A COMPARATIVE STUDY OF SOME AGRICULTURAL PRODUCTS, THEIR DERIVATIVES AND IMPROTANCE IN MARKETING

(A CASE STUDY OF KADUNA STATE)

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BY

MUHAMMAD IDRIS ALIYU
(MBA\A1)M I N\00688\93-94

A Thesis submitted to Postgraduate School, Ahmadu Bello University, Zaria Nigeria in Partial Fulfillment of the Requirement for the Award of the Degree of Master of Business Administration (MBA).

SEPTEMBER 2900

DECLARATION

I hereby declare that, this thesis has been prepared by me and is solely the record of my research work. It has not been presented in any previous application for a higher degree.

All quotations are specifically acknowledged by means of references.



MUHAMMAD IDRIS ALIYU.
SEPTEMBER, 2000

CERTIFICATION

This thesis entitled; "A Comparative Study Of Some Agricultural Products & Their Derivatives" Muhammad Idris Aliyu meets the regulations governing award of the degree of master of Business Administration (M.B.A) of the Ahmadu Bello University, Zaria, Nigeria and is approved for its contribution to knowledge and literary presentation.

J. K. Yere Alfa — 13-01-03

Chairman, Supervisory Committee — Date

M S 9450 — 18/12/2001

Member Supervisory Committee (External)
Professor Usman A. Zakwadeen. — Date

DEPT OF BUSINESS ADMIN

14-08-2003

Head, Department of Business Administration — Date

24 JUL 2003

PROF. M. [illegible]

Dean, Postgraduate School — Date

DEDICATION

I dedicate this work to my late father, Alhaji Aliyu Buhari Abdullahi (may his soul rest in perfect peace, Amin.) and my elder brother Muhammad El Edris (Mutawalli) as well as Alhaji Abubakar Mustapha for the moral up bringing and concern for my academic achievements.

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ABSTRACT

A comparative study of some agricultural products retailing, uses, users, problems and prospects was conducted in Kaduna, Anchau, Zaria, Kachia and Kafanchan. The agricultural products studied are ginger, Soya beans, cotton lint & seeds and pepper chillies. It was discovered that the market is supplier oriented, where demand is higher than the supply. This made competition multi-dimensional amongst retailers. Beside being supplier oriented, the market is also an import oriented market for ginger extracts.

The derivatives or product lines discovered in ginger and Soya Beans are yet to receive the required patronage they deserve. Therefore, there is the ardent need for more advertisement and sales promotion, since all those products are import substitution products with great potentialities to exploit the ever-increasing supply gap. This would identified more users whose needs are satisfied as a result of the multiple use(s) discovered.

The break through in Research and Development have significantly reduces the problems of these agricultural products, thereby increasing their prospects and subsequently more uses and users are discovered. But a lot needs to be done in the area of funding Research & Development in order to keep satisfying the dynamic and innovative needs of customers, otherwise the future is very bleak for the sub-sector

CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Before the emergence of Crude Oil or Petroleum in early 1956 and late 1970s, agricultural production had assumed a significant role in the Nigerian Economy. The contribution to gross domestic product as well as per capital income of this sector can be seen from the needed output to feed the expanded population. To furnish raw material for the manufacturing sector, to boost exports as well as to raise income levels of the large portion of the labour force employed in this sector.

The agricultural sector of the economy has been relegated to the second position in 1976 with the production of crude petroleum, which stood at approximately 90.5 million tons as against the 24.2 million tons production of principal crops (selected), while production of principal economic minerals stood at 22.4 million tons. (Source: Ministry of Mines and Power and Nigeria COAL Corporation, as reported in Economic Indicators, vol.13 No. 1-6 (June 1979), Federal Office of Statistics P. 15, the Nigerian Business Environment by Efiong J. Etuk P. 31).

However, because of its immense contribution towards creating self-employment and there by reducing rural – urban drift. The Federal Government in 1974 increased producer price of cash crops in order to increase production. While prior to that, in 1972 the Federal Government established Agricultural Development Bank, The Nigerian Agricultural and Co-operative Bank (NACB) for agricultural financing.

Within the sub-sector, cotton seed/lint, Ginger, Soya Beans and Pepper have in no small measure contributed to the economy and in turn income levels of both the producers, besides the labour force. The producers are among the major cash crops in Kaduna State. Thus, it signified how important the retail outlets are in the sub-sector of the economy.

The proliferation of agro-allied industries has increased the level of the retail outlets due to new discoveries as per new uses of these agricultural products e.g. Kachia Ginger Processing Company, Zaria Cotton Seed Processing Company, Zaria Ginnery besides the textile mills.

The abrogation of Marketing Board in 1975 led to the proliferation of retail outlets through direct whole sale purchase by using agents. The co-operative societies could play a vital role if properly harnessed and managed far better than the Marketing Board as every member is a partner.

1.2 Statement of the Problem

Considering the diverse nature and complexity associated with agriculture in general and the produce in particular, there are bound to be general and specific problems.

Among the general problem regarding the subject of study, below are some of the impediments:-

1) Getting the right quality products or produce free from defects arising from processing that ensures consumer(s) satisfaction.

2) Lack of well-coordinated and managed consumer-retail co-operative.
   b) Lack of storage facilities and preservation methods as well as poor technical skills, which leads to substandard goods.
   c) Penetration of International Market may be difficult.

3) Poor knowledge of abundant outlets due to poor communication between the retailer and the end user or consumer.

4) Lack of patronage on the part of end user or consumers who prefer foreign raw materials than local.

5) Poor research and development on the part of the retailers and industrial users or consumers for new uses besides the normal conventional ways.

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These and other problems could emanate from lack of financial support inspite of the existing agricultural development institutions such as Nigerian Agricultural Co-operative Bank and Nigerian Agric Insurance Company.

The specific problems are numerated as follows:-

1) Ginger:- There exists the problem of fungi, mixing of various grades, lack of scientific drier or method, under weight syndrome on the part of company's official or agents.
2) Cotton:- Has its own peculiar problems ranging from climatic conditions, Diseases arising from bacteria/pest, Dishonesty on the part of the producers/retailers due to watering, putting stones, mixing low and high grades.
3) Soya Beans:- Problems of weather condition, bacteria, rodents, unripeness that gives rise to dark colour.
4) Pepper:- The fragile nature as well as bacteria, lack of drying facility among others

However, many impediments would be discovered and the ways of militating them would be identified in the course of the research.

1.3 STATEMENT OF HYPOTHESIS

This section intends to give an imagined answer to the real problem enumerated earlier through deductive and inductive reasoning.

Following the increase in research and development in both the private and public sector as well as the academic circle, the right quality products or produce as well as the storage facilities and preservation methods have emerged, besides the new uses and users. Also taken care of are the impediments arising from fungi, bacteria/pest infections. While the end user or consumer satisfaction is improved. Dishonesty is reduced to the minimum due to the measured taken through supervision by the buyers from farmers. This can be seen from various effort made by Liventis, U. A. C., Cadbury in the private sector, RMDRC in the public sector and Institute of Agricultural Research, Agronomy Dept. A.B.U Zaria in the academic circle, to mention a

few. Leventis, U.A.C., Cadbury and Vegfru embarked on either vertical or backward integration besides the horizontal. This includes planting, processing and marketing.

1.4 AIM AND OBJECTIVES OF THE STUDY

Aims:- As stated earlier, it is the intention of this thesis to identify areas where these retail outlets could be boasted, in terms of skills, gains or benefits, reduce the risk (s) and cost(s) levels. With the new dispensation and the change of direction within the sector, there has been development awaiting these outlets to reap. Therefore the research intends to find out more on the awaiting prospects and possible outlets.

The numerous problems outlined and many more which have become set back or obstacles towards harnessing the maximum benefits would be addressed. So all efforts would be geared towards achieving solutions with an easy means of implementing them at the retail outlet levels.

Objectives:- The research would look for the possibility of diversifying the retail outlets in order to reduce the risk which are negatively correlated.

The work would also try to identify the possibility of the retailer embarking on backward or vertical integration or jointly with farmer(s) or intra (within the retailers) as the case may be. The thesis would be also geared towards evolving a way of getting and enticing the consumer towards relying on the local products or produce than importing them.

It would see the possibility of exporting, their prospects and problems, while the local market share would be expanded with increasing sales turnover at a subsidise rate in favour of the final consumer.

However, table below is the resultant contribution of the public, private and academic circles towards satisfying the consumer's needs. Since the market is supplier market where demand is always higher than the supply.

