

Financial Profiles for Palmyrah Based Agro-industrial Projects

**J.K.M.D. Chandrasiri
W.A. Jayaratne**

Research Study No. 92

March 1995

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114, Wijerama Mawatha
Colombo 07.
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FOREWORD

Palmyrah is an economically valuable resource which could be used for various industrial projects. However, adequate information about such projects is a long felt need. This study, which was commissioned by the Palmyrah Development Board, was conducted by the HARTI to fill this information gap.

The study mainly seeks to find out financial requirements on the basis of inputs, labour and technology applied for different palmyrah industrial activities, and also their viability. Possible means for credit for these projects have also been examined. The study is based on information gathered from several districts, namely, Puttalam, Anuradhapura, Hambantota, Ampara, Batticaloa and Trincomalee.

The information provided by this study would be useful for people who are interested in commencing projects of this nature and also Government and Non-Governmental Organizations which are interested in encouraging people towards them, and banks, which are interested in providing financial facilities for such ventures.

Dr. S.G. Samarasinghe
Director/HARTI.

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**J.K.M.D. Chandrasiri
W.A. Jayaratne**

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CHAPTER ONE

Introduction

1.1. General

Financial profiles on palmyrah based agro-industrial projects were prepared by the Agrarian Research and Training Institute* for the Palmyrah Development Board (PDB) to use these profiles to encourage those who are interested to invest on various palmyrah based industries.

1.2. Objectives of the Study

The major objective of this exercise is to give a clearer picture of different palmyrah agro-industrial projects in terms of their inputs, labour, technical and financial requirements and their viability, in order to encourage people to start enterprises or self-employment activities. This would also help banks and other institutions which provide credit facilities for consideration of giving credit.

Estimating the financial requirements, based on current value, for both the training of people interested in different palmyrah projects and for the cultivation of palmyrah in new lands were sub -objectives of this study.

The examination of institutions from which it is possible to obtain credit for these projects was an additional objective.

* Name of the Institute was changed as Hector Kobbekaduwa Agrarian Research and Training Institute (HARTI) from February 1995.

1.3. Study Method and Applicability of the Financial Profiles

These profiles are intended to be prepared on the basis of the general situation of palmyrah production and income earning activities in Puttalam, Anuradhapura, Hambantota and all the districts in the Eastern Province.

There are variations in the cost of production, profit and margins between similar types of industries in different districts and sometime even within a single district due to the level of development and the size of investment. Hence profiles were prepared for each activity by using reliable data regarding that activity in a particular district. Each profile can be replicated in any district by using data from that particular district.

1.4. Data Collection and Limitations

Data collected between the period of January and April 1992 from the relevant districts was used for this exercise. Lack of time series data on supply and demand and market prices of palmyrah products etc. constrained forecasting. The difficulty in obtaining data on the number of people requiring training and the extent to be allocated for growing palmyrah, was a constraint in calculating the total amount of finance required.

CHAPTER TWO

Financial Profiles for Palmyrah Based Agro-industries.

2.1. Production : Fibre Processing

Out put : Processed Fibre

Input Materials : Palmyrah Sheaths

Marketing system : There is a substantial demand locally for processed fibre. This demand is at present mainly fulfilled by imported fibre. About 50 m.ts of fibre are imported each year. If it is produced locally at a reasonably low cost there is an export market potential.

Marketing : There are purchasing centres of the PDB in the major palmyrah districts. In addition there are private buyers too. More private traders will enter the market when the volume of production increases. The marketed surplus does not encourage the traders at present.

Project 1 : Fibre Processing on Manual/Individual Basis*

Basic requirements : This can be started as a cottage based enterprise. The following items are the basic input requirements : cutting knives, wooden hammers, combs, wooden platforms and soaking barrels (canals, ponds or other

water loggings can also be used for this). Most of these items can be made by the producers themselves or within the family unit without spending much money.

Management and Technical Skills : A person who commences this type of enterprise in a separate hut in his home garden can work on a full time or part time basis. This does not require a specific skill and a few days working practice is adequate. The project is most suitable for women. Thus the financial profile of the project is prepared for the women entrepreneurs.

1) Total investment requirement of the project in the first month.

A) Fixed capital estimates		Rs.	Rs.
i)	Making a hut (10' x 5' size)		500
ii)	For equipments	(Rs)	
	Cutting knife	-	400
	Mallet	-	75
	Hand Comb	-	250
	Trimming knife	-	75
	Half cut barrel	-	400
			1,200
			1,200
	Sub total for fixed capital		1,700
			1,700

B) Working capital estimates

i)	Raw-material for one month (2340 sheaths x 10 cents single sheath at private lands)	234
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ii)	Transporting of raw-material (transport by two wheel tractor from 10 miles distance)	200
iii)	Salaries (for one month) (Rs. 50/- per day x 26 days)**	1,300
	Sub total for working capital	1,734
	Total Investment	3,434
C)	Ways of obtaining money Long term loan	3,434
2)	Estimated cost of production (for 39 kgs. per month and 468 kgs. per annum).	
		Monthly
		Rs.
i)	Raw-material	234
ii)	Maintenance & Repairing	40
iii)	Salaries	1,300
iv)	Depreciation of Building (20%)	8
	Equipment (20%)	20
v)	Transport	200
vi)	Interest on loan (25%)	71
		Total
		1,873
		Annually
		Rs.
		2,808
		480
		15,600
		100
		240
		2,400
		858
		22,486
3)	Estimated income from sales (in the current market situations).	
i)	Input output formula One kg. of processed fibre = 60 single palmyrah sheaths.	

