.4.7. Repairs and Maintenance	57
4.1.4.8. Depreciation	58
4.1.4.9. Miscellaneous Expenses	58
4.1.5. Financial Charges	58
4.1.6. Corporate Income Tax	59
4.1.7. Balance Sheets	60
4.2. Investment Requirements and Sources of Funds..	62
4.3. Profitability Analysis	64
4.4. Leverage Ratio	66
4.5. Cash Flow Analysis	68
4.6. IRR, NPV and Payback Period Analysis	69
4.6.1. IRR (Internal Rate of Return)	69
4.6.2. NPV (Net Present Value)	70
4.6.3. Payback Period	72
4.7. Break Even Analysis	72
4.8. Sensitivity Analysis	72
4.8.1. Decreasing of Selling Price of Prod. ..	72
4.8.2. Increasing of Operating Costs	74
4.8.3. Combination of Changing in Decreasing of Selling Price of Products and Increasing of Operating Costs	75
4.9. Financial Ratio Standards	76
V SUMMARY AND CONCLUSION	78
BIBLIOGRAPHY	80

LIST OF TABLES

Table	Page
1. Chemical Composition of Several Fats and Oils	6
2. The Production of CPO in Indonesia	8
3. The Total Production of CPO of PTP VII	9
4. The Application of Fatty Acids	11
5. Physical Properties of Fatty Acids	13
6. Boiling Point of Fatty Acids	14
7. List of Machinery and Equipments	24
8. Time Schedule for Project Implementation	32
9. Fatty Acids and Glycerine Producers in Indonesia ..	33
10. World's Exporter of Fatty Acids	34
11. World's Importer of Fatty Acids	36
12. World's Exporter of Glycerine	37
13. World's Importer of Glycerine	38
14. The Uses of Fatty Acids	39
15. The Uses of Glycerine	40
16. Indirect Labour Cost	52
17. Salaries and Allowances	55
18. Investment Requirements and Sources of Funds	63
19. Impact of Decreasing of Selling Price to NPV & IRR	73
20. Impact of Increasing of Operating Cost to NPV & IRR	74
21. Impact of Decreasing of Selling Price and Increasing of Operating Cost to NPV	75
22. Impact of Decreasing of Selling Price and Increasing of Operating Cost to IRR	76

LIST OF EXHIBITS

Exhibits	Page
1. Investment Requirement and Sources of Funds	82
2. Projected Production and Sales	83
3. Schedule of Raw Material Used in Production	84
4. Projected Cost of Goods Sold	85
5. Projected Income Statement	86
6. Schedule of Depreciation on Fixed Assets and Amortization of Pre Operating Expenses	87
7. Schedule of Amortization of Investment Loan	88
8. Schedule of Amortization of Working Loan	90
9. Calculation of NPV and IRR	91
10. Calculation of Payback Period	92
11. Break Even Analysis	93
12. Projected Cash Flow Statement	94
13. Projected Balance Sheet	95
14. Ratio Analysis	97

LIST OF FIGURES

Figure	Page
1. Fatty Acids and Glycerine Production	98
2. Fat Splitting Plant with Preconcentration	99
3. Glycerine Water Prepurification Plant	100
4. Glycerine Water Evaporation Plant	101
5. High Vacuum Glycerine Distillation with Bleaching and Post Distillation	102
6. Fatty Acid Distillation with Precolumn and Heat Recovery	103
7. High Pressure Continuous Hydrogenation Plant	104
8. Spray Cooling of Stearic Acid	105
9. Flaking and Bagging	106