TABLE I

S/No.	Main Product	Product Derivatives	Type of Pest or Bacteria or Fungi	Type of Diseases	Type of Diseases Control	Users	Uses
1.	Cotton Lint	Long staple Short staple	Boll worm complex Leaf feeders Stainers, suckers	Bacteria blight Alternaria leaf spot, Die-back diseases, Areolate mildew, Aschocyta leaf spot Anthracnose	Use of clean healthy seeds, Good cultural Practices, chemical Control, Insecticide spraying.	Textiles, Local weavers, Spinners	Woven, knitted, fabrics of Textiles materials.
2.	Cotton seed	Planting seed, oil, cake	Pink boll worm, Older, Young nymphs, Nematospora gossypi.	Xanthomona campestris pv; reduction in quiity and viability; machine delinted seeds.	Acid-delinted healthy seeds, Weeding, chemical seed dressing.	Ginneries, farmers, house hold, livestocks.	Planting, cooking, animal feeds.
3.	Ginger	Raw ginger (white) Raw ginger (black) Oleoresin, Essential oil, Powder.	*Spiny boll worm, Pink* boll worm, false codling moth, Flea beetles, aphid fungus – Nematospora gossypi.	*Distortion of the apex,* rot-causing organism by bacteria or fungi, decrease in plant development & yield, mal-formation.	*Weeding &* Roqueing Chemical control and insecticide spraying	*Restaurants* Hotels, meat processing industry. Backeries, beverage, confectionaries, chemical and pharmaceuticals.	*Flavour, in drugs* and medicine production.
4.	Soya Beans	Soya Bean flour, Soya Bean Cake, Soya Bean milk, Soya Bean oil (cooking oil), Soya Bean condiments; (dawdawa)	Spiny boll worm, false codling moth, Flea beetles, leaf worm, aphid, white flies.	Bacterial blight, Alternaria leaf spot, Die-back disease, etc.	**As in the above**	House hold, Livestocks, Farmers, Children, Cadbury, & lever – Brothers Leventis & U.A.C.	Soya Bean flour Cakes, Biscuits, Rolls, pap, Porridges, Soy-Amala, Soy-Eba, Soy-Gari, Soya pudding milk, cottage cheese, (wara) cottage cheese, tomato cheese spread (Tofu)
5.	Pepper	Pepper, birds chilly Dan Bauchi Dan Kauru Dan Ida Dan Meyere	False codling moth, fungus Nemathosphora gossypi white flies, aphid.	Mosaic, loss of colouration & Contamination leaf curl.	**Ditto**	**Ditto**	Local uses can hardly be met by Analogues

1.5 SIGNIFICANCE OF THE STUDY

Agricultural and indeed its product(s) are presently negated to the background as a result of the emergence of petroleum. This has negative effects on both the farmer(s) and retailer(s) due to individual(s) or government official.

There have been so many impediments on Research and Development beside the communication or absorption by both farmers and retailers. The farmer(s) and retailer(s) remain adamant and conservative. Thus makes them un-aware of new discoveries regarding the products, uses and upon which the outlets are developed.

Therefore, this work would summed up the new discoveries regarding the main product(s), their derivatives, uses and users with which the retailers capitalise on to develop their retail outlets. This would in turn improve their sales turnover and indeed their profit margins. While the end-user or consumer's need is being satisfied through the varieties of product derivatives as well as uses.

The table produced in the hypothesis has articulated these developments at a glance for the benefit of the retailer who can now directs his sales machinery to these consumers.

This is a turning point for import substitution where one exported main products in return for the importation of the processed product derivatives. If property harnessed by retailers, it would improve the income level of the labour force, farmers, retailers beside the foreign reserve or balance of payment which could have positive bearing on the Gross Domestic Product (G.D.P.)

1.6 SCOPE AND LIMITATIONS

Scope:- The whole work would therefore be centred on the following main agricultural products in relation to their retailers, outlets, sources, problems (diseases) and prospects. (1) Ginger (2) Cotton (Seed & Lint) (3) Chillies and Pepper (4) Soya Beans.

Limitation:- The following are some of the limitation faced.

i) In-accessibility to Record:- One can not lay hand on all the records/vital information due to the bureaucracy of the management as they are considered "Highly confidential" which would have been good for such research as an updated one.

ii) Bias:- On filling the questionnaire or responding to face to face interview, in order to protect their interest. The management also behaves in the same way in the interest of the organisation due to lack of confidence on the researcher to treat all information under strictly confidential issue. After all there has to be disregard to that confidentiality as any research is to enlightened, educate on discoveries for the benefit of all and sundry as against the monopoly of knowledge.

iii) Poor Record Keeping:- Where one is able to lay his hand, the records would not be up to date, with vital information missing. Those in charge with the record keeping may seems to be keeping it through fire brigade approach by fabrication of data, that would satisfy their selfish interest.

iv) Financial Constraints:- Information has to be sometimes bought over or one has to bribe his way by tipping the person in charge otherwise the record or information would not be available. Where the information is given you may find that it is either not up to date or is a stale information. Go and come back syndrome would be the order of the day as a way of frustrating the research or the researcher.

v) Transportation Problems:- Collation of data is not an easy task it involves moving from one centre to another at different locations since the collation centres are not centrally located. Exhaustion of all information seems to be very difficult, while proximity factors is the primary consideration against far distance location.

vi) Time Constraints:- Go and come back syndrome always play a negative role to successful completion of research at the right time. It is always good to do the right thing at the right time. Appointment could be made but hardly met, thereby forcing the researcher unnecessary delay.

CHAPTER TWO

2.00 LITERATURE REVIEW

2.01 Retailing

Any business particularly in the production or manufacturing sector would only succeed through retailing or retail distribution. Howe (1992) consider it as an "essential and not insignificant part of total economic activity...." The success of this segment as part of the workings of the economy leads to the availability of a wide range of manufactured products. This can be seen from the derivative table of the raw agricultural product such as Seed Cotton, Ginger, Soya beans and Pepper shown in the statement of hypothesis.

The competitive world of today has necessitated manufacturers, distributors and retailers to provide a wide range of choices for consumer satisfaction, through innovation or creativeness. As a result of this manufacturers will only make what they can sell, instead of selling what they can make, Chisnall (1992). This development has made the retail business to become more dynamic, with competing organisations always making concerted efforts to create consumer interest in their products or produce. Consequently, the nature of competition in retail marketing has been plagued by the adoption of new strategies. Presentations of raffles draw sales promotion (door to door) and discount given etc.

2.02 Function of Retail/Distribtuion

The function of retail/distribution or retailing is bridging the gap between producer(s) and consumer(s). this enables producer to specialised in manufacture and the latter to obtain a range of goods for their needs at a given price.

The central function of retailing is the assortment of goods to make them available in small lots for the consumer. It is therefore necessary to anticipate consumer demand and its nature and to make available a concentrated variety of goods for the convenience of the consumers. The concentrated variety of goods will differ from business to business. In agricultural produce retailing

for instance, there are different grades of farm produces as well as their derivatives. The produces and their derivatives are mostly differentiated in terms of cost or quality.

MCClelland (1966) opine that the retailer must be regarded "from a logistical point of view as one who receives a variety of articles..... and on the basis of inefficiently and irregularly received instructions sorts them to their appropriate destinations". Also HOWE (1992) identified five unique retailing functions within this focus.

These are:-

i) Physical movement of goods
ii) Availability of a range of goods
iii) Change of Ownership
iv) Advice to potential customers
v) Other services to customer.

All the above factors have been referred to in the ensuing discussions. By providing appropriate distributive services efficiently that one class of retailer assumes greater or lesser important in the sector. And within any one type of retailer, the recognition of the need for particular services and the ability to provide these efficiently will determined the "survival, profitability and growth of individual retailing enterprises.

2.03 Retail Pricing

Pricing is a fundamental factor that affects retail policy. The policy for retail are simply an overall guide to pricing and consists of a set of rules which the retailer follows in making day to day pricing decision, Mason and Mayer (1978). The retailer is likely to have more than one policy if a variety of produces are sold. Pricing is affected by a number of factors. Mason and Mayer listed the following as the major ones.

i) Type of goods
ii) Retailer cost structure
iii) Demand structure
iv) Market structure

2.3(1) Type of Goods

The type of goods offered often affect-pricing decisions. This is moreso where great product or produce differentiation exists and the consumer is probably searching for some unique aspect of merchandise. The retailer thus has some leeway in prices for this type of product. The consumer will make a major effort to acquire a particular brand in so far as their needs are satisfied at an affordable price.

2.3(2) Retailer Cost Structure

The Cost Structure of the retailer is also important. Mason and Mayer (1978) believe that costs are difficult to establish for the multiple product retailers. Every effort should however be made not to price individual products below the overall cost structure of the company.

2.3(3) Demand Structure

Demand Structure is normally discussed with reference to elasticity. Elasticity is the percentage response in the quantity sold to percentage change in price. The computation should be in percentage terms instead of absolute units to allow for comparisons of demand sensitivity for different products.

There is another complication problem in pricing decisions for the retailer. This is cross elasticity of demand especially when products or outlets have close substitutes.

Generic and brand influences are also goods for thought for the retailer. Generic refers to industry-wide demand while brand refers to the individual brand, which the retailer offers.

Agricultural produce is elastic, although cross elasticity of demand plays a significant role due close substitutes. However, brand elasticity could be high due innovation and creativity. Small changes in price can for particular brand cause major shifts in the quantity purchased. The probability of brand elasticity for a product is likely to manifest where

consumers do not perceive major differences between the products and produce offered by various retailers. This probably accounts for why *manufacturers try to establish brand differentiation in their products or* produce.

2.3(4) Market Structure

The number and size of competitors and the amount of product or store differentiation usually affect market Structure, which in turn affect pricing. Depending on circumstances, the market structure may assume any of the following characteristics.

i) Pure Competition

ii) Monopolistic Competition

iii) Oligopoly

iv) Pure Monopoly.

2.3(4.1) Pure Competition

Pure competition exists where a product is perceived to be homogeneous, Mason and Mayer (1978). Market forces may dictate the price for the produce or products. Consumers obtain the product at the lowest economically feasible price. The retailer has little control over price and must fix his price at the prevailing market prices. This can be seen from the cotton market. Where production is relatively proportionate to favourable price.

2.3(4.2) Monopolistic Competition

Monopolistic Competition is characterised by many firms offering for sale differentiated line of products. Each firm has a limited kind of monopoly based on the manipulation of the various elements of the retailing mix.

In this type of market, retailers have a limited amount of influence over price. Management will have an upper hand in establishing prices if it is successful in differentiating the outlet. Soya beans and

Pepper/Chillies as well as cotton (sometimes) their prices are being controlled by the consuming company.

