PREFEASIBILITY STUDY ON

SETTING UP FRUIT SALAD PROCESSING AND VENDING IN NIGERIA

DEVELOPED BY

STARTUP BUSINESS FOUNDATION

FREE DOWNLOAD

Register & Download

@
Website: www.startupbizfoundation.org
Email: info@startupbizfoundation.org
Tel: +234832686671,

STARTUP
BUSINESS FOUNDATION

DISCLAIMER

ACKNOWLEDGMENT

Startup Business Foundation is thankful to all organizations and individuals who have helped in several ways in preparation of this prefeasibility study.

We also wish to extend our gratitude to all those who reviewed the content and provided valuable inputs for improving the quality, coherence, and content presentation of this prefeasibility study.

ABOUT THIS REPORT

This prefeasibility study is designed to provide potential and startups entrepreneurs' valuable information on setting up fruit salad business in the food processing industry of Nigeria's market; aimed at encouraging and facilitating industrial activities across the country. It is our realization that industrialization is at the heart of economic development and that every effort has to be made to bring about industrial growth and encourage our people to be part of it.

The fruit salad processing and vending business has over 80% local content in terms of availability of raw material, equipment and machinery, manpower and other requirements.

The key areas covered in this report include:

i) Technical and economic analysis of the production, marketing and profitability of the project.

ii) Recommendations in respect of procurement of equipments and associated problems.

iii) Recommendation on suitable agronomic management practices to ensure efficient running of the projects.

iv) Detailed financial analysis including project cash flows for the projects.

This prefeasibility report provides a comprehensive and detailed coverage of the above terms of reference and is designed to facilitate investment decisions.

The implementation of this project will also impact positively on the economy of the immediate community where the project is located. This is in terms of employment-direct and indirect, skilled and unskilled. Government also stands to benefit from internal revenue from taxation.

In view of the result of the analysis using some economic indicators as stated in the proposed project, it is hereby recommended that the project is viable.

TABLE OF CONTENT

APPENIDIES

PART I
EXECUTIVE SUMMARY

This particular prefeasibility study is on the setting up on marketing/ vending of fruits in most lucrative part(s) of Nigeria.

The project is micro enterprise business that involves selling varieties of fruits like mangoes, pineapples, paw paws, watermelon, apples and sweet bananas which are bought in large quantities, washed, peeled, cut into pieces and packed in disposable containers to make the fruit salads.

The market structure and demand is relatively high especially in urban areas. Similarly, the location of project site could be in the semi rural provided there is available mechanism for conveying the unprocessed fruits from rural areas to the factory.

The business risk involved is healthy and safety related risks surrounding the manufacturing and processing but can be solved by employing food scientists and adhering to a strict safety and hygienic standard.

The installed production and marketing of the factory is on sale of 250 fruit salads packed in containers per day, which translates into 6,500 packages per month, working 312 days annually. The investment capital is N2,024,000 and could be scaled up depending on the available funds.

1.1 SUMMARY OF TOTAL PROJECT COST

S/N	DESCRIPTION	QTY	UNIT PRICE	AMOUNT
1	Land & building	1	300,000	300,000
2	Machinery & equipments		347,500	890,500
3	Utility equipment		250,000	250,000
	Total Cost of capital		897,500	1,440,500
4	Working capital		400,000	400,000
5	10% Contingencies & preliminary expenses		184,050	184050
	Total project cost		**1,481,550**	**2,024,550**

1.2 FINANCIAL ACCOUNTING RATIOS ANALYSIS

PERFORMANCE RATIOS AVERAGES

(a) Return on Sales =15%

(b) Return on Equity =1,363%

(c) Return on Investment =165%

(d) Positive NPV = ₦11,613,056

(e) IRR =47%

(f) ARR =165%

(g) Payback Period = 1 year and 2 months.

PART II
MARKET ANALYSIS

2.1 INTRODUCTION

There is a high demand in densely populated areas and the Nigerian population is highly sensitized about the use of fruits through radios and other media channels. This proposed product has gain interest as a result of increasing literacy, health awareness and consciousness among the citizens. These raw materials includes but not limited to the following: Mango, oranges paw-paw, pineapple, banana, apple, guava, strawberry, watermelon, grapes, carrots, cucumber, garden egg etc.

2.2 MARKET AREA ANALYSIS

Fruit consumption is very nutritious to the body due to the minerals and vitamins it provides to the human body. The market for fruit is both huge locally and internationally. With your packaging, you can always export it in commercial quantities to places where fruit salad is in demand and make a lot of money due to the exchange rate. However, for the proposed of this prefeasibility study, only the local demand and consumption is considered.