		<u>Per Month</u>		<u>Per Year</u>		
		Qty. Kgs.	Price PerKg.	Sales Income Rs.	Qty. Kgs.	Sales Income Rs.
ii)	Marketing Expenditure	39	Rs. 65***	2,535 30	468	30,420 360
	Net Sales Income			2,505		30,060
				=====		=====
4)	Estimate of Profitability		<u>Monthly</u>		<u>Annually</u>	
			<u>Rs.</u>		<u>Rs.</u>	
i)	Net Sales Income		2,505		30,060	
ii)	Total Cost of Production		1,873		22,486	
	Net Income		632		7,574	
			=====		=====	

Clarifications

- : * The relevant information for this project was collected from the Puttalam district.
- : ** The financial profile is prepared for women workers and the salary scale applied here is the normal rate women are paid in Puttalam when they are hired for onion cultivation, which was the most dominant labour demanding sector at the time of study.
- : *** This is the price the Palmyrah Development Board paid for producers at their purchasing centres in Puttalam; the prices paid by the private traders varied.

Notable:

- 1) In the case of fibre processing on a manual basis, mainly women are involved. Men can also become involved and generate a higher output per day.
- 2) The lack of time series data on fibre prices and other relevant items prevents us from forecasting the profitability in this project. The PDB at present encourages private entrepreneurs to enter this industry and is exploring possibilities for exporting fibre. The early signals are said to be positive.

Project 2 : Fibre Processing on Mechanical/Group Basis

Basic Requirements : This project is proposed to be started as an enterprise in which a number of people work together. Fibre is extracted using a diesel operated machine. The sheaths are crushed and combed by a single machine. The rest of the activities; further combing, sizing, and bundling will be done manually. The basic equipments, tools and other needs include a fibre extracting machine with a mechanical combing device (proto-type available with PDB), 5 cutting knives, 5 mallets, 5 hand combs, 5 trimming knives, a hut, a pond of water and six people.

Management and Technical Skills : One mechanically skilled person is required. Of the other three males two will operate the machine (supplying and pre-preparation of sheaths). The two female workers will be involved in combing, processing and binding the fibre. These activities do not require specific skills.

1) Total investment requirement of the project in the first month.

A)	Fixed Capital Estimates	Rs.	Rs.
i)	Making a hut (20'X8' size)	2,000	
ii)	Construction of a pond of water (8'x4'x4' size)	2,500	
iii)	Fibre extracting machine with mechanical combing device (available with PDB)	55,000	
iv)	Tools & equipments (Rs)		
	5 cutting knives at Rs. 400 each	2,000	
	5 mallets at Rs. 75 each	375	
	5 hand combs at Rs. 250 each	1,250	
	5 trimming knives at Rs. 75 each	375	
		4,000	4,000
v)	Furniture (a table at Rs. 500, a chair at Rs. 250, stationary - Rs. 200)	950	
	Sub total for fixed capital	64,450	64,450

B) Working capital estimates (for one month/26 working days).

		Rs.	Rs.
i)	Raw-material (11,700 pairs of sheaths at the rate of 20 cents one pair)	2,340	
ii)	Diesel for machine (10 litres per day at the rate of Rs. 15 per litre)	3,900	

iii)	Transporting raw-material (transport by four-wheel tractor from 15 miles distance)	900
iv)	Maintenance & repair	300
v)	Salaries (One skilled person at the rate of Rs. 2,500 per month, 2 unskilled males at the rate of Rs. 70 per day each and 2 females at the rate of Rs. 50 each)	8,740
vi)	Employees Provident Fund (12% of the salary)	1,049
	Sub total for working capital	17,229
	Total Investment	81,679
2)	Ways of obtaining money	
	Long term loan	81,679
3)	Estimated cost of production (for 520 kgs. per month and 6,240 kgs. per year).	

		<u>Monthly</u> Rs	<u>Annually</u> Rs
i)	Raw-materials	2,340	28,080
ii)	Diesel	3,900	46,800
iii)	Transport of raw-material	900	10,800
iv)	Maintenance & repair	300	3,600
v)	Salaries & EPF	9,789	117,468
vi)	Depreciation of Hut (20% per year)	33	400
	Pond (10% per year)	21	250
	Machine (10% per year)	458	5,500
	Tools/equipment (10% per year)	33	400
	Furniture (10% per year)	8	95

vii)	Interest on loan (25% per year)	1,701	20,420
	Total	19,483	233,813

4) Estimated income from sales.

i) Input output formula

One Kg. of processed fibre = 45 single palmyrah sheaths
(Mechanical processing minimized damage to the fibre)

ii)	<u>Per Month</u>		<u>Per Year</u>		
	Qty. Kgs.	Price Per Kg.	Sales Income Rs.	Qty. Kgs.	Sales Income Rs.
	520	65	33,800	6,240	405,600
Marketing expenditure			300		3,600
Net sales income			33,500		402,000

5) Estimated profitability.

i)	Net sales income	33,500	402,000
ii)	Total cost of production	19,438	233,813
	Net Income	14,017	168,187

Clarifications : This financial profile is based on information obtained from the Puttalam District.

