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DESIGN, CONSTRUCTION AND EVALUATION
OF A MANUALLY OPERATED
PEANUT SHELLER

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DESIGN, CONSTRUCTION AND EVALUATION
OF A MANUALLY OPERATED
PEANUT SHELLER

A Thesis

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A B S T R A C T

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A manually operated peanut sheller was designed and constructed at the Department of Engineering and Agro-Industrial Technology, to evaluate the performance of the peanut sheller and analyze the cost and return for small scale peanut production.

The principal components of the machine was made up of wood. The machine basically consists of the shelling drum, cylinder, hopper and stand. The machine was made portable for easy handling operation and maintenance.

Highly significant results were obtained in terms of shelling efficiency, feeding capacity and percentage undamaged nuts. Results showed that an angular speed of 100 rpm gave the highest feeding capacity of 0.92 kg/min, shelling efficiency of 93.75 percent and percentage undamaged nuts of 95.50. Results revealed that shelling efficiency, feeding capacity and percentage undamaged nuts were significantly affected by the angular speeds.

The cost of the machine is P685.75. It has a pay back period of 84 hours and a break even point of 2.76 kilogram per hour. A net return of P2,166.00 per year can be attained.

TABLE OF CONTENTS

	Page
BIOGRAPHICAL SKETCH	iii
ACKNOWLEDGEMENT	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF APPENDIX FIGURES	x
ABSTRACT	xi
INTRODUCTION	1
Objectives of the Study	2
Time and Place of the Study	3
Scope and Limitation of the Study	3
Definition of Terms	4
REVIEW OF LITERATURE	5
Principle of Shelling	5
Classification of Shellers	6
Mechanical Damaged	7
Effect of Moisture Content on Seed Damage	8
Effect of Cylinder Speed and Clearance on Seed Damage	9
Effect of Cylinder Speed and Clearance on Shelling Efficiency	9
MATERIALS AND METHODS.	12
Materials for the Construction of the Machine	12
The Design Criteria	12

Description of the Machine	12
Principles of Operation	14
Evaluation of the Machine	14
Preparation of the Samples	14
Testing of the Machine	15
Viability of Shelled Peanut	15
Data Gathered	16
Experimental Method	16
Statistical Design and Analysis	19
Cost and Return Analysis	20
Theoretical Basis of Design	22
RESULTS AND DISCUSSION	27
The Peanut Sheller	27
Problems Encountered	33
Feeding Rate of the Machine	34
Shelling Efficiency	35
Output Capacity (Shelled Pods)	36
Unshelled Pods	38
Percentage of Undamaged, Bruised and Broken	39
Percentage Germination	42
Cost Analysis	43
SUMMARY, CONCLUSION AND RECOMMENDATION	48
LITERATURE CITED	51
APPENDICES	53

LIST OF TABLES

Table	Page
1 Feeding Rate of the Peanut Sheller	35
2 Shelling Efficiency	36
3 Output Capacity (Shelled Pods)	37
4 Output Capacity (Unshelled pods)	39
5 Percentage Undamaged, Bruised and Broken Nuts	41
6 Percentage Germination	42
7 Basic Information of the Peanut Sheller . . .	45
8 Financial Analysis of the Peanut Sheller . . .	46
9 Bill of Materials	47

LIST OF FIGURES

Figure	Page
1 The Photographic View of the Peanut Sheller	13
1a. The Peanut Sheller	28
2 The Front and Side View of the Peanut Sheller	29
3 The Hopper Assembly	30
4 The Shelling Drum Assembly	31
5 The Conveyor and Stand Assembly	32

LIST OF APPENDIX TABLES

Appendix Table	Page
1 Raw Data of the Feeding Rate of the Peanut Sheller	53
1a ANOVA of the Feeding Rate of the Peanut Sheller	53
2 Raw Data of the Shelling Efficiency	54
2a ANOVA of the Shelling Efficiency	54
3 Raw Data of the Output Capacity (Shelled Pods)	55
3a ANOVA of the Output Capacity (Shelled Pods)	55
4 Raw Data of the Output Capacity (Unshelled Pods)	56
4a ANOVA of the Output Capacity (Unshelled Pods)	56
5 Raw Data of the Percentage Undamaged Nuts .	57
5a ANOVA of the Percentage Undamaged Nuts . .	57
6 Raw Data of the Percentage Bruised Nuts . .	58
6a ANOVA of the Percentage Bruised Nuts . . .	58
7 Raw Data of the Percentage Broken Nuts . .	59
7a ANOVA of the Percentage Broken Nuts	59
8 Raw Data of the Percentage Germination . .	60
8a ANOVA of the Percentage Germination	60

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OF A MANUALLY OPERATED
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^{1/}

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INTRODUCTION

Peanut is a very nutritious seed containing high quality protein. It is a major source of food shortening, confectionery and other food and industrial products (PCARRD, 1986).

The national average yield of peanut remains low inspite of its favorable price in the local market. The low yield of 634 metric tons can be attributed to two factors, namely: the employment of low level technology by local peanut farmers, and the more common use of peanut as an intercrop with other upland crops like corn and cassava rather than as primary crop.