Apparently, the success of this project is premised on the ability of the entrepreneur to seek vendors and distributors where can place large and sustained order on a daily basis and affordability of the raw materials.

2.3 TARGET AMRKET ANALYSIS

The proposed project is built on concept of supplies to resellers or distributor who then sales to the final consumer. In this case, the entrepreneur processes and packaged afterwards, supplies to marketers at a subsidized price. As part of incentives, the entrepreneur will provide the vendors or distributors with the mobile truck to easy the conveying of the products to the target market.

The entrepreneur should consider the establishment of the outlet in major road where there regular movement of people or main market, local stores, etc. mobile trucks or tricycles can as well be employed in the marketing of the products from one place to another.

PART III
TECHNICAL ANALYSIS

3.1 PRODUCT DESCRIPTION

This involves the processing and combination of different varieties of fruits into a container in hygienic and well packaged manure. These fruits salad is made freshly without preservations (chemical additives) and in some cases, they are served cooled to the customers.

3.2 SUITABLE LOCATION

This project can be sited in any populated metropolitan cities in Nigeria with especially consideration to availability of main markets and proximity to source of raw materials.

3.3 PRODUCTION CAPACITY

Production capacity depends on the capital invested and capital capability. This business idea targets a sale of 250 fruit salads packed in containers per day, which translates into 6,500 packages per month.

3.4 TECHNOLOGY AND PROCESS DESCRIPTION

Fruit vending involves a door to door delivery of services and has no complicated technology involved. Fruit processing is relatively simple because fruits are bought in large quantities, washed, peeled, cut into pieces, mixed and packed into containers in a desired quantities for sale.

3.5 RAW MATERIALS

Raw material is basically fresh fruits and can be sourced in different rural communities most especially from Northern parts of Nigeria. These fruits can be bought in large quantities and preserved using different preservative measures other than chemical additives.

3.6 SOURCES OF FUNDS

The project can be funded through a number of sources which include but not limited to the following; Agric-Business, Small & Medium Scale Investment Scheme (AGSMEIS), Bank of Industry, Bank of Agriculture (BOA), Nigeria Export-Import (NEXIM) Bank, International Finance Corporation (IFC), grants etc., though the conditions and criteria for accessing the loans and grants varies.

PART IV

4.0 FINANCIAL ANALYSIS

Basically, the financial section of this prefeasibility study consists of three financial statements: Income statement, Balance sheet, Cash flow projection. This section determines whether or not the project is viable using some economic indicators such as Net Present Value (NPV), Internal Rate of Return (IRR), and payback period as are detailed in the appendices below.

4.1 ASSUMPTIONS

1. Assuming that the project will last for the period of five years and the salvage value at the end of the project life ignored.
2. The Machineries, Equipments and Utility Equipment have uniform depreciation of 20%.
3. The estimated capacity is 250 fruit salads packed in containers per day, which translates into 6,500 packages per month estimated at 60% capacity utilization.
4. The proposed capacity utilization are 60% in the first year of commercial production, 70%, 80% in the 2nd and 3rd year respectively and 90% in the 4th and 5th years.
5. Raw materials will be sourced locally and Market for the product is readily available.
6. Staff and labour cost will increase by 10% yearly.
7. Prices and unit costs are assumed unchanged in the five years of projection.
8. The valuation currency used is Naira.

4.2 ACCOUNTING /FINANCIAL ANALYSIS

4.2.1 NET PROFIT

The projected Annual Trading Profit and Loss Account is proposed to make the following Net Profit after tax during the corresponding projected periods – all things being equal.

4.2.2 NET PRESENT VALUE (NPV)

NPV is one of the four methods of discounted cash flows techniques which state that money that is immediately available for use, has a greater value than same amount receivables in future date.

Using this method however, all net cash inflows will be discounted to present value using the estimated interest rate of 60% discount factor. At **12%** discount factor the project produced a positive **NPV NGN 11,613,056**

4.2.3 INTERNAL RATE OF RETURN (IRR)

This is the discount rate which gives zero NPV or the rate which equates the present value of cash inflows with present value of cash outflows of the project.

The cash flow of this project was discounted systematically until the NPV of the project finally become zero. The project produces the **IRR** of **47%.** Thus, the project accepted as being viable. This is because **IRR** is more than the cost of capital.