2.2. Production : Palmyrah Leaf Products

Production Type : Baskets, Trays, Caps, Mats, etc.

Marketing : There is a certain demand for these products especially in palmyrah growing areas. The

attention of the urban consumers can also be obtained if these products are prepared qualitatively to satisfy their requirements. Recently an ARTI study on the marketing of palmyrah products has indicated that there is a good demand for palmyrah handicrafts among tourists.

Marketing System : In the major producing areas, the producer-consumer market channel is the most popular. The private traders will also collect from producers. The purchasing and selling centres of the PDB is also involved in buying these products.

Project 3 : Making of Rectangular Shaped Baskets of 6"x5"x5" size on an Individual Basis

Uses : They can be used for storing spices and other necessary kitchen ingredients.

Basic Requirements : This can be started as a cottage industry by females. One female can make two baskets in a day. This needs only a sizing tool (Rs. 250) and a sizing knife (Rs. 50).

1) Total investment requirement of the project in the first month.

A) Fixed capital estimates	Rs.	Rs.
i) For equipment (a sizing tool, a sizing knife)	300	
Sub total for fixed capital	300	300

B) Working capital estimates (for one month)

i)	Raw-material (46 leaves at Rs. 5 each)*	230
ii)	Blades (6 blades at Rs. 3 each)	18
iii)	Dye**	27
iv)	Salaries (for 26 days, at the rate of Rs. 50 per day)	1,300
	Sub total for working capital	<hr/> 1,575
	Total Investment	<hr/> 1,875

C) Ways of obtaining money

Long term loan 1,875

**2) Estimated cost of production (for 46 baskets per month and 552 baskets
per year).**

		Monthly	Annually
		Rs.	Rs.
i)	Raw-material	230	2,760
ii)	Blades & Dye	45	540
iii)	Salaries	1,300	15,600
iv)	Depreciation of equipment (20% per year)	5	60
v)	Interest on loans (25% per year)	39	469
	Total cost of production	<hr/> 1,619	<hr/> 19,429

3) Sales income estimate

	<u>Per Month</u>		<u>Per Year</u>
No. of baskets	Price per basket	Sales income	No. of baskets
46	Rs. 30***	1,380	552
Marketing expenditure		10	120
Net sale income		<u>1,370</u>	<u>16,440</u>

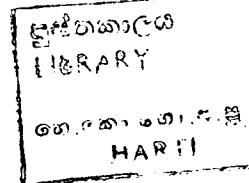
4) Estimated profitability

	<u>Monthly</u> Rs	<u>Annually</u> Rs
i) Net sales income	1,370	16,440
ii) Total cost of production	1,619	19,424
Net income	<u>- 249</u>	<u>-2,989</u>

Clarifications : This financial profile is based on information obtained from the Puttalam District.

* One basket needs one leaf. Two baskets can be made per day. The leaves have to be processed once a week and it is assumed that one person is involved only on 26 days. Hence, 46 leaves have to be bought.

** 5 boxes needs one gramme of dye. Thus the total requirement is 9 grammes.



*** This was the price given by the PDB at its purchasing centres in Puttalam. This price changes according to the area, but on most occasions the price is higher than this.

The net income indicates that the project is not viable, but since initiators' salaries are also included under cost of production, it is profitable.

This project can be operated at a viable level if raw-material can be supplied freely and products can be sold at higher prices and also if production efficiency can be improved.

Project 4 : Making of Square Shaped Baskets of 1'x1'x1' size on an Individual Basis

Uses : These baskets can be used to carry sand, fish and vegetable.

Basic Requirements : This project is most suitable for females. One female can make one basket in a day. One basket need two palmyrah leaves. Basically this project needs only a processing knife (Rs. 60).

1) Total investment requirement of the project in the first month.

A)	Fixed capital estimates	Rs.	Rs.
i)	Equipment (Processing knife)	60	
	Sub total for fixed capital	60	60

B) Working capital estimates

i) Raw-material* (46 leaves at Rs. 5 each) 230

ii)	Salaries (26 days at the rate of of Rs. 50 per day)	1,300
	Sub total for working capital	1,530
	Total Investment	1,590

C)	Ways of obtaining money	
	Long term loan	1,590

2) Estimated cost of production (for 23 baskets per month and 276 baskets per year).

		<u>Monthly</u> Rs	<u>Annually</u> Rs
i)	Raw-material	230	2,760
ii)	Salaries	1,300	15,600
iii)	Interest on loan (25% per year)	33	389
	Total cost of production	1,563	18,749

3) Estimated income of sales

No. of baskets	Price per basket	<u>Per Month</u>		No. of baskets	<u>Per Year</u>	
		Sales income	Rs.		Sales income	Rs.
23**	Rs.50	1,150		276		13,800
Marketing expenditure		30				360
Net sales income		1,120				13,440

4) Estimated profitability.

	<u>Monthly</u> <u>Rs</u>	<u>Annually</u> <u>Rs</u>
i) Net sales income	1,120	13,440
ii) Total cost of production	1,563	18,758
Net income	- 443	- 5,318

Clarifications : This financial profile was prepared based on information obtained from the Puttalam District.

* One basket needs two leaves and one female can make one basket in a day. In a month, three days are needed for processing material.

** This price was given by the purchasing centres of the PDB in Puttalam.

: This project indicates that it is not viable, but the initiator's salary has been included under "Cost of Production".

