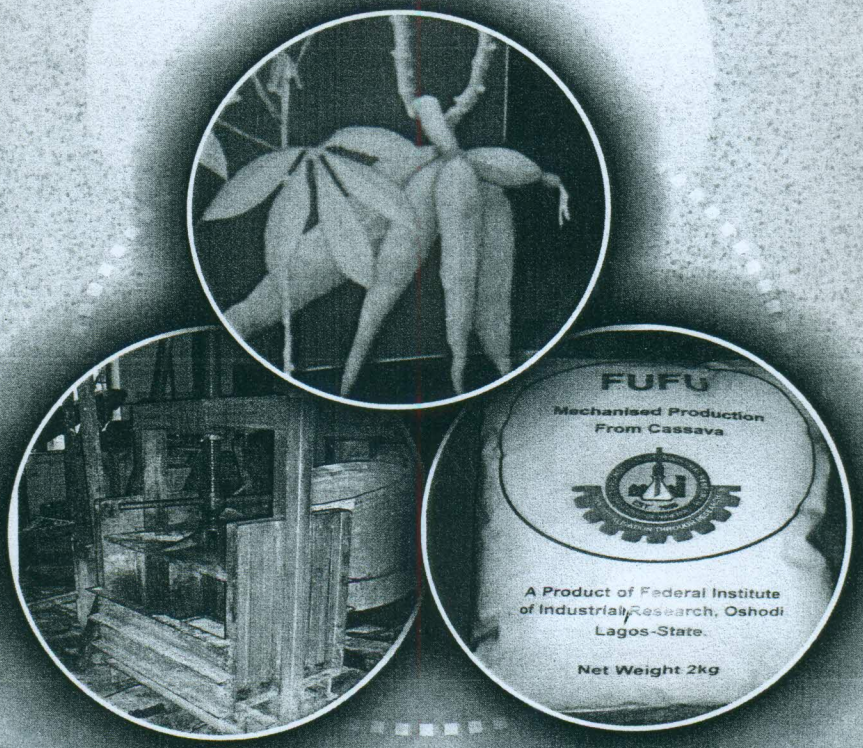
CASSAVA

Production, Processing and Utilization in Nigeria



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ECONOMIC VIABILITY OF CASSAVA PROCESSING INTO FUFU

BY

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ECONOMIC VIABILITY OF CASSAVA PROCESSING INTO POWDERED FUFU

Production Programme

The production schedule adopted for production of Fufu is based on a number of criteria, which include.

- The extent of the market for the finished product
- The capabilities of available production plants and their efficiency
- The skill and efficiency of the labour force and
- The availability of raw materials. The proposed production schedule of Fufu as follows: -

A.	**Number of hours, shift working days**	
	No. of hours per shift	8
	No. of shifts/day	2
	No. of working days/week	5
	No. of working days/year	250
B.	**Quantity of Fufu produced**	
	Output of Fufu per shift	1 Ton
	Output of Fufu per day	2tonnes
	Output of Fufu per year	500 Tones
C.	**Input; output Ratio**	**18% i.e. 5.5:1**

RAW MATERIALS SUPPLIES UTILITIES REQUIREMENTS.

Requirements:

These are the same required as for Gari processing

FACTORY SPACE REQUIREMENT

The same amount of floor area is required as for Gari production

PERSONNEL REQUIREMENT.

The same amount of floor area is required as for Gari production

PROPOSED PRODUCTION PROGRAMME

Maximum capacity utilization is proposed to be achieved at 80% for the first year and 90% in subsequent years. Two shifts are recommended from second years

capacity utilization is lower to allow the factory workers gain experience on the job and also allow for the market penetration of the product. The total production at 100% capacity utilization is 250 tonnes in the first year of 1 shift. The total production at 100% capacity 500 tonnes from in the second year of 2 shifts.

The proposed production programme can be summarized.