Retail outlets in this type of market structure have some leeway in fixing prices. If a firm raises its prices it can expect a decline in sales because some customers may switch to lower price brands or even to other outlets selling the same item at a lower price. Also the company or individual may be able to sell more units of an item at lower price than at a higher price. Where a large number of substitutes are available as in the agricultural produce or products market for example, the degree of price elasticity is a function of the number of rival competitors. And the "extent to which the products or produce or outlets offered are differentiated in the minds of customers" Mason and Mayer (1978). Obviously then, the less the degree of product differentiation, and the larger the number of competitors, the higher the elasticity of demand for the individual(s) or firm(s) offerings.

2.3(4.3) Oligopoly

This market structure exists where a small number of retailers dominated sales in an area. The retailers in this type of market structure occupy sufficiently prominent market positions to influence the decisions and action of competitors. The Ginger processed cartel is a good example of this market structure. There is so to say interdependence among them, which extends to pricing, customer service and other similar aspects of competition. For instance, price cuts by a firm will be marched by competitors so as to prevent the price – cutting firm from gaining customers.

On the other hand, unilateral price increases will be largely ignored because, presumably, retailers who do not raise price will gain the business lost by the firm, which raises its price. This in oligopolistic market models, retailers will tend to refrain from independently raising prices above a going rate for fear that they will experience a

substantial decline in profits, sales and market share. They are also not likely to cut prices drastically because price cuts will be marched by competitors.

2.3(4.4) Pure Monopoly

A monopoly, according to Bowden (1986) is a market structure in which there is only one seller. In order words, it is the opposite of pure competition, where individual firms have no power over the market. A monopoly on the other has power to influence the market price, Lipsey (1983). By reducing its output, the monopoly can force prices up and force the price down by increasing the output.

However, Bowden (1986) believes that no producing firm or individual in the present day, with pure monopoly can escape the influence of consumer demand. For instance, at prices, which are too high, the monopolist is bound to loose customers. Also, if the monopolist is making good profit, this will tempt potential competitors. In the final analysis, competitors it will suffice to say that "some kind of actual or potential competition" is always present either in the same product or some substitute product.

2.4 Retail Competition

Retail of all shapes and sizes perennially compete with each other MCCelland (1966). Economic analysis often assumes that industries exist where firms all produce identical, homogenous products, Ireland (1992). Actually, such more industries are the exception rather than the rule. An industry because its products are interdependent. The nature of demand may also stimulated the provision of variety.

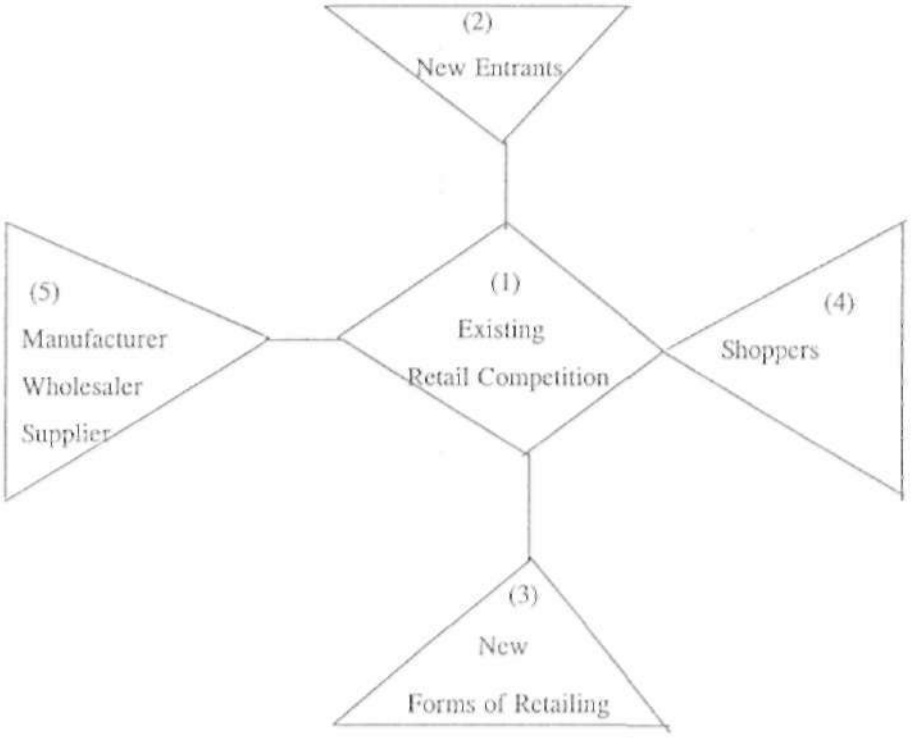
The provision of a variety of products in an industry stimulates competitive operation of the market forces of supply and demand that consumer are satisfied at the lowest resource cost, Howe (1962).

2.4(1) Factors To Be Considered In Retail Competiton

There are many ways by which the factors that affect retail market competition can be identified. Howe (1962) opined that the 'actors' or participants in retail

markets could be identified by adapting porter's five-force framework as shown in the figure below.

Fig. 1: **Five-Forces Frame work**



Source: HOWE 1992

Box 1 relates to competition among existing retailers (or producers) of the same product, simply offering consumers with same product (or service). Each of the retailers makes profit through its relationship with suppliers and consumers by convincing the latter that it offers the best value for money.

Boxes 2 and 3 make up two more dimensions of retail competition in retailing, new entrant competition is a usual possibility. This is because market entry costs for many forms of retail distribution are low. Also, diversification from one form of retail business to another is readily possible.

The forces in boxes 4 & 5 also influence retailer profitability and strategy. The relationship between retailers and their customers more often than not influence the retailers strategic decision making.

2.4(2) Forms of Retail Competition

A retailer must carefully appraise the precise nature of the competitions to see how he can fit into picture. This is because from experience, it is generally believed that it is difficult to make good profits where there is keen competition Buskirk and Buskirk (1979). The forms of competition can be broadly categorised into three, according to Howe (1962). These are:-

i) Horizontal Competition

ii) Intertype Competition

iii) Vertical Competition

2.4(2.1) Horizontal Competition

Mason and Mayer (1978) defined horizontal competition as that between two independent retailers of the same group. It also encompasses the possibility of entry into a retail market by more retailers of that group within the scope of horizontal competition. The struggle for customers between ginneries and textiles for cotton or its materials while in the case of imported processed ginger and the locally processed, for instance can be analysed. Another example pharmaceutical stores, can be cited. Howe (1992) believes that among competitiors having similar cost structure "Competition tends to take the form of marginal price differences, competition in service ..... And, particularly in respect of 'Corner shop' Location".

2.4(2.2) Intertype Competition

Intertype Competition according to palamountain's (1955) is competition between different forms of distribution. More specifically, it is the competition between different types of firms selling the same product. Sometimes intertype competition is viewed as a subset of horizontal competition since all sales are at retail. This type of competition is the most representative model of retail competition today.

2.4(2.3) Vertical Compettion

Vertical competition consists of webs of horizontally coordinated and vertically aligned establishments at each level operated at an optimum scale so that marketing functions within the system are performed at the most advantageous level or position, Davidson (1970). The outcome of this vertical relationship depends upon the relative bargaining strengths of the participants, palamountain (1955).

Vertical Systems require enormous capital investment and their networks seek to provide maximum economics and efficiencies in promotion, technology and the competence of management. In this system, monetary activities are co-ordinated from the point of production to the point of ultimate distribution.

2.4(3) Competitive Responses By Retailers

According to MCClelland (1966), there are three major dimensions of competitive response at the disposal of retail organisations, viz: price, location and services.

2.4(3.1) Price

Retail pricing, although complex, is one way that retailers can respond to competition. It must be born in mind that although there may be alternative retail outlets to consumers, they are characterised by limited price consciousness and price sensitivity and even a tendency in some cases to judge the quality of the product by its price. It can thus be seen that price may not necessarily be the only variable upon which consumers base their choice of retail outlets.

For a healthy competitive price strategy, retailers must make decisions on price promotions based on such variables as timing, choice of products and comparative price levels of other national brands. Decisions should also be taken relative to price levels for the same products or produce in different geographical locations.

2.4(3.2) **Location**

This involves the siting of new outlets and sometimes the closure of existing ones. It is an important variable in the ever-increasing competitive retail environment.

HOWE (1992) outlines three general issues that should be considered. These are population size, distinction between convenience and shopping goods and geographical or locational monopoly. Population size supports a particular retail establishment. Obviously, this is determined by the size of the catchment area population and the frequency of purchase per head of the population. If retail outlet is located in a particular place, it is the expenditure of the existing population of the centre and that of immigrant consumers from outlying areas that provides an adequate sales turnover. In this regard, a good forecast is of utmost importance.

Distinction should be made between convenience and shopping goods. Goods of convenience as the name implies comprise goods of convenience (with regard to the former) and are an important aspect of consumer requirements. Shopping goods are those with higher unit price, but purchased less frequently and consumers try to make comparisons of attributes of the products, eg. Price and quality.
The small corner shops usually enjoy some form of geographical or locational monopoly. The absence of new competition is occasioned by the patronage or loyalty, which the shops enjoy. By offering convenient location, retailer may be able to significantly improve his turnover.

Bowlby (1984) opined that there are a range of techniques available to retail managers in making store location decisions. HOWE (1992) summarised them as follows:-

"These may be broadly divided into search techniques designed to determine particular geographical areas which are appropriate to

individual categories retailer, store viability techniques which involve forecasting sales turnover for individual stores in a particular store location which influence sales levels".

Dawson (1979), however considers sub-urbanisation as the major locational change to have taken place in retailing. He wrote that it is a potential area of conflict between competing groups of retailers increasing successful sub-urban retailers and those located at the centre of cities which are becoming increasingly less successful. The major problem being that price changes by competitors are quickly known where retailers are free to fix their own prices.