4.2.4 ACCOUNTING RATE OF RETURN (ARR)

ARR uses accounting information as revealed by financial statements (Income Statement) to measure profitability of the project under consideration. The forecast **ARR** of the project is 165%**.**

4.2.5 PROFITABILITY INDEX (PI)

This is the present value of future cash flows over the present value of cash outlays. The project PI further confirm the viability of the project , because as the rules of the accepting and rejecting hold, a project should be accepted if the PI is equal or greater than one (1). Consequently, the PI of this project is **1.72** and thus recommended as being viable to be accepted for financing.

APPENDIX I
TOTAL PROJECT COST

S/N	DESCRIPTION	QTY	UNIT PRICE	AMOUNT
	LAND & BUILDING			
2	Rent of factory	1	300,000	300,000
	Sub total	**1**	**300,000**	**300,000**
	MACHINERY & EQUIPMENTS			
1	Construction of mobile truck	5	60,000	300,000
1	Refrigerator	2	200,000	400,000
2	Wrapping machine	3	84,000	168,000
3	Knives	10	400	4,000
4	Buckets	10	600	6,000
5	Uniforms	5	2,500	12,500
	Sub total		**347,500**	**890,500**
	UTILITY EQUIPMENT			
6	Generating set	1	250,000	250,000
	Sub total		**250,000**	**250,000**
	Total Cost of capital		897,500	1,440,500
	Working capital		400,000	400,000
	10% Contingencies & preliminary expenses		184,050	184050
	Total project cost		**1,481,550**	**2,024,550**

APPENDIX II
ESTIMATION OF WORKING CAPITAL REQUIREMENT

N'000

Year of Commercial Operation	**1 week**
% Capacity Utilization (Inventory)	**60%**
3days stock of raw material	278,500
One day stock of finished products	81,000
Work in Progress	19,710
Bank/ Cash (5% sales of the products)	20,790
Working capital	**400,000**

APPENDIX III
FINANCING PLAN

DESCRIPTION	EXISTING	PROPOSED	TOTAL
Equity	24,550		24,550
Term loan from	-	2,0000,000	2,000,000
Total project cost	**24,550**	**2,000,000**	**2,024,550**
% Contribution	**13.5%**	**86.5%**	**100%**

APPENDIX IV
TERM LOAN REPAYMENT SCHEDULE

LOAN AMOUNT: 2,000,000 (Two Million Naira Only)
TYPE : ANY LOCAL AVAILABLE SME FUND
INTEREST RATE USED: 12%
REPAYMENT: 5 YEARS EQUAL INSTALLMENT (Annually)

YEAR	OPENING BALANCE	REPAYMENT	INTEREST DUE	TOTAL YEAR INTEREST
1	2,000,000	400,000	240,000	640,000
2	1,600,000	400,000	192,000	592,000
3	1,200,000	400,000	144,000	544,000
4	800,000	400,000	96,000	496,000
5	400,000	400,000	48,000	448,000
Total		**2,000,000**	**720,000**	**2,720,000**

STARTUP
BUSINESS FOUNDATION

APPENDIX V

FORECAST STAFFING SCHEDULE (1ST OPERATIONAL YEAR)

N'000

POSITION	No	Unit Scale	Scale/ Month	Scale / Year
DIRECT LABOUR				
Factory Manager	1	40	40	480,000
Unskilled labour	5	20	100	120,000
Sub total	**6**	**60**	**140**	**600,000**
INDIRECT LABOUR				
Admin/ Cashier	1	30	30	360,000
Sub total	**1**	**30**	**30**	**360,000**
Total on staff (1st year)	**7**	**90**	**170**	**960,000**

APPENDIX VI

ESTIMATE OF ANNUAL DEPRECIATION ALLOWANCE

N'

ITEMS	INITIAL VALUE	DEPRECIATION (20%)
Machinery and Equipments	250,000	50,000
TOTAL	**250,000**	**50,000**

APPENDIX VII

ESTIMATE OF ADMINISTRATIVE / OVERHEAD EXPENSES

N'

COST ITEM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Utilities (water & Power)	256,800	269,640	282,480	296,604	296,604
Packaging materials	624,000	655,200	686,400	720,720	720,720
TOTAL	**880,800**	**924,840**	**968,880**	**1,017,324**	**1,017,324**