: This project can also be operated at a viable level if raw-material can be freely available and products can be sold at higher prices and also if production efficiency can be further increased.

Project 5 : Making of Flower Baskets in Different Sizes(4"x4", 5"x5", 6"x6") on Individual Basis

Basic Requirements : This can also be commenced as a cottage industry. A trained woman can make 6 baskets per day. One leaf is enough for 3 baskets. A processing knife is required.

Uses of Flower

Baskets : These baskets can be used for decorative purposes.

1) Total investment requirement of the project in the first month.

		Rs.	Rs.
A)	Fixed capital estimates		
i)	For equipment (a processing knife)	60	
	Sub total for fixed capital	60	60
B)	Working capital estimates (for one month)		
i)	Raw-material (20 leaves at Rs. 5 each)	100	
ii)	Dye (40 grammes at the rate of Rs. 3 per gramme)	120	
iii)	Salaries (26 days, at the rate of Rs. 50 per day)	1,300	
	Sub total for working capital	1,520	1,520
	Total Investment		1,580
C)	Ways of obtaining money		
	Long term loan		1,580

2) Estimated cost of production (for 120 baskets per month and 1,440 baskets per year).

	<u>Monthly</u>	<u>Annually</u>
	<u>Rs.</u>	<u>Rs.</u>
i)	Raw-material	100
ii)	Dye	120
iii)	Salaries	1,300
		15,600

iv)	Depreciation of equipment (50% per year)	3	30
v)	Interest on loan (25% per year)	33	395
	Total cost of production	1,556	18,665

3) Estimated income from sales.

No. of baskets	Price per basket	Sales income Rs.	<u>Per Year</u>	
			No. of baskets	Sales income Rs.
120	Rs. 20*	2,400	1,440	28,800
Marketing expenditure		50		600
Net sales income		2,350		28,200

4) Estimated profitability.

	<u>Monthly</u>	<u>Annually</u>
	<u>Rs.</u>	<u>Rs.</u>
i) Net sales income	2,350	28,200
ii) Total cost of production	1,556	18,665
Net Income	794	9,535

Clarifications : This financial profile is based on information obtained from the Puttalam District.

* This price was given for the products by the PDB purchasing centres in Puttalam.

Project 6 : Making of Food Covers on an Individual Basis

Uses : These can be used for covering food on the table, hence these have a better demand among urban consumers.

Basic Requirements : Both males and females can be engaged in this on the basis of a cottage industry. Three palmyrah leaves with ekels are needed for one food cover. Three days are needed to make a single cover. A sizing tool (Rs. 250) and a processing knife (Rs. 60) are the basic tools for this project. Since this is a skilled activity all those involved need to be trained.

1) Total investment requirement of the project in the first month.

A) Fixed capital estimates	Rs.	Rs.
i) For equipment (a sizing tool and a processing knife)	310	
Sub total for fixed capital	310	310
B) Working capital estimates (for one month)		
i) Raw-material (21 leaves, at the rate of Rs. 5 per leaf)*	105	
ii) Blades (3 blades at the rate of Rs. 3 per blade)	9	
iii) Dye (21 grammes at the rate of Rs. 3 per gramme)	63	
iv) Varnish (2 tins at the rate of Rs. 60 per tin)	120	

v)	Salaries (26 days, at the rate of Rs. 50 per day)	1,300
	Sub total for working capital	1,597
	Total Investment	1,907

C)	Ways of obtaining money	
	Long term loan	1,907

2) Estimated cost of production (for 21 covers per month and 252 covers per year).

		<u>Monthly</u>	<u>Annually</u>
		<u>Rs</u>	<u>Rs</u>
i)	Raw-material	105	1,260
ii)	Dye and varnish	183	2,196
iii)	Salaries	1,300	15,600
iv)	Depreciation of equipment (20% per year)	5	62
v)	Interest on the loan	40	477
	Total cost of production	1,633	19,595

3) Estimated income from sales.

No. of covers	<u>Per Month</u>		<u>Per Year</u>	
	Price per cover	Sales income(Rs.)	No. of covers	Sales income(Rs.)
21	Rs. 100**	2,100	252	25,200
Marketing expenditure		30		360
Net sales income		3,070		24,840

4) Estimated profitability.

	<u>Per Month</u>	<u>Per Year</u>
	<u>Rs</u>	<u>Rs</u>
i) Net sales income	2,070	24,840
ii) Total cost of production	1,633	19,593
Net Income	437	5,247

Clarifications : This financial profile is based on information obtained from the Puttalam District.

* Out of the 26 days in which the person is involved in production, 5 days are needed for the preparation of raw-material.

** This is the price given by the PDB at its Purchasing Centres in Puttalam.

This profile is prepared with the assumption that a female is involved. If a male is involved the production level as well as the cost of production may change.

More profits can be obtained if raw-material is freely available and also if production efficiency can be improved.

Project 7 : Making of Caps on an Individual Basis

Demand : People in rural areas use these to protect themselves from the sun as well as from the rain, so there is good demand. Caps are used as a fashionable item in urban areas and by tourists too.

Basic Requirements : This project is mostly suited for women who are skilled in making caps. A sizing tool (Rs. 250) and a processing knife (Rs. 60) are essential.

1) Total investment requirement of the project in the first month.