Buskirk and Buskirk (1979), on the other hand, identified nine major factors to be considered when siting a retail location.
They are:-
Size of trading area
Area's growth patterns
Traffic patterns
Supporting Institutions
Buying habits of target market
Zoning & Building regualtions
Physical nature of premises and Security.

Specifying the size and structure of retail market areas is a potentially useful way of summarising the number and characteristics of potential customers. As the area from which the bulk of a company's customers are drawn is called its "trading area", it is therefore imperative to note that this area will certainly overlap where there are alternatives to the product being offered.

Mason and Mayer (1978) opined that the shape of trading areas is typically specified by central place theory and that a retailer's source of ideas about the structure of market areas is the gravity model which state that. "The volume of purchases by consumers and the frequency of trips to an outlet are a function of the size of the store and distance between the store and the origin of the shopping trip".

It is important to take into account all the relevant external environment conditions that affect local area growth, which in turn affect locational decisions. Careful investigation of economic conditions, competition, positive/negative climate that bears on legal, social and technological issues. The developments follow a predictable pattern. When they are thoroughly studied, it is easier to make "educated guess" about what will happen in future.

While considering a suitable location, the exact location of competing outlets should be identified. Actually healthy competition should be encouraged. Buskirk and Buskirk (1978) wrote that "In may instances new merchants want to locate near the competition whose clientele is the same as the one they seek. They want customers to see their store during a shopping trip to the competitors". It must however be mentioned that the presence of competition also has its drawbacks, depending of course on certain factors such as size of trading area, the type of product or produce that the retailer sells, the size of the retailer and the number and nature of the competitors. MCDonald Tideman (1993) went on to say that 'Unique product ranges can enable retailers to break into the most established shopping locations with a considerable degree of success'.

Some retailer outlets should be located near other types of businesses either for technical support or patronage by the other operations. Retailers should carefully select a target market to which they intend to sell. And therefore, retail outlets location decisions should include an analysis of the buying habits of the target market. According to Buskirk & Buskirk (1979), a study of buying habits tries to determine;

- Where the customers buy
- When they buy

- How they buy
- What they buy.

Obviously, new outlets should be located where its potential customers buy. Also the location should accommodate when and how they buy.

Sometimes, government-planning regulations do not permit the siting of certain businesses at certain locations. Local regulations should therefore be checked before a final decision can be sanctioned.

The physical nature of a location should also be given serious consideration when a retail location is being contemplated. It may be too small or oddly shaped and may scare potential customers away.

Finally, it must be said that security has become a major problem. There are rampant cases of petty thefts and even outright-armed robbery. Some locations pose larger risks than others do and due cognisance to this should be given. More over, insurance in high-risk locations is likely to be difficult to buy. Where it is successfully negotiated, the premium will certainly be on the high side.

In summary, location is critical to the success of most retail operations. It is a two-phase process. Firstly, a good community is essential. Secondly, a good site in the community is also of utmost importance.

2.4(3.3) Service

Services to customers can be described as either primary or supplementary. According to James et al (1970), primary services are offered to customers for the benefits they provide. The service itself is the object of the transaction. Supplementary services on the other hand are designed to facilitate or aid in the sale of a product or

primary services. Clearly then, retailers can improve their competitive advantages by improving the quality of their supplementary services. This could be in the form of after sales service by assisting in the application or to hear suggestions or complaints in one product or other. Also the polythene bags provided to customers be it in Ginger or Pepper.

All services offered by a retailer cost money. Such costs should be balanced against additional revenue. In evaluating the merits of a particular service to customers, a retailer should consider the cost, consumer demand, alternative sources of the services, and competition, James et al (1970). However, the retailer should periodically review whether there is need to continue offering a particular service, Mason and Mayer (1978).

2.5 Retail Organisation and Management

All business activities must be organised towards achieving the objectives of the firm. The type of organisational structure selected depends on factors such as the size of the establishment the types of goods and services offered, location of the outlet etc. The basic effect of a retail organisation simply is to satisfy customer needs while making profit.

Mason and Mayer (1978) opined that organisation is not particularly important for small retailers who may have a few employees only. In such cases, the retailer should set his objectives and approach them in the best way possible.

2.6 Customer Behaviour

Customer behaviour, just like human behaviour, is difficult to understand, let alone predict. Ehrenberg (1972), Mayer (1978) and Buskirk and Buskirk (1979) concurred on this. There are for instance pre-purchase needs and decisions that have to be made on whether to buy, what to buy, what not to buy and at what cost.

There is also the question of the buying situations, which are highly varied. Some products are bought frequently, while others are bought at longer intervals. Some products are pre-packaged and graded (e.g. processed ginger) and with different varieties (grades).

Promotional support is also important in shaping consumer behaviour. The type of promotion and content of an advertisement copy are also very important. Consumption levels of certain products also differ among individuals. For instance restaurants, house holds, beverages and pharmaceuticals would frequently or likely to consume more processed ginger and pepper or chillies.

From the discussions so far there bound to many buying situations. However, when a consumer has to choose between different manufacturers brands of a product, which are similar (there is little or no perceived differences), in quality, price and availability, it might appear equally "rational" to buy any of the products. Empirically however, it has been found that most people tend to develop habits of buying the same brand or a small number of brands fairly regularly, Ehrenberg (1972).

In summary, consumer buying habits are important to retailers because the where, when, what and how of buying provide many important keys to retailing decisions' Buskirk and Buskirk (1979).

3.0 Methodology

This section intends to give in detail the methods and techniques employed. To achieve the desired objective, therefore the study is structured in the following manner:-

3.1 The method of choice of the subjects or participants in the study, their characteristics and experiences etc.

3.2 Description of the independent and dependent variables identified in the study.

3.3 Description of the procedures used in data collection, e.g. questionnaires, interviews, etc.

3.4 Cursory description of the study.

3.1 The method of choice of the subjects or participants

The characteristics and experiences of the subjects or participants in the field of study has informed their selection. The participants were classified as followed:-

a) Individuals

b) Corporate bodies

c) Governmental bodies

d) Institution(s)

3.1(a) **Individuals:-** Instant information on prices can be given but hardly could one get past data or information due to poor record keeping or non-existence. Under this category, three (3) classes could be identified with at least 5 years experience. These include the following:-

3.1a(i) Individuals who retail the product or produce only

This group does not go into production directly or indirectly. They only purchase the agricultural produce for resale to final consumers in the market.

What matters most to this group of individual is getting a good grade at an affordable price that ensures fast sales with fair or good profit margin and low transportation cost.

3.1a(ii) **Individuals who produce and retail**

This group under takes production directly or indirectly and after harvest they sell it to retailers as well as final consumers in their own stalls at the market.

3.1a(iii) **Individuals that produce and sale to retailers**

This group does not partake in the retailing activities. They are involved in the production of the agricultural products or produce directly or indirectly. But on harvest they involve a retailer or whole seller.

3.1(b) **Corporate Bodies**

This subset intends to give the name and the reasons behind their selection. The corporate bodies include the following:-

(i)	Abdul Son Nig. Ltd.	-	Kaduna
(ii)	Cotton and Agricultural Processor	-	Zaria
(iii)	Kachia Ginger Processing Company	-	Kachia
(iv)	Zaria Ginnery	-	Zaria
(v)	Seed Cotton Processing Company	-	Zaria
(vi)	U.N.T.L	-	Kaduna
(vii)	K.T.L	-	Kaduna
(viii)	Cadbury/Vegfru	-	Kaduna
(ix)	Belphins Nig. Ltd. (Ginger Processing Co)	-	Kafanchan

AbdulSon Nig. Ltd. Kaduna has at least 5 years of experience in ginger business in production, storage and sales to final consumer.

While Kachia Ginger Processing Company and Belphins Nig. Ltd. And Ultra Modern Ginger Processing Factory beside trading in the raw ginger as done by AbdulSon Nig. Ltd. Has gone into the processing, that gave rise to essential oil, Oleoresin and ginger powder.

CAP, Zaria Ginnery, S.C.P.C., U.N.T.L. and K.T.L. each has at least 10 years experience in cotton business. This could be directly or indirectly in production through backward integration as in the case of CAP, Zaria Ginnery. While others besides involving in backward integration indirectly, they also involve in vertical integration (production (planting), Processing and marketing) S.C.P.C., U.N.T.L. & K.T.L. are good in this combine methods.

Cadbury & Vegfru are in production (planting), processing and marketing and whole purchase of both Soya beans and Pepper/Chillies.

Farina Ltd., specialises in Soya beans milk production although it is located in Lagos.

3.1(c) **Governmental Bodies**

The Governmental Bodies selected include the following:-

(i) Ministry of Trade Commerce, Industries and Tourism Kaduna.

(ii) N.I.D.B. - Kaduna Area Office

(iii) Federal Office of Statistics - Kaduna

(iv) Raw Material Research & Development Council –RMRDC (Kaduna).

The information or Data collected has contributed in no small measure towards achieving the desired objectives of the study. Although the data collated are stale because I was only able to lay my hand on 1995 data's as some of the current information needed are not forth coming.

3.1d Institution(s)

The institution selected are as follows:-

i) National Agricultural Extension & Research Liason Services (A.B.U. Zaria)

ii) Africana Section – K.I.L. (A.B.U. Zaria)

iii) C.A.B.S. Library – Kaduna Polytechnic

The segment certainly provides most of the information regarding uses, problems and prospects as well as past work of others can be seen in my references.

3.2 Description of the Independent & Dependent Variables Identified

The independent variables are those factors that have direct bearing on the dependent variables. The independent variable is a function of the dependent variable. Therefore, the independent variables are the determinant to the retail outlet or business success. A good policy or decision on the independent variables would certainly have direct and positive result on the dependent variables. An adverse effect would result, if a bad policy or decision is taken on independent variables.