APPENDIX VIII

ESTIMATION OF PRODUCTION AND OPERATION COST

Cost Item	Units	@	Qty/ day	Pdn cost / day	Pdn cost/ month	Pdn cost/ year
Direct Costs						
Mangoes	No	60	100	20	6,000	1,872,000
Sugarcanes	No	210	10	7	2,100	655,200
Water mellon	No	360	10	12	3,600	1,123,200
Apples	No	72	50	12	3,600	1,123,200
Pineapples	No	180	25	15	4,500	1,404,000
Paw-paws	No	300	25	25	7,500	2,340,000
Sweet bananas	No	12	100	4	1,200	374,400
Pears	No	60	50	5	1,500	468,000
Grapes	Kg	900	5	15	4,500	1,404,000
Jack fruit.	No	600	1	2	600	187,200
Packing Materials	No	30	250	25	7,500	2,340,000
Sub-total			**626**	**142**	**42,600**	**13,291,200**

APPENDIX IX
ESTIMATION OF RAW MATERIAL/PRODUCTION COST AND SALES

Year of Commercial Production	Year 1	Year 2	Year 3	Year 4	Year 5
% Capacity Utilization	60%	70%	80%	90%	90%
1. Output					
Fruit salad	78,000	85,800	94,380	103,818	103,818
Total output	**78,000**	**85,800**	**94,380**	**103,818**	**103,818**
2. Cost of Production	N'000	N'000	N'000	N'000	N'000
Fruit salad @ N170.4/pack	13,291,200	14,620,320	16,082,352	17,690,587.2	17,690,587.2
Total cost of production	**13,291,200**	**14,620,320**	**16,082,352**	**17,690,587.2**	**17,690,587.2**
3. SALES					
Fruit salad @ N230/ pack	17,940,000	19,734,000	21,707,400	23,878,140	23,878,140
TOTAL SALES/ TURNOVER	**17,940,000**	**19,734,000**	**21,707,400**	**23,878,140**	**23,878,140**

APPENDIX X
FORECAST INCOME STATEMENT (PROFIT & LOSS ACCOUNT)

Year of commercial operation	Year 1	Year 2	Year 3	Year 4	Year 5
% Capacity Utilization	60%	70%	80%	90%	90%
1. **SALES**	**N'000**	**N'000**	**N'000**	**N'000**	**N'000**
Gross Sales	17,940,000	19,734,000	21,707,400	23,878,140	23,878,140
Net Revenue	**17,940,000**	**19,734,000**	**21,707,400**	**23,878,140**	**23,878,140**
2. **OPERATION COST**					
Cost of Raw materials consumed	13,291,200	14,620,320	16,082,352	17,690,587	17,690,587
Staff and labour	960,000	1,386,000	1,455,000	1,528,000	1,528,000
Admin. & Overhead Expenses	880,800	924,840	968,880	1,017,324	1,017,324
Depreciation	50,000	50,000	50,000	50,000	50,000
Total Operating Cost	**15,182,000**	**15,596,546**	**17,102,687**	**18,759,439**	**18,759,439**
3. **OTHER COSTS**					
Interest on Term Loan (12%)	240,000	192,000	144,000	96,000	48,000
Loan Repayment	400,000	400,000	400,000	400,000	400,000
Total (Other Costs)	**15,822,000**	**16,188,546**	**17,646,687**	**19,255,439**	**19,207,439**
Profit Before Tax	2,118,000	3,545,454	4,060,713	4,622,701	4,670,701
Corporate Tax (12%)	254,160	425,454	487,285	554,724	560,484
Profit after tax (NET PROFIT)	**1,863,840**	**3,120,000**	**3,573,427**	**4,067,977**	**4,110,217**
% Return on Sales	0.1038929	0.15810274	0.16461793	0.170364053	0.172133035
% Return on Equity	75.920162	127.08755	145.55712	165.70169	167.42226
% Return on Investment	0.9206193	1.54108296	1.76504775	2.009323901	2.03018779

APPENDIX XI
FORECAST HIGH RATE AND LOW RATE COMPUTATION

Year	C/F	DF 12%	NPV
	N'		N'
0	(2,024,550)	1	(2,024,550)
1	1,863,840	0.893	1,664,409.12
2	3,120,000	0.797	2,486,640
3	3,573,427	0.712	2,544,280.02
4	4,067,977	0.636	2,587,233.37
5	4,110,217	0.567	2,330,493.04
Total Profit	**16,735,461**		**11,613,056**
Average Profit	**3,347,092**		

Year	C/F	DF 60%	NPV
	N'		N'
0	(2,024,550)	1	(2,024,550)
1	1,863,840	0.625	1,164,900
2	3,120,000	0.3906	1,218,672
3	3,573,427	0.2441	872,273.531
4	4,067,977	0.1526	620,773.29
5	4,110,217	0.0954	392,114.702
Total Profit	**16,735,461**		**4,268,734**
Average Profit	**3,347,092**		