A) Fixed capital estimates	Rs.	Rs.
i) Equipment (a sizing tool and a processing knife)	310	
Sub total for fixed capital	310	310

B) Working capital estimates (for one month)

i) Raw-material (15 leaves at the rate of Rs. 5 per leaves)	75
ii) Blades (one blade at the rate of Rs. 3 per blade)	3
iii) Dye (three grammes at the rate of Rs. 3 per gramme)	9
iv) Salaries (26 days at the rate of Rs. 50 per day)	1,300
Sub total for working capital	1,387
Total Investment	1,697

C) Ways of obtaining money

Long term loan 1,697

2) Estimated cost of production (for 30 caps per month and 360 caps per year).

	<u>Monthly</u> Rs	<u>Annually</u> Rs
i) Raw-material	75	900
ii) Dye	9	108
iii) Blades	3	36
iv) Salaries	1,300	15,600

v) Depreciation of equipment (20% per year)	5	62
vi) Interest on the loan (25% per year)	35	424
Total cost of production	<u>1,427</u>	<u>17,130</u>
	<u> </u>	<u> </u>

3) Estimated income from sales.

No. of caps	<u>Per Month</u>		Sales income	<u>Per Year</u>	
	Price per cap	Rs. 35*		No. of caps	Sales income
30			1,050	360	12,600
Sales expenditure			10		120
Net sales income			<u>1,040</u>		<u>12,480</u>
			<u> </u>		<u> </u>

4) Estimated profitability.

	i) Net sales income	<u>Monthly</u>		<u>Annually</u>	
		Rs	Rs	Rs	Rs
	ii) Total cost of production	1,040	1,427	12,480	17,124
	Net Income	- 387		- 4,644	
		<u> </u>	<u> </u>	<u> </u>	<u> </u>

Clarifications : This financial profile is based on information obtained from the Puttalam District.

* This price was given by the PDB Purchasing Centres in Puttalam.

Although the project seems to be unprofitable, it should be noted that salaries have been included under "Cost of Production".

There is a possibility of operating this project at a profitable level;

- 1) by using raw material that are freely available
- 2) by increasing production efficiency and
- 3) by selling products at higher prices

2.3. Production : Palmyrah Sap Products

Types of products : Toddy, sweet toddy, vinegar, jaggery, sugar candy and sucrose.

Marketing : There is a sufficient local market for these sap products. For example toddy can be sold to the Distilleries Corporation in bulk quantities. If not it can be sold to authorized taverns or collectors. Sweet toddy, vinegar and jaggery also needed for day to day household requirements.

Marketing System : At present toddy is purchased directly by the Farm Product Cooperative Society in Trincomalee from tappers. The PDB Purchasing Centres are collecting other sap products.

Project 8 : Palmyrah Toddy Tapping on an Individual Basis

Management and Technical Skills : Toddy tapping is a skilled operation. One person can generally tap about 5 trees per day. Meanwhile he can be involved in other part-time activities. This can only be involved in the 4 months period from January to April when flowering occurs.

Basic Requirements : For the tapping of 5 trees a knife, 40 clay pots and a large sized can or a barrel are needed.

1) Total investment requirement of the project in the first month.

A) Fixed capital estimates		Rs.	Rs.
i)	Equipment	Rs.	
	One knife	75	
	40 clay pots X		
	Rs. 25 each	1,000	
	One plastic can	300	
	Sub total	1,375	1,375
ii)	Leasing of 5 trees (at the rate of Rs. 200 per tree for a year)	1,000	
	Sub total for fixed capital	2,375	2,375
B)	Working capital estimates (for one month)		
i)	Salaries (for 30 days, at the rate of Rs. 75 per day)	2,250	
	Sub total for working capital	2,250	2,250
	Total investment		4,625
2)	Ways of obtaining money		
	Long term loan	4,625	
3)	Estimated cost of production		
		Monthly	Annually
i)	Leasing trees	Rs	Rs
		250	1,000
ii)	Salaries		9,000
		2,250	

iii) Depreciation of equipment (20% for a year)	68	275
iv) Interest for loan (25% per year)	289	1,156
Total cost of production	2,857	11,431

4) Estimated income from sales.

<u>Per Month</u>			<u>Per Season</u>	
No. of bottles	Price per bottle	Sales income (Rs.)	No. of bottles	Sales income (Rs.)
1,200*	Rs. 10**	12,000	4,800	48,000
Net sales income		12,000		48,000

5) Estimated profitability.

	<u>Monthly</u> Rs	<u>Seasonally</u> Rs
i) Net sales income	12,000	48,000
ii) Total cost of production	2,857	11,431
Net income	9,143	36,569

Clarifications : This financial profile is based on information obtained from the Trincomalee District.

* In Trincomalee one palmyrah tree yields 3-15 bottles per day an average. The minimum level of yield was applied for these calculations.

** The tavern operated by the Farm Product Co-operative Society in Trincomalee purchased a bottle of toddy at Rs. 10 from the farm-gate and sold it at Rs. 15 in the Trincomalee town.

2.4. Production : Palmyrah Pulp Products

Introduction : Palmyrah fruit contains 30 per cent to 40 per cent of edible sweet pulp. Traditionally it has been used for making oil cakes and other foods and drinks. The PDB has successfully developed some other quality products using palmyrah pulp, such as cordials and jam.