The independent variables include the following:-

1) Consumer Satisfaction
2) Price
3) Product Quality
4) Product availability
5) Location (Market)
6) Transportation cost
7) Risks
8) Government Tariffs
9) Incentives
10) Storage Facilities

However, the dependent variable has little consequences, although it could be insignificant compared to what the independent variables have on the dependent variable.

The dependent variables include the following:-

1) Seller's need or desire
2) Finances
3) Sales turnover
4) Profit Margin
5) Pure Competition
6) Monopoly
7) Oligopoly (Cartel)

3.3 Description of the procedures used in Data Collection

Literature Survey was conducted by consulting relevant journals, newspapers and texts, which provided the theoretical framework for conducting the field survey of the project.

Field data was collected and analysed. Two methods of data collection were employed. These were:-

1) By the use of questionnaires
2) Personal Interviews.

A questionnaire was initially designed and administered for a pilot study. From the results of the pilot study, a more comprehensive questionnaire was drafted. A copy of the questionnaire is shown in appendix 1.

The questionnaire was administered to respondents in Zaria, Kaduna, Anchau, Kafanchan and Kachia. The respondents were either top management staff or managers of retail outlets sampled for study 30 questionnaires were administered.

The personal interviews were conducted in order to clarify some items in the questionnaire.

3.4 Cursory Description of the Study

The data generated was subjected to simple descriptive analysis. This is due to the fact that there was no proper record that would warrant quantitative (statistics) or qualitative (%) analysis.

Finally, conclusions were drawn and appropriate recommendations made.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Return of the Questionnaires

The questionnaire was the major survey instrument for the study. The respondents of the questionnaires were mostly the top management executives of the organisation and sometimes the proprietors of the retail business. The Questionnaires were administered to respondents in Kaduna, Zaria, Anchau, Kachia and Jama'a.

A significant number were returned, although some were not completely answered for reasons such as confidentiality or lack of adequate information.

All the questionnaires returned were useable for analysis. The returns of 24 questionnaires in all, which represent 80 percent (%) was considered adequate for analysis.

The farming of Soya beans and Ginger are more predominant in the Southern part of the State. While Cotton and Pepper (Chillies) are prominent in the Northern part of the State.

But the processing of these products and their derivatives are concentrated in Zaria and Kaduna due to urbanisation and industrial base, with the exception of Kachia Ginger Processing Company and Belphins Nig. Ltd., and Ultra Modern Ginger Processing Factory in Kafanchan. Therefore, the retailers of the raw product are concentrated in the rural areas while the processed product retailers are in the urban areas.

Anchau in the northern part of the state produces Soya beans, peppers (chillies) as well as Cotton.

The return are shown in Table 4.1

TABLE 4.1:- Returns of Questionnaires

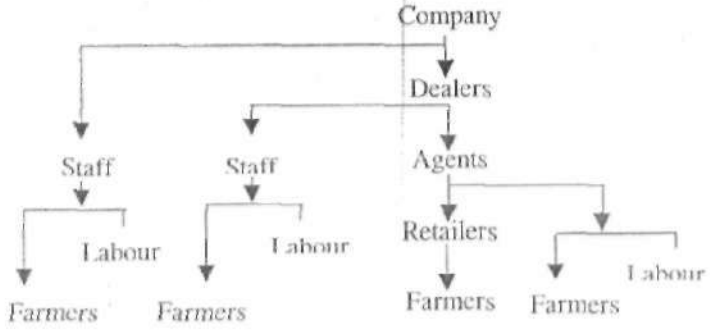
PRODUCTS	COTTON	SOYA BENA	GINGER	PEPPER (CHILLIES)	TOTAL	NUMBER ADMINISTERED
ZARIA	1	1	1	1	4	6
KADUNA	2	1	1	1	5	6
ANCHAU	1	1	1	2	5	6
KACHIA	-	2	2	1	5	6
JAMA'A	-	2	2	1	5	6
TOTAL	4	7	7	6	24	30

SOURCE: Field Survey (1998)

4.2 Organisation and Management

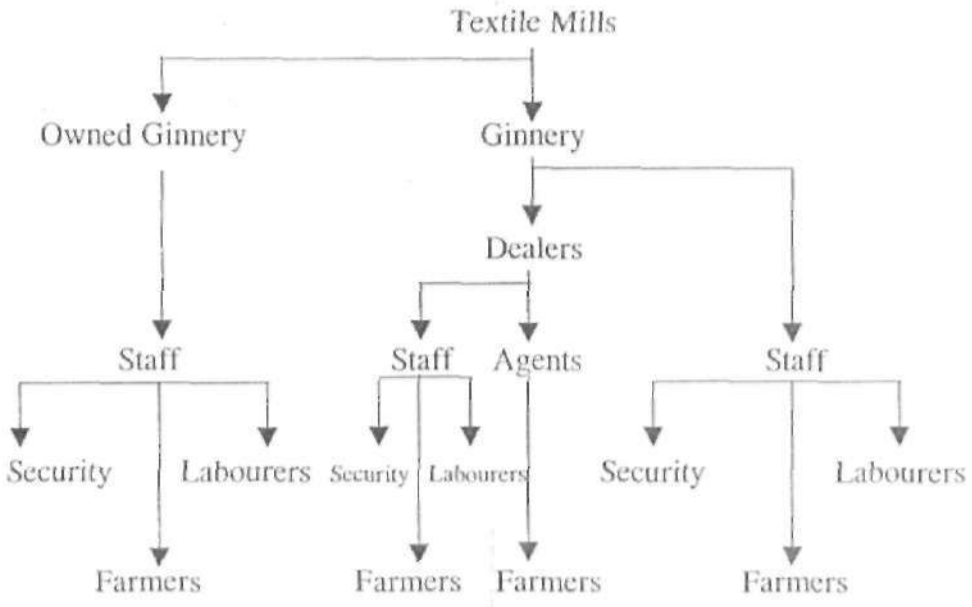
From the result of the responses obtained, about the organisational structure in Ginger, Soya beans and Pepper are similar with only slight differences. But Cotton, the structure is different from what was obtained in the past; that was in the early 1960's

Figure 2:- Orgnisational Structure (Ginger, Soya Beans and Pepper)



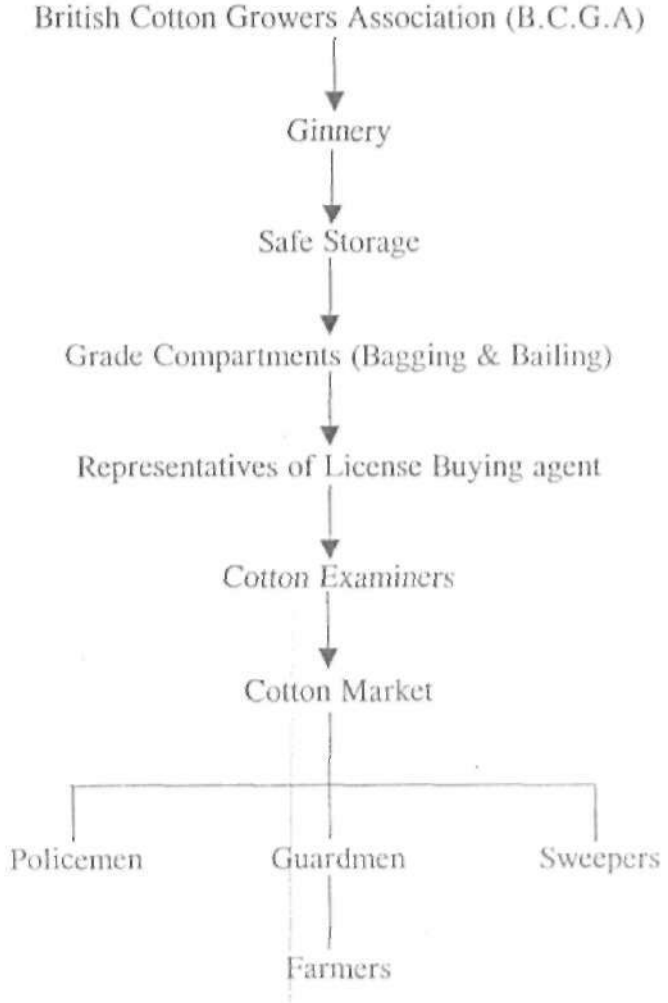
Source:- Field Survey (1998)

Fig. 3 – Organisational Structure (Cotton)



Source: Field Survey (1998)

Figure 4: Organisational Structure under B.C.G.A (1950 – 1970)



Source : Field Survey (1998)

Initially it was dealer, Agents and Retailer business relationship acting as intermediaries between the farmers who is the producer and the final user depending on the quantity purchased.

As a result of re-orientation of business enterpreneurship due to the economic realities i.e. the consciousness of profit maximisation or cost minimisation, shutting one or two parties for a direct deal with the farmer(s) or producer has become the order of the day.

Some staff would be charged with the responsibility of getting the right quality product from the source at a cheaper rate if compared with involvement of non-staff. While others try to reduce the number of parties involvement in their operation.

An office is usually secured closed to the farmers for the sake of proximity as well as easy and fast operational and administrative requirements or needs. Bulk purchase is always made by the company or it's dealers through their Agents or staff. The retailers on the other hand usually make small purchases for the end-user (customer), which could be raw or processed. The structure does not change in its operation or application.

Labourers are also employed for the purpose of bagging, separation, weighing, sweeping, loading and off loading of the purchased goods or products. These labourers are directly under the agents or senior staff attached to the field. The Agents or staff assigned to field work are usually skillful as it obtains in the cotton examiners who usually grade the product quality, weigh it in order to give the appropriate price(s) for such product.