Year	1	2 - 5
Capacity utilization shift	80%	90%
Annual output (tones)	200	450

LIST AND ESTIMATED COST OF PROCESSING MACHINERY AND EQUIPMENT FOR 2 TONS/DAY FUFU PRODUCTION

S/N	ITEM		ESTIMATED COST (N)
1.	Continuous Pulping and sifting machine		180,000.00
2.	Hydraulic press steel		180,000.00
3.	Fermentation tank (tilled concrete type)		70,000.00
4.	Cake Granulator		170,000.00
5.	Flash Dryer (2.5T/Day)		3,000,000.00
6.	Shaker Screen		210,000.00
7.	Dry mill (Hammer mill)		170,000.00
8.	Double Cone Mixer		150,000.00
9.	Heat Sealer		25,000.00
10.	Bag Stitcher		30,000.00
11.	Weighing Machine		85,000.00
	- raw materials		
	- finished product		
12.	Accessories		
	(plastic troughs	10	5,000.00
	- Peeling knives	10	5,000.00
			4,280,000.00

ESTIMATED INITIAL FIXED COST FOR GARI

Items	Cost (N)
Land (2 Plots)	250.000.00
Factory Building	2000.000.00
Machinery & Equipment including installation and commissioning	4,708,000.00
Furniture and fittings	1,000,000.00
Borehole, Water tank, Pipes, pump	300.000.00
Generator (60 KVA) (used)	650.000.00
Utility vehicle (fairly used prick –up van)	1,200,000
TOTAL	10,108,000.00

FACTORY SPACE REQUIREMENT

The floor area requirement is estimated at 40 square meters. The factor floor area may be divided into four main areas; the cassava arrival and preparation area, the fermentation area, main processing area and the product finishing area.

PERSONNEL REQUIREMENTS.

CATEGORY A: (ADMIN)	NO	QUALIFICATION	ANNUAL ENUMERATION (N)
General Manager	1	Bsc/HND	360,000
Accounting officer	1	SSCE	120.000
Purchasing officer	1	SSCE	120.000
Sales/invoice officer	1	SSCE	120,000
Driver	1	FSLC	120.00
Security Guards	2	FSLC	168,00

CATEGORY B: FACTORY PERSONNEL

Production Supervisor	1	OND	240,000
Maintenance Technician	1	Trade Test	120,000
Operative	4	FSLC	336,000
Factory Hands	6		288,000
			N1, 992,000

ECONOMIC VIABILITY FOR FUFU FLOUR PRODUCTION (N)

(i)	Initial Fixed Capital Cost	10,108,000.00
(ii)	Initial Working Capital Cost	4,160,558.00
(iii)	Pre-production Expenses	779,459.00
(iv)	Pay-back Period (PBP)	1 years 4 months
(v)	Internal Rate of Return (IRR) is estimated at	above 50%
(vi)	Break – even (Volume:) -The Break – even volume is estimated at about 57,3372kg of Fufu powder i.e. 28.68% of annual production during the of 1st year of shift per day at 72 days of production.	
(vii)	Rate of Return on Investment (RRI)	64.69%
(viii)	Net Present Value (NPV) at 30% is	25, 562, 660

Two main categories of personnel are identifies for the project. These are administrative personnel constitute the indirect labour force, while the factory staff constitute the direct labour force.

The administrative personnel required include;

- General Manager
- Accounting officer
- Purchasing officer
- Sales officer
- Security guards and Driver.

The factor personnel required include;

- Production supervisor
- Maintenance Technician
- Factory operatives and factory hands.

The no. of personnel required for the two shifts of 2 tonnes per 8-hour day is twenty (20). The General manager overseas and supervises the general running of the project and has the overall control over all labour. The accounting officer should have a minimum qualification of ordinary National Diploma (OND) records and keeps the company accounts and takes care of the financial affairs of the company such as staff salaries and monitoring of funds disbursement.

The purchasing officer who should have a minimum of ordinary National Diploma in purchasing and supplied with at least three years working experience. He is to

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food technology and should have at least three years working experience. He is directly responsible for the General Manager and the factory operative are

responsible to him. The factory operatives who should have a minimum of city and gauds certification should be skilled enough to operate the processing machine.