Marketing : There is a demand for cordials in urban areas. As it has already been tested for containing pectin, a highly valuable chemical, the preserved palmyrah pulp will have a better demand in the future.

Marketing System : At present the PDB Purchasing Centres are collecting preserved pulp at the rate of Rs. 15 per litre. The collected pulp is brought to Colombo and other marketing centres and sold after making cordials and other food items.

Project 9 : Making of Preserved Palmyrah Pulp on Group Basis.

Basic Requirements : The pulp can be extracted by hand after the removal of the skin of the fruit and washing it with warm water. This project requires 300 fruits per day, 275 plastic containers of a capacity of 25 litre each, 2 aluminium basins of a capacity of 50 litre each, 3 plastic buckets, a hearth, firewood, 4 spoons and 2 ladies.

Management and Technical Skill : The project can be handled by a person who will be one of the four workers required for this project. This does not require much skill. Two male and two female workers are ideal.

- 1) Total investment requirement of the project in the first month.

A) Fixed capital estimates		Rs.	Rs.
i)	Making a hut (10'x5' size)		500
ii)	For equipment (Rs)		
	275 plastic containers		
	X Rs. 100	- 27,500	
	2 aluminium basins X		
	Rs. 2500	- 5,000	
	3 plastic buckets X		
	Rs. 400	- 1,200	
	One hearth X Rs. 200	- 200	
	4 wooden spoons X Rs.4	- 16	
	2 ladles X Rs. 400	- 800	
	Sub total	34,716	34,716
	Sub total for fixed capital	35,216	35,216
B) Working capital estimates (for one month)			
i)	Raw-material (7,800 fruits, at the rate of Rs. 2 per fruit)	15,600	
ii)	Fire-wood (400 kilos, at the rate of Rs. 2 per kilo)		800
iii)	Salaries (two males - Rs. 75 per day each, two females - Rs. 50 per day each)	6,500	
iv)	Employees Provident Fund (12% of the salary)	1,625	
	Sub total for working capital	24,525	24,525
	Total Investment		59,741
2)	Ways of obtaining money		
	Long term loan	59,741	

3) Estimated cost of production (for 2,340 litres per month and 7,020 litres per season/three months).

		<u>Monthly</u> Rs	<u>Seasonally</u> Rs
i)	Raw-material	15,600	46,800
ii)	Fire-wood	800	2,400
iii)	Salaries and EPF	8,125	24,375
iv)	Depreciation of hut (20% per year)	35	100
	Equipments (10% per year)	1,157	3,472
v)	Interest on loan (25% per year)	4,978	14,935
	Total	30,965	92,082

4) Estimated income from sales.

i) Input output formula
300 fruits = 90 litres of pulp

	<u>Per Month</u>			<u>Per Season</u>		
ii)	Qty. litres	Price per litre	Sales income(Rs)	Qty. litres	Sales income(Rs)	
	2,340	Rs.15	35,100	7,020	105,300	
		Marketing expenditure	900		2,700	
		Net sales income	34,200		102,600	

5) Estimated profitability.

	<u>Monthly</u> <u>Rs</u>	<u>Seasonally</u> <u>Rs</u>
i) Net sales income	34,200	102,600
ii) Total cost of production	30,695	92,082
Net Income	<u>3,505</u>	<u>10,518</u>

Clarifications : This financial profile is based on information obtained from the Puttalam District.

The increased profits can be obtained if fruits are available freely and also if the seeds of the fruits are used for another activity, such as producing *Cottakelengu*.

2.5 Production : Palmyrah Tuber Products

Types of Products : Raw tuber (*Odiyal*), *Odiyal* flour and palm *posha*.

Marketing : Normally palmyrah tuber products have a demand in local and urban areas.

Marketing System : At present the Purchasing and Selling Centres of the PDB are involved in collecting and selling tubers and tuber products. There are private collectors too. In Puttalam raw tubers are collected by traders at the rate of 60 to 75 cents per tuber.

Project 10 : Production of Raw Tubers on an Individual Basis

Basic Requirements and Skills : Collected or purchased seeds have to be planted. Seeds of fruits from which the pulp has been extracted are also suitable. Beds have to be prepared.

Regular watering according to a certain pattern is also necessary.

Producing tubers from 20,000 seeds requires one mammoty, one watering bucket, one bucket and ten gunny bags.

Management and Technical Skills

: This does not require specialized skills. One person can perform most of the activities with the support of hired labour when required usually in peak periods of production activity. Except in the first and last month, when bed preparation and harvesting is done just half an hours involvement on a daily basis for watering will be sufficient.

Financial Analysis:

Total investment requirement of the project.

A)	Fixed capital estimate	Rs.	Rs.
i)	For equipment	(Rs)	
	One mammoty	-	275
	One watering bucket	-	300
	One water carrying bucket	-	150
	Ten gunny bags X Rs. 10	-	100
	Sub total	825	825
	Sub total for fixed capital	<u>825</u>	<u>825</u>

B) Working capital estimates

i)	Raw-material (20,000 seeds at the rate of 20 cents per seed)	4,000
ii)	Salaries (for one month at the rate of Rs. 75 per day)	2,250
	Sub total for working capital	6,250
	Total Investment	7,075

2) Ways of obtaining money

Long term loan 7,075

3) Estimated cost of production during production period (for production of 14,000 raw tubers).

i)	Raw-material	4,000
ii)	Salaries	2,250
iii)	Depreciation of equipment (20% per year)	165
iv)	Interest for loan (25% per year)	1,838
	Total cost of production	8,253

4) Estimated income from sales.