The instruction regarding the specification is determined by the buying company who dictate the direction of the market. This means that the farmers is at the receiving end.

Also involved in the field operation are the security guardsmen who receive instruction from the field manager in charge of operation in the field. The field manager is assisted by a cashier(s) who pays for the product purchased.

Stalls are also provided for the safe storage of products purchased. These stores are classified for the various grades purchased in order to avoid mixing of the various grades. However, at intervals these purchased products are transferred to the parent company's warehouse.

There is no significant change in the organisational structure with respect to the processed product. The only change is being the replacement of farmers with retailers who finally sell the product to customers.

Management:- the day to day administration of the company is usually in the hands of a management team comprising the following:-

1) Managing Director/C.E.O

OR

2) General Manager
3) Production Manager
4) Accountant/Admin Manager
5) Marketing Manager
6) Officers/Supervisors

4.3 Retailing Strategies

it is important to note that these agricultural products are being retailed. The raw products as well as the processed ones are retailed or sold to individual(s) or Company(s) based on the quantity required.

The processed products stand as an import substitution remedy. Therefore, it is necessary for these products to meet the international standards, so that besides satisfying the domestic demand, they would also penetrate the world market. This objective could not be without some set backs from both the local and international cartels.

The success behind the achievement of these company(s) or individual(s) is due to the strict observance of four phases task, although there could be some short comings which would be discussed later in this chapter. The four phases are discussed below:-

Phase I:- This involves five (5) tasks which are as follows:-

Task 1 → The firms or individuals study prospective buyers regarding who they are, where they are, what factors are important in their purchased or non purchase of their product?

Task 2 → The product retailed satisfies customers needs and wants.

Task 3 → The prices and terms set on these products appear reasonable to buyers while at the same time returning a fair profit.

Task 4 → The distribution channels, making the products available to buyers, when and where they can conveniently get them.

Task 5 → the products developed are brought into the market as well as informing the market through adevertisements.

However, because of implied warranty of satisfaction with the product, marketing responsibility does not end with sales. Thus the firm its agents or retailers do occasionally re-assure the buyer and in many cases perform after – sales service or visits, for performance feed back through suggestion or complaints received from customers for ratification.

Phase II:- It is worthy of note that these companies, their agents or retailers maintain their market shares and even get more prospective buyers by meeting the following:-

(1) **Satisfying the International Standards:-**

The processed and raw products usually satisfy the quality and grade of the international standards organisation. These raw seed cotton, Ginger, Soya beans as well as pepper are recognised and acceptable in the International market. Other considerations among others for a successful marketing includes, the products:-

(i) Availability (ii) Reliability (iii) Price

(iv) Service (after sale) (v) Technical details (vi) Identity

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Other items that ensure maintenance of market share and the firm or retailers continuos floating in the market are the following:-

(i) Research and Development on the product.

(ii) Marketing Research and market forecasting.

(iii) Maintained close contact with customer with more attention to their complaints and suggestions.

(iv) Quick to exploit product innovations.

Phase III:- The apparents used in penetrating or exploiting the market locally or internationally through the following.

(i) Domestic or International Distributors

(ii) Licensed marketing agent (on commission) who connects buyer with seller.

(iii) Casual or Accidental export by using foreign based companies who purchase the product for their own foreign operations. Opportunistic firms may see such occasional exports as a way to unload an unexpected surplus or some obsolete inventory.

(iv) Active export:- Because of the number of unsolicited orders from abroad, the company either sets up its own in-house export operation or hire some outside organisations to handle its export marketing. The Nigerian Textile Materials in Niger, Chad & Cameroon adopted this channel, or Raw materials of ginger, seed cotton, Soya beans and pepper found in Europe and the middle East are retailed through this medium.

(v) Other forms of entrance into the foreign market amount to much commitment of funds, efforts and other resources. These forms of entrance include.

(a) Foreign Licensing (b) Overseas Marketing by the firm.

(c) Foreign production & Foreign Marketing (d) Joint Venture

Phase IV:- The strategies adopted by the companies or individuals that ensure successful marketing and retail outlets with fair returns are as follows:-

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(i) Market penetration strategy:- This is done through persuasion or convincing buyer(s) to have trial

(ii) New market strategy:- This involves expansion to an entire new segment, e.g. food/beverages.

(iii) Backdoor strategy:- The challenger runs around market leader indirectly

(iv) Guppy strategy:- This involves attacks launched against smaller competitors instead of market leader.

(v) Market followers strategies:- It involves maintaining position without engaging in competitive war.

(vi) Market – Nicher strategies:- The minor firms that is the newly establish ginger processing companies try to avoid clashes with major competitors.

(vii) Geographical – Expansion strategy:- This involves expansion to an entirely new geographical location that was being served before.

The above mentioned phases have proved positive result in both old and new retail outlets as this would be shown in due course.

4.3.1 Innovation

An innovation is a product of Research and Developments. As a result of the positive results achieved in the production and processing of these products and by improving on the uses and preservation method, the outlets have expanded.

Table 4.2 Possible Outlets

PRODUCT(S)	USES	OUTLETS	AVAILABLE SOURCE
GINGER	Powder:- Flavour In Food, Spices in Meet. Syprus/Powder:- Fruit drinks, bear, Drugs & Medicine Production Fresh ginger/ Vegetable:- Domestic consumption Leafs:- Animal feeds	Departmental stores Restaurants, Hotels Meat Processing Industries. International Market Bakeries, Confectioneries Beverage industries, Chemical & Pharmaceuticals Biscuits & Sweets Industries, House Holds Livestock Farmers	Kachia, Jaba, Z/kataf, Kaura and Part of Kauru Local Governments
SOYA BEANS	A source of protein A Beverage soft Drinks, food flour, Dawdawa – A local Condiment maggi Used in soup Solid waste for Animal feeds – cake Soya Beans Oil	Domestic House Hold Restaurants, Hotels, Livestock farmers, International market	Kachia, Jaba, Z/Kataf, Kaura and Part of Kauru, Lere Kubau Local Governments.
COTTON LINT AND SEED	Lint, yarn, grey baft Cotton Dust (Blanket) Seed, Oil Cotton Seed cake See appendix VII For more details	International market, Textile Mills, Ginneries, Tarpaulins & Blanket factories, Farmers Local weaver House Holds, Livestock farmers	Soba, Ikara, Kubau Kudan, Zaria, Sabon Gari, Makarfi And some part of Kauru & Lere Local Governments
PEPPER CHILLIES	Pepper, Birds chilly Yar Kauru " Zaria " Meyere	Cadbury, Vegfru, Restaurants, Hotels, House Holds, International Market.	Northern part of The state and some Part of Southern Zaria.

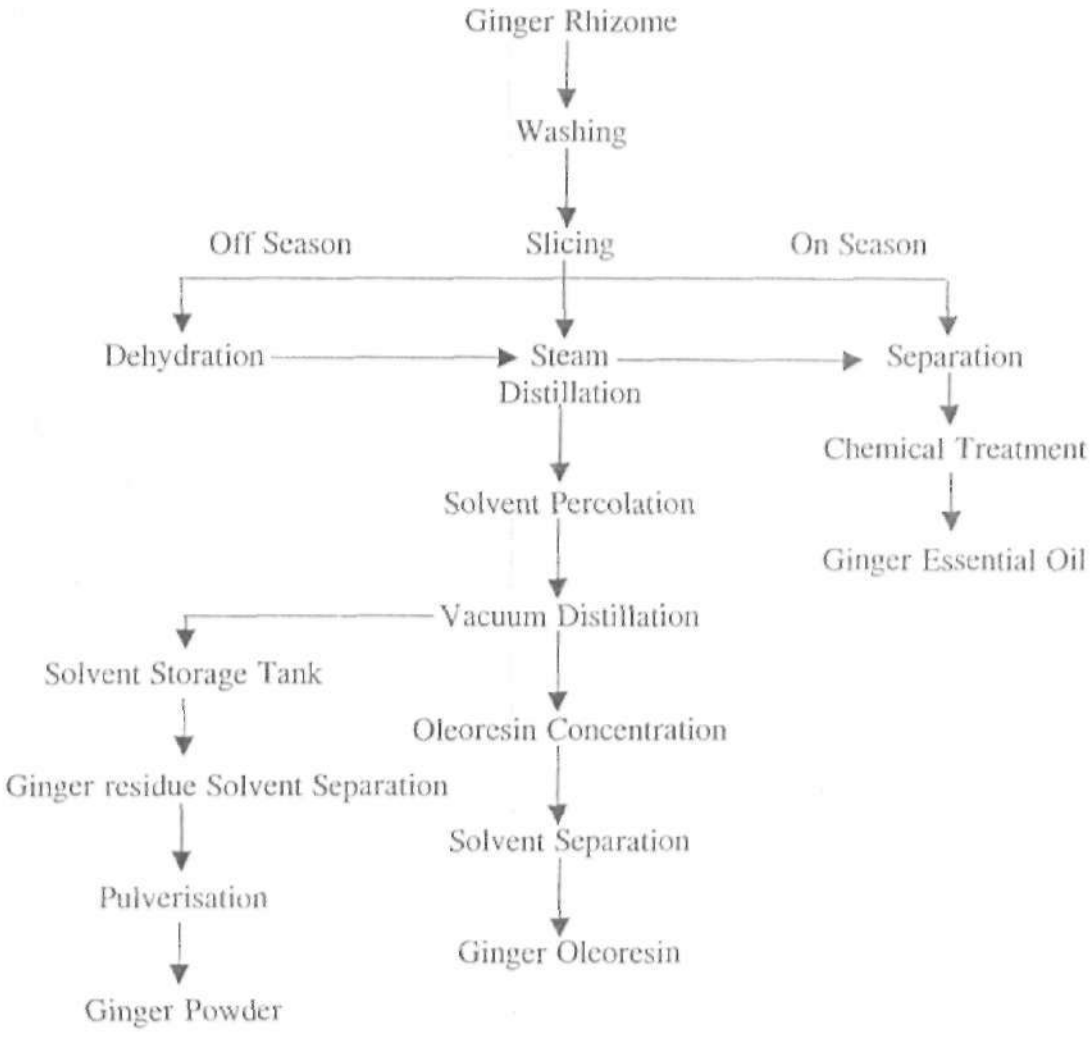
Source: Field Survey (1998)

From the table 4.2 it has shown that the positive effect of Research and Development for introducing new uses, which can be seen from the proliferation of the retail outlets as a testimony of R&D break through in the processing methods.