APPENDIX XII
FORECAST IRR AND ARR COMPUTATION

$$IRR = a + \left(\frac{A}{A+B}\right) * (b-a)$$

Where

a = 12%

b= 60%

A = 11,613,056

B= 4,268,734

$$12\% + \frac{11,613,056}{11,613,056 + 4,268,734} (60-12)$$

12% + 38

47%

$$ARR = \frac{\text{Estimated Average Profit}}{\text{Estimated initial investment}} * 100$$

$$ARR = \frac{3,347,092}{2,024,550} * 100$$

165%

APPENDIX XIII
CASH FLOW PROJECTION

Year of Comm. Production	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
% Capacity Utilization		60%	70%	80%	90%	90%
A) CASH RECEIPTS	**N'**	**N'**	**N'**	**N'**	**N'**	**N'**
Equity Capital	24,550	-	-	-	-	-
Term Loan	2,000,000	-	-	-	-	-
Gross Revenue	-	17,940,000	19,734,000	21,707,400	23,878,140	23,878,140
Total Receipts	**2,024,550**	**17,940,000**	**19,734,000**	**21,707,400**	**23,878,140**	**23,878,140**
B) CASH PAYMENTS						
Capital Payment						
Machinery & Equipments	250,000	-	-	-	-	-
TOTAL	**250,000**	-	-	-	-	-
(ii) Operating Expenses						
Depreciation	-	50,000	50,000	50,000	50,000	50,000
Change in working capital	1,774,550	15,132,000	15,546,546	17,052,687	18,709,439	18,709,439
Sub total	**1,774,550**	**15,182,000**	**15,596,546**	**17,102,687**	**18,759,439**	**18,759,439**
(iii) Financial Expenses						
Repayment of Term Loan	-	400,000	400,000	400,000	400,000	400,000
Interest on Term Loan	-	240,000	192,000	144,000	96,000	48,000
Corporate Tax	-	254,160	425,454	487,285	554,724	560,484
Sub total	-	**894,160**	**1,017,454**	**1,031,285**	**1,050,724**	**1,008,484**
Total cash payment (ii)-(iii)	**1,774,550**	**14,287,840**	**14,579,092**	**16,071,402**	**17,708,715**	**17,750,955**
Net cash flow c/f	1,774,550	14,287,840	14,579,092	16,071,402	17,708,715	17,750,955

STARTUP
BUSINESS FOUNDATION

APPENDIX XIV
BALANCE SHEET PROJECTION

Year of comm. Operation	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
ASSETS	**N'000**	**N'000**	**N'000**	**N'000**	**N'000**	**N'000**
(i) Fixed assets						
Machinery and Equipments	250,000	-	-	-	-	-
Value at Acquisition	-	250,000	250,000	250,000	250,000	250,000
Less Cumulated Depreciation	-	50,000	100,000	150,000	200,000	250,000
Net fixed assets	**250,000**	**200,000**	**150,000**	**100,000**	**50,000**	**0**
(ii)Current Assets/ liability						
Stock of Raw Materials	400,000	5,413,526	8,664,813	10,773,723	11,664,004	13,114,487
Debtors /prepayment	-	1,453,000	2,098,000	3,308,000	4,139,000	5,653,000
Bank and Cash Balances	1,224,550	1,150,024	2,160,031	3,170,539	4,180,674	4,180,741
Creditor / accruals	-	(4,074,000)	(6,039,000)	(8,947,000)	(11,013,000)	(13,785,000)
Company Tax	-	(254,160)	(425,454)	(487,285)	(554,724)	(560,484)
Net current assets	**1,624,550**	**3,688,390**	**6,458,390**	**7,817,977**	**8,415,954**	**8,602,744**
TOTAL NET ASSETS	**2,024,550**	**3,888,390**	**6,608,390**	**7,917,977**	**8,465,954**	**8,602,744**
(ii) FINANCED BY						
Equity Capital	24,550	24,550	24,550	24,550	24,550	24,550
P&L	-	1,863,840	3,120,000	3,573,427	4,067,977	4,110,217
Retained Profit	-	-	1,863,840	3,120,000	3,573,427	4,067,977
SHAREHOLDERS FUND	**24,550**	**1,888,390**	**5,008,390**	**6,717,977**	**7,665,954**	**8,202,744**
Long Term Loan	2,000,000	2,000,000	1,600,000	1,200,000	800,000	400,000
TOTAL EQUITY & LIABILITY	**2,024,550**	**3,888,390**	**6,608,390**	**7,917,977**	**8,465,954**	**8,602,744**

STARTUP
BUSINESS FOUNDATION