Input output ratio.

100 seeds = 70 tubers (the germination rate is 70%)

No. of raw tubers produced	Price per tuber (cts)	Sales income tuber (Rs.)
14,000	60	8,400
Net sales income		8,400

5) Estimated profitability (Rs).

Net sales income	8,400
Total cost of production	8,253
Net Income	147

Noticeable : This financial profile is based on information obtained from the Puttalam District.

The net income of this project is shown as Rs. 147. But, the project provides the opportunity for the initiator to be involved for 30 days (15 days at the beginning and 15 days at the end) on a full pay basis.

The profit margin can be increased by three ways;

- i) by the supply of seeds at lower price or freely
- ii) by the sale of raw tubers at higher price
- iii) by combining of raw-tuber production with other projects such as pulp production and also with raising of palmyrah seedlings in poly-bags.

CHAPTER THREE

Financial Requirements for Training People and Growing Palmyrah

3.1. General

In order to develop the palmyrah industry priority should be given to the training of new entrants to the industry in skill development and in entrepreneurial activities. Expanding the available resources by the cultivation of palmyrah is another important prerequisite in this regard. In performing both these tasks the PDB has to intervene. This chapter examines the finances required for these purposes.

3.2. Financial Needs for Training

The required amount of finance for training is determined by a number of factors; the type of training, number of trainees, programmes and days of training. At this stage it is difficult to obtain the above information. Especially the number of people who show interest in palmyrah enterprises and those who require training can vary under different circumstances. Thus, we have estimated here the financial requirements for two types of programme models. One is a model for an in-house type of programme which focuses on training on the management of agro-industrial projects and on short-term skill development such as on palmyrah toddy tapping. The other model is for programmes which require long term training with practical components such as the production of handicrafts. These two models can be used by the PDB in identifying the financial needs for training.

Training Programme : Model One

Financial requirements for a three day in-house training programme.

	<u>Item</u>	<u>Rate</u>	<u>Total Cost (Rs)</u>
i)	Seminar Hall	Rs. 1000 per day X 3 days	3,000
ii)	Equipment (Maggie board, over-head projector etc.)	Rs. 200 per hour for each item X 2 hours X 3 days	1,200
iii)	Meals and Snacks for the trainees	Rs. 100 per day per trainee X 20 trainees X 3 days	6,000
iv)	Allowances for the trainees (inclusive of room charges)	Rs. 100 per day X per trainee X 20 trainees X 3 days	6,000
v)	Payments for Resource Persons	Rs. 200 per hour	4,200
vi)	Subsistence for Officers	Rs. 350 per day per person X 2 persons X 5 days	3,500
vii)	Overtime for Assistants	Rs. 150 per day per person X 2 persons X 5 days	1,500
viii)	Transport miles	Rs. 15 per mile X 300	4,500
ix)	Stationary		2,000
	Total		<u><u>31,900</u></u>

Training Programme : Model Two

Financial requirement for a three month practical training programme.

	<u>Item</u>	<u>Rate</u>	<u>Total</u> <u>Rs</u>
i)	Renting a house/ hall	Rs. 1000 per month X 3 months	3,000
ii)	Salary for the trainer	Rs. 2500 per month X 3 months	7,500
iii)	Equipment* (21 chairs/ black board and other equipment such as sizing tools and knives)	10% of the value of the equipment	1,500
iv)	Raw-materials** for practicals	Rs. 5 per leaf X 100 leaves	500
	Total		<u>12,500</u>

Clarifications :

* The same equipment can be reused for other training programmes. Thus, only a percentage of their value needs to be added for one programme.

** For practicals some amount of raw-material is needed at the beginning. On subsequent occasions income obtained by selling these products can be utilized to re-supply raw-materials.

3.3. Financial Needs for Growing Palmyrah

Palmyrah can be grown either by government initiative in state and common lands including along the roads, and by individuals in private lands. It can be cultivated in a mixed cropping system or separately.

If palmyrah is grown on fertile land as a mixed crop with some other

crop that generates short-term incomes, expenses such as that clearing of land will not have to be borne. However, the PDB has recommended that it be grown in uncultivable or marginal lands.

In this exercise we have calculated the amount of money needed for cultivating palmyrah in an acre as a mono-crop (see table followed). The available extent of uncultivable land in the relevant district is also included so that the PDB can have an idea on the financial requirements for growing palmyrah.

Amount of Money Required for Cultivating an Acre of Palmyrah

<u>Activity</u>	<u>Input and Cost</u>	<u>Total Cost</u> (Rs)
i) Clearing land	20 labour days (8 labour days for initial clearing and 12 labour days for clearing in later occasions)	2,000
ii) Purchasing seedlings	400 seedlings at the rate of Rs. 9 per seedling	3,600
iii) Planting seedlings including cost of protection	4 labour days	400
iv) Watering	2 labour days, i.e. one hour each for 16 days	200
Total		6,200

According to the agricultural census of 1982 there are 15,920 acres of land that is not suitable for cultivation (rocky and waste land) in the six districts covered by this study (see the following table for details). This data shows the amount of waste land within agricultural holdings. In addition there is waste land outside agricultural holdings belonging to the state.

