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**TESTING AND EVALUATION OF COFFEE
DRYERS IN SOUTHERN LUZON**

JENNY-VI INCOGNITO DOLOR

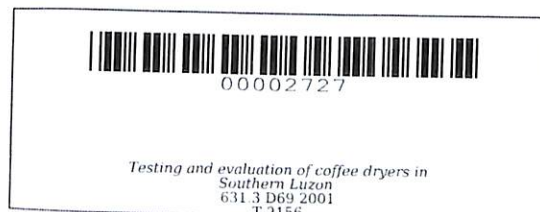
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TESTING AND EVALUATION OF COFFEE
DRYERS IN SOUTHERN LUZON

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ABSTRACT

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The study was conducted to determine the drying efficiency and drying rate of the different brand of dryers in drying coffee beans and also to determine whether the existing machines can be adopted by small to medium scale coffee growers in drying coffee cherries.

Batch type dryers intended for drying coffee beans used at the coffee mills, in Lalaan, Silang, Cavite were tested and evaluated from November 2000 to January 2001.

The first two dryers that use 960 kg have a brand name of Masatoyo Rice Machine-1 and Sun Brand Dryer owned by ERA Enterprise. The third dryer that uses 1,500 kg and 1,620 kg has a brand name of Masatoyo Rice Machine-2 owned by Twin Bros. Coffee Export.

Results showed that Sun Brand Dryer obtained the highest drying efficiency of 49.11 % and drying rate of 5.5 % MC/hr followed by Masatoyo Rice Machine-1 with drying efficiency of 43.50 % and drying rate of 3.67 % MC/hr. Both dryers have input capacity of 960 kg of coffee beans. Masatoyo Rice Machine-2, which has input capacity of 1,500 kg of coffee beans for the first batch obtained a drying efficiency of 43 % and drying rate of 2.25 % MC/hr, for the second batch containing 1,620 kg of coffee beans its drying efficiency is 40 % and drying rate is 1.5 % MC/hr.

The costs of Masatoyo Rice Machine-1, Sun Brand Dryer and Masatoyo Rice Machine-2 are P53,000.00, P70,000.00 and P58,000.00, respectively. Sun Brand Dryer

obtained the highest annual net income of P57,775.20 followed by Masatoyo Rice Machine-2 with P46,120.20 and Masatoyo Rice Machine-1 with a net income of P8,836.80. Masatoyo Rice Machine-1 and Sun Brand Dryer operate at 8 hours a day in 105 days while Masatoyo Rice Machine-2 operates at 12 hours a day in 105 days.

TABLE OF CONTENTS

	Page
BIOGRAPHICAL SKETCH	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	vi
TABLE OF CONTENTS	viii
LIST OF TABLES	xi
LIST OF APPENDIX TABLES	xii
LIST OF APPENDIX FIGURES	xiii
INTRODUCTION	1
Importance of the Study	2
Objectives of the Study	3
Time and Place of the Study	3
Scope and Limitation of the Study	3
REVIEW OF RELATED LITERATURE	4
Drying Methods	4
Types of Dryer	5
Drying Phenomena	6
Airflow Velocity	7
Temperature of the Drying Air	8
Relative Humidity	8
Moisture Content	9

Drying Time	9
Drying Capacity	10
Heating Value of Fuels	10
MATERIALS AND METHODS	12
Materials	12
Methodology	12
Preparation of the Samples	13
Testing of the Machine	13
Criteria for Evaluation	14
Economic Evaluation	15
Statistical Analysis	18
RESULTS AND DISCUSSION	19
Drying Time	21
Drying Temperature	22
Drying Rate	22
Drying Efficiency	23
Velocity of Drying Air	24
Ambient Temperature and Relative Humidity	24
Fuel Consumption	25
Economic Analysis	26
SUMMARY, CONCLUSION AND RECOMMENDATION	29
Summary	29
Conclusion	30

Recommendation	31
LITERATURE CITED	32
APPENDICES	33

LIST OF TABLES

Table	Page
1 Usual Range of Airflow to Different Drying System	7
2 Heating Values of Fuels	11
3 Operating Conditions of the Dryers	21
4 Comparative Study of Technical Performances of the Dryers	23
5 Average Relative Humidity	25
6 Comparative Study of Cost and Return Analyses of Dryers	27

LIST OF APPENDIX TABLE

Appendix Table	Page
1. Basic Information of Masatoyo Rice Machine-1	34
2. Financial Analysis of Masatoyo Rice Machine-1	35
3. Basic Information of Sun Brand Dryer	36
4. Financial Analysis of Sun Brand Dryer	37
5. Basic Information of Masatoyo Rice Machine-2	38
6. Financial Analysis of Masatoyo Rice Machine-2	39
7. Average Temperatures of the Dryers	40
8. Average Air Velocity	41

LIST OF APPENDIX FIGURES

Appendix Figure	Page
1. Photographic View of Masatoyo Rice Machine-1	42
2. Photographic View of Sun Brand Dryer	43
3. Photographic View of Masatoyo Rice Machine-2	44
4. Masatoyo Rice Machine-1 Containing 960 kg of Partially Dried Coffee Beans	45
5. Sun Brand Drier Containing 960 kg of Partially Dried Coffee Beans ...	46
6. Masatoyo Rice Machine-2 Containing 1,500 kg of Partially Dried Coffee Beans	47
7. Masatoyo Rice Machine-2 Containing 1,620 kg of Partially Dried Coffee Beans	48
8. Loading of Coffee Beans	49
9. Mixing of Coffee Beans (ERA Enterprise)	50
10. Mixing of Coffee Beans (Twin Bros. Coffee Export)	51
11. Moisture Content Determination	52
12. Sun-Drying of Coffee Cherries in Southern Luzon Using Concrete Pavements	53
13. Sun-Drying of Coffee Cherries in Southern Luzon Using Woven Materials	54

TESTING AND EVALUATION OF COFFEE DRYERS IN SOUTHERN LUZON ^{1/}

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INTRODUCTION

Coffee is one of the most important agricultural export products. It is grown almost exclusively in developing countries. At the coffee production sites (farms and estates) two different main methods of processing are used to obtain intermediate product that will subsequently be treated in exactly the same way to provide coffee beans of commerce. These methods are dry processing, which produces dried coffee cherry and wet processing, which produces (dry) parchment coffee.

One of the processing operations for harvested coffee cherries is drying. Drying refers to the removal of moisture, usually by heat and air movement, to provide an environment in which an organism – yeast, molds, and bacteria – that causes spoilage cannot grow or grow very slowly. Drying should be completed in the shortest time possible.