The flow chart for ginger processing and Soya Beans Milk Production are shown in figures 4.5 and 4.6.

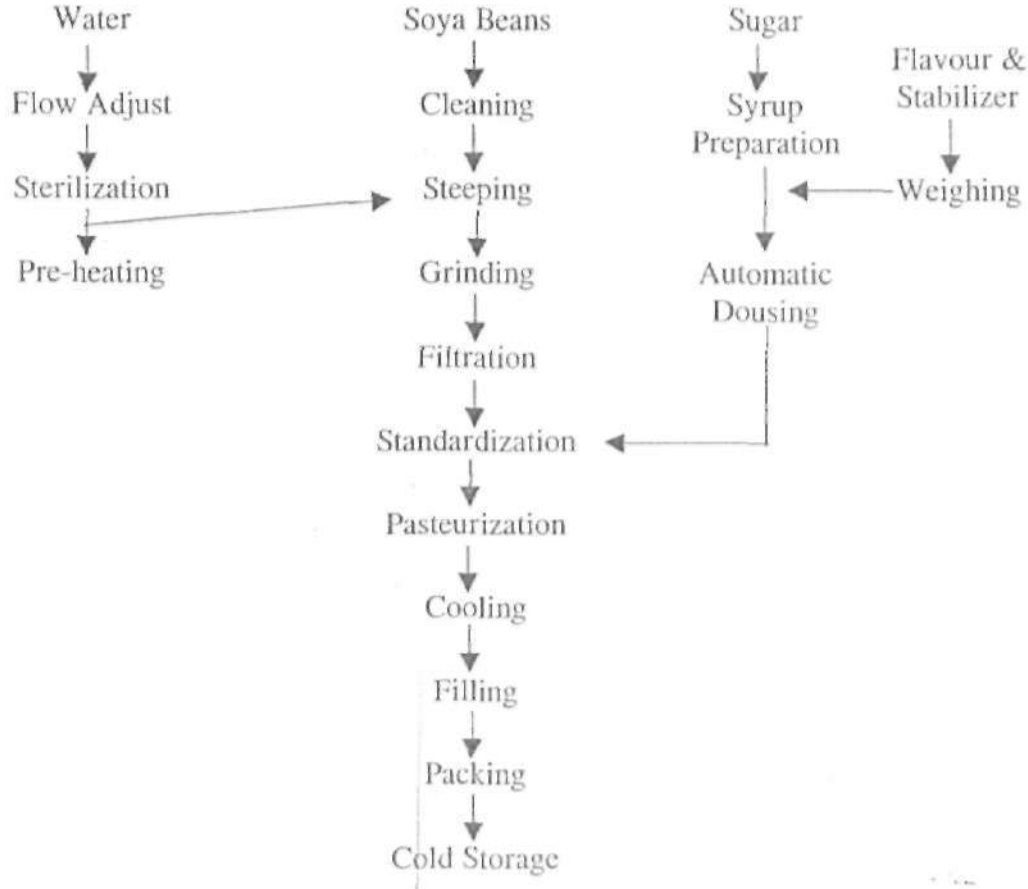
Fig. 4.5

FLOW CHART FOR GINGER PROCESSING



Source:- N.I.D.B.

Fig. 4-6 **Flow Chart for Soya Beans Milk Processing**



Source:- N.I.D.B.

Also note worthy is the price for Research and Development (R & D) in the innovation of machines for drying, crushing and preservation of these agricultural products.

Table 4.3 Extract from Evaluation of Performance of Locally Fabricated Process Equipment

	Equipment	Part Description	Average No. Replaced P. a	Capacity Rated by Manufacturer	Average Capacity	Rating
1.	Feed Milling Machine	Hammer Screen sieve	50 50	3tons/hr	35%	Good
	Name/Address of fabricator	Paul & Weldamann Ltd. 10, Ukpong Ineum Road, Ikot-Ekpene, Akwa – Ibom State				
2.	Crusher	Hammer Screen	100 30	0.5ton/hr	-	Good
	Name/Address of Fabricator	U-Freedom Nig. Ltd., 135 Abeokuta Express Way Dopemu – Agege, Lagos.				

3.	Grinder	Grinding Plate Pulley Belt	2 1	Half(1/2) Pick-Up P/H	-	Satisfactory
	Name/Address of Fabricator	Hassan Technical Work, beside G. B.O, Ile-Ife, Osun State.				
4.	Multi-Purpose (for grinding, drying, serving, pumping.	Flame Tube	3	3 tons/day	2 tons/day	Good
	Name/Address of Fabricator	Ogunubi Complete Technology				
5.	Rice Stoner Multi – Purpose Cabinet dryer Airal assisted Solar dryer Cocoa drying Machine	Mechanic & Pneumatically	9 machines	Fabricated by Federal University Technology – Akure, Agricultural Engineering Department.		
6.	Rice Par Boiler Solar dryer Fruit Juice Processor.	Fabricated by University of Maiduguri, Food Science & Tech. Department.				

Source:- RMRDC

The cost of Research and Development on the product(s) and its outlets ranges between N20,000 – N200,000 depending on the scope. The financing could be internally generated or through Banks.

However, the response is not all that immediate, but with patience fruitful results are always achieved.

4.3.2 Location

The issue of location of the outlets is an important one, although it was not referred to in the questionnaire. However, observations were made during the physical process of administering and retrieving the questionnaire. Some of the outlets were mostly located in the markets, business districts (mini markets) and super stores. Where such a super market does not make provision for such product it may be found outside.

The competition for the sales in the market is more liberal than monopolistic or oligopolistic. The competitors are usually located in a central point with correlated agricultural products. Although the prices could be the same, but those that have more customers usually subsidised their prices.

The market, i.e. the size of trading areas is big enough to accommodate most of the retailers. This means that there exists a healthy and pure competition.

Sometimes, major buyers provide a central buying point for easy evacuation, grading and security of the transaction with sellers or farmers.

With respect to the processed product(s) the case could be different where the manufacturers may be selling indirectly to Hotels, Restaurants, Pharmaceuticals, Bakeries etc. through local purchase orders provided or the offered by the buying companies to their contractors.

Another alternative outlets could be through internal consumption via owned processing plants. E.g. a ginning company owned by a textile mill would process a seed cotton for the mother company for it to be sub charge in their books of account.

Integrating forward suits textile milling and vegetable oil processing which certainly improves the existing or present outlets. The textile mill finance farmer(s) during a farming season on harvesting product, the farmer settled the bills with the harvested product. Sometimes the company directly partakes in the faring of raw materials through direct labour.

4.3.3 Competition Responses

As the market for these agricultural products are fast developing, so is the competition is becoming keener. Presently Kaduna State within the short span has witnessed the siting of processing companies owned by both the public and the private sector. This development has in no small measure contributed to the proliferation of retailers and outlets.

Ginger:- Marketing Ginger is one of the difficult tasks in agro-allied markets due to its oligopolistic cartel-controlled tendencies. This makes the penetration of new entrants into the ginger market and its derivatives very difficult and almost impossible, of which the Kachia ginger processing company and Belphins Nigeria Ltd. are not exceptional cases.

There are currently at least 26 ginger processing plants around the globe with 15 of the plants in the U.S.A. producing about 70% of the global supply. Spain has 4, U.K. has 2, Nigeria 2, France, India and Germany have 1 each. Source: - N.I.D.B.

In the local or domestic market is an import-oriented market satisfying at least 15 major users with annual consumption of 50,000 tons. While in the International Market the demand for ginger extract was placed at 590,609 tons with only 438,983 tons being supplied, leaving a supply gap of 151,626 tons to be supplied. Source:- N.I.D.B.

Therefore, locally Kachia ginger processing company and Belphin Nigeria Ltd. would be competing, beside the struggle to penetrate the syndicated cartel-market within and outside the country.

The raw ginger from southern part of the state has met the International standard. But with China's mechanised farming of the product is giving a serious threat to that of Nigeria, which is traditionally farmed with some impurities.

Another important factor is that there is no law, banning the importation of ginger extracts. This makes the competition open to all including the foreign firms.

Soya Beans:- There is excess demand in the domestic market, this has resulted into a keen competition from other varieties of milk and beverages. To show extent of the competition is the use of distributors who use cooler bicycles to reach schools, hospitals and market places.

In order to improve the protein deficiency the Government encouragement in the utilization of Soya Beans, led to the establishment of utilization committee being co-ordinated by the International Institute of Tropical Agriculture (IITA) Ibadan. Also the Agricultural Extension & Research Liaison Services (AERLS) – A.B.U. Zaria has contributed in this direction towards processing of Soya Beans and milk products. All these agencies have opened other ways or benefits associated with Soya Beans which makes it vulnerable to competition due to increasing demand.