Extent of Land, Not Suitable for Cultivation (Rocky and Waste Land) in Each District

	<u>District</u>	<u>Acreage</u>
i)	Puttalam	1,485
ii)	Anuradhapura	3,556
iii)	Hambantota	1,964
iv)	Amprara	5,906
v)	Batticaloa	1,788
vi)	Trincomalee	1,221
	Total	15,920

Source : Census of Agriculture, 1982.

Note : This is based on land under agricultural holdings - small holdings and the estate sector.

There is a large amount of land, in the relevant districts, that have been classified as being sparsely used*. These lands can be further developed in the future. Various land types; sloped, rocky and unfertile etc. come under this category. A separate study is needed to examine the physically and economically suitable land for palmyrah. Further discussion with the planning bodies in relevant districts is necessary to identify the exact amount of land for the development of palmyrah.

* This information has not yet been published. Once published, it can be obtained from the Land Use Policy Planning and Project Management Office of the Ministry of Land.

CHAPTER FOUR

Credit Facilities for Palmyrah Based Agro-industries

4.1. General

There are various credit schemes by various commercial banking institutions in the country, some being specific to some areas and some covering the entire island. Among these there are a number of schemes which can be used to cover the credit requirements for commencing palmyrah based agro-industrial projects. Although various banks have numerous credit schemes, here we will examine only the schemes coming under the People's Bank, Bank of Ceylon and the Regional Rural Development Bank (RRDBs), since these government banks have many branches that are accessible at the grassroot level.

4.2. Credit Facilities under the People's Bank

The credit scheme operates under the broad heading of "Agricultural Credit Schemes" covering cultivation loans and income generating activities based on agriculture. This scheme is applied to palmyrah activities too. There is no limitation on the amount of credit supplied under this scheme and an interest rate of 21 per cent per annum is charged.

The specific credit schemes of the People's Bank from which credit for palmyrah activities can be obtained are;

- i) Start-up Enterprises Loan Scheme for Small Scale Entrepreneurs.

The objective of this scheme is to promote self-employment activities.

School leavers and other young people (between 18 to 40 years of age) who have had an opportunity to follow on the job training programmes or vocational training at a recognized training institution or any other institution acceptable to the regional manager are eligible for loans under this scheme. A maximum of Rs. 30,000 can be borrowed at an interest rate of 18 per cent per annum to be paid within 7 year period.

ii) **Self Employment Loan Scheme for Members of NYSCO.**

This is for youth between the ages of 18 and 35 years. Under this a maximum of Rs. 25,000 can be obtained at the interest rate of 16% per annum to be paid within 5 year period.

iii) **Credit Scheme to Assist Members of Kantha Societies of the Women's Bureau of Sri Lanka (WBSL).**

This scheme provides credit facilities to set-up, improve or expand ventures for women between the ages of 18-40 years who come from poorer families. There are other requirements too which have to be satisfied in order to be eligible. These include being a member of the Kantha Society and having followed a training programme of some recognized institution. A maximum of Rs. 12,000 at an 18 per cent interest rate per annum can be obtained to be paid within 3 years.

iv) **Village Adoption and Self Employment Loan Scheme for Youth (Anuradhapura District)**

This is a scheme started to encourage self employment activities. Applicants who are above 18 years and live in Anuradhapura can obtain a maximum of Rs. 25,000 at the interest rate of 14 per cent per annum. It can be paid within 5 years.

4.3. Credit Facilities Under the Bank of Ceylon.

The Bank of Ceylon also had a number of separate credit schemes in order to provide credit facilities for self employment activities. At present by amalgamating all of them a unified scheme called the "Comprehensive Credit Scheme for Small Enterprise Development (SED)", has been established.

i) **Comprehensive Credit Scheme for Small Enterprise Development.**

Any branch of the Bank of Ceylon can operate this scheme for any production and income generation activity (covering trade, services and production). Individual as well as group projects are considered for credit under this scheme. A maximum of Rs. 50,000 can be obtained. The interest rate is 21% per annum. The loan has to be repaid within 5 years.

ii) **Small and Medium Scale Industry Scheme (SMI)**

Credit requirements above Rs. 50,000 can be fulfilled under this scheme. The interest rate is 23.5 percent per annum.

4.4. Credit Facilities under Regional Rural Development Banks (RRDBs)

One of the most reliable sources to obtain credit for palmyrah based agro-industries is the Regional Rural Development Bank. These banks provide loans for any activity which commences as self-employment. There are 17 RRDBs at present in 17 districts with 160 branches, each being in each electorate in the relevant districts. These districts include Puttalam, Anuradhapura, Hambantota and Ampara. There are no RRDBs in Trincomalee and Batticaloa (Central Bank of Sri Lanka, "Gami Naya Thorathuru", Vol. 10, No. 28, Jan-Jun 1992).

The amount of credit that can be obtained from any branch or district bank of the RRDBs can differ. Normally a branch manager of RRDB can approve Rs. 10,000 and the manager of a district bank Rs. 100,000. The board of a district bank can approve more than Rs. 100,000.

The usual interest rate for RRDB credit facilities given for self-employment activities is 21 percent. This interest rate of RRDBs is lower than this (16%) under special credit schemes operated in different districts. At present under the Southern Province Rural Development Project Loan Scheme upto Rs. 200,000 is given for self-employment projects at a 16 percent interest rate.