The advertisement through Television and Radio that Soya beans is nourishing and a very good source of protein as a meat substitution remedy due to the exploring of this untapped economic sector by the competitors

Cotton Lint/Seed:- Clothing as the 3rd most important basic necessity after food and shelter has invariably made cotton a significant product worth exploring in trying to meet the unsaturated demand.

The quality of textile manufactured in Nigeria competes favourably with imported textiles goods. With increasing population and given the right condition there shall be pure competition amongst textile mills as the raw cotton is within their reach.

The Nigerian cotton lint market is a suppliers market oriented as demand out weighted the supply. This means that the market operates have an upper hand for a keener competition.

The demand increased from 248,000 bales to 660,569 bales in 1979/80-1985/86 period as reported by Nigerian Cotton Board (NCB), this would in turn triggered for more market share so as to allow the textile mills a continued float in the industry.

A threat to the Nigerian Cotton are the cotton brought or smuggled into the country from neighbouring Chad, Cameroon and Benin Republics which is beside being of good quality, it is at the expense of the local cotton.

The re-introduction of long staple lengths fibres to other areas in order to boast the production of such species which was withdrawn from our farms by the Colonialist. This means that Kaduna State would have the opportunity of double advantage for both short & long staple over the predominantly long staple areas such as Kumo, Keffi, Lokoja and Kuru.

Another segment that makes the competition interesting are the local weavers. Although the quantity consumed is not much but with expansion of Co-operative Societies for Weavers in Ashoke, Gwado etc. the quantity consumed would in no distance future be significant. This is because highly skilled weavers enjoy high demand for traditional materials. Although local weavers that uses mechanised spun thread couples with inadequate storage facilities reduces their strength in the local markets though still remains a threat.

Cotton Seed Oil:- In another segment that is receiving competitor's interest. Because presently a factory is sited in Zaria purposely to be milling the oil from the cotton seed. This development is not only a threat to the cotton lint/seed users but also to the groundnut oil producers and marketers.

Cotton Seed:- The livestock farmers use the cotton seed to feed their animals particularly during the dry season. This also poses a threat to the entire sector beside the increasing a latitude for a wider and pure competition amongst cotton seed oil mills and seed cotton farmers.

The farmers are not left out in the competition of keeping the cotton seed for the next farming season. They are left with the option to choose between getting proceeds from the sale of their seed cotton (raw cotton seed and the chances of farming the next season.

Pepper (Chillies):- Not much is known regarding its uses besides spices in food. But this product still attracts competitors. The competing circle includes local traders and companies such as Cadbury and Vegfru. These companies develop the competitive line by processing the products with Tomatos for Canned Tomapep production.

4.3.4 Sales of product(s)/Derivatives

All the outlets selected for the study shown in table 4.4 are engaged in the retail or consumption of these agricultural product(s)/derivatives. The ranges of products and their product lines are as follows:-

TABLE 4.4 RANGE OF PRODUCT/DERIVATIVES

Product(s)	Cost Price Of Raw Product (₦)	Derivatives Product Lines	Installed Capacity (Processed)	Selling Price (₦)	Properties	Farmers Production Capacity
Ginger	87.50/kg	Essential oil Oleoresin Powder Tonic	750 – 120 Tons p. a.	Ess. Oil 1,210/kg Oleo 1,430kg Powd 22/kg Tonic 20/Lt.	Warm Pungent Taste with Pleasant Aroma	37,000 tons p. a.
Soya Beans	64.00/kg	Flour Cake Oil Milk Condiments (Dawdawa)	30-150tons 8630-20592t 3000-22500 Cartons .3mil-.5mil N.A	Flour 70/kg Cake 20/kg Oil 80/kg Milk - 90k/1000ml Condi 5/3 ps	White, less Pungent taste With round Shape but Smooth hard Cover than Ordinary Local beans	20,388t

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Cotton lint Cotton Seed	90 – 105/kg	Short staple Long staple Oil Cake Seed	225,168 Liner meters N/A 170500mt 96 " 88096 "	90-20/kg N/A ₦ 65/lt ₦20/kg ₦65-00/kg	White colour Composite And spined By mills Seed is a Small, black Colour Similar to Okoro seed Found after The removal Of the cotton	50,000bales N/A 46,400mt 54mt 174,153tons
Pepper (Chillies)	5,800/bag (580/kg) 5250/bag (525/kg) 3200/bag (320/kg) 2400/bag (240/kg)	Tomapep Dan Bauchi Dan Kauru Dan Ida Dan Meyere Pepper mint oil	N/A 13,446- 47559mt	365/kg	A reddish Fruit with Stimulant Pungent, Strong, sharp Stinging Taste.	N/A

Source:- Joint Information (RMRDC, NIDB, field survey - 1998)

Ginger:- The Ginger Rhizome is an under ground stem, has a warm pungent taste with pleasant and flavourant aroma. If processed would give rise to the following which are commercially significant in both domestic and international market.

(i) **Ginger Oleoresin:-** This is a solvent extract from pure ginger blended with oil depending on buyer's specification of oil contents. It is being used in food, pharmaceutical and cosmetic industries.

(ii) **Ginger Essential Oil:-** Also like Oleoresin, besides solvent extract and blended with oil according to buyer's specification, direct sunlight reduces its shelf life. Bakeries, confectioneries such as sweets, biscuits factories as well as beverage industries use the product.

(iii) **Ginger Powder:-** It could also be in the dry crystal form. The powdered form is blended with measured quantity of oil and Oleoresin. The powdered is usually used as a flavour in food production and spices in meat, as food seasoning suitable for boiling meat and already prepared meals such as rice, stew, soup, pepper soup.

(iv) **Ginger Tonic:-** A health supplement made from pure honey and ginger Oleoresin, good for cold and influenza. It is diluted with hot or cold water or as a flavouring for tea, coffee and pap.

(v) **Fresh Ginger:-** It can be combined with vegetable for house hold consumption (kwado in Hausa)

(vi) **Ginger Leaves:-** is used for Animal feeds.

The test marketing conducted by Belphin Nigeria Ltd. on items 1-4, the response was high thereby receiving wide acceptance from the potential market particularly the ginger tonic.

Packaging and Available Facilities:- Oleoresin and Essential oil are packaged in 500ml amber coloured glass bottles or Aluminium bottles sealed and stocked in cartons of 12 bottles. While the powdered type is packaged in polythene sachets. Sometimes Oleoresin & essential oil could be packaged in 4 litres gallon and jerry cans of 25 litres.

However, Oleoresin is stored in a cool, dark place before and during shipment, otherwise its shelf life would be affected.

The ginger tonic is placed in jars of 100 grams or 0.1kg and also packaged in a packs of 0.15kg (150 grams) and 0.25kg (250 grams) is the ginger spice or powder. While the amber bottles is sold at ₦3.00/litre (₦1500.00 per 1000 bottles of 500ml) and the aluminium bottle is sold at ₦18.70/litre (₦9350.00 per 1000 bottles of 500ml) source N.I.D.B/Belphin Nig. Ltd. Tower Aluminium Plc, Lagos and Metal Box Ltd., Lagos are the packing manufacturers.

The raw ginger can be stored in a ware house or a small store, which must be clean, leaving air space for air circulation and periodically the store should be fumigated in order to avoid attack by pests.

Set Standards:- Firstly the raw ginger has to be dried with maximum moisture of 12%, while impurities are removed to a minimum of 0.01%. This can be achieved through complete drying or re-drying after washing, careful hand picking and clean, fumigation, insecticizing through self or strict supervision. A mechanised farming, harvesting, splitting and drying could be an added advantage.

The processed extracted ginger must conform to standards set by National Agency of Food Drugs Administration and Control (NAFDAC) as well as International Standard Organisation for Successful Trading in both local and international markets.

Demand for Ginger Extract:- Nigerian raw ginger and indeed Kaduna State raw ginger being one of the best species enjoys a steadily 2.5% per annum increase in demand. As a result of the steadily increasing demand, an estimated 50,000 tons of ginger extract was used in 1991 as declared by Raw Material Research and Development Council.

The demand steadily increased from 321,097 tons in 1980 to 522,012 tons in 1990. The foreseen increase is due to the projected population growth and discoveries as well as development of new markets in the Eastern Europe (former Eastern Block – Raw Material Research & Development Council as the source.

Another important factor that contributed to the increasing demand is the improved communication between the buyers and the sellers in providing useful information regarding one's specification of either raw ginger or processed extract through the various media of information dissemination as well as transportation shorten through sea, air or land.

The list of major users of ginger extract and their annual requirements are shown in table 4.5 below.

Table 4.5 **Major Retailing Outlet(s) for Ginger Extract and their Annual Requirement, in tons**

S/NO	NAME OF COPANIES	ANNUAL REQUIREMENT, IN TONS	SUB-TOTAL (TONS)
1)	Satis Product, Lagos	800	
2)	Nigerian Bottling Co. Apapa, Lagos	3,000	
3)	Niger Biscuits, Apapa, Lagos	1,100	
4)	Mobil Oil (Nig.) Ltd., Lagos	3,000	
5)	Texaco (Nig.) Ltd., Lagos	3,200	
6)	Johnson Wax (Nig.) Ltd., Lagos	1,200	
7)	7-Up Bottling Co. Ikeja, Lagos	3,000	
8)	West Africa Distillery, Ikeja, Lagos	1,200	16,500
9)	Nigerian Bottling Company Kaduna	3,050	
10)	Savannah Sweet Company	1,700	
11)	Express Foods (Nig.) Ltd., Kaduna	400	5,150
12)	Nigerian Bottling Company, Ibadan	4,000	4,000
13)	Nigerian Bottling Company, Kano	3,000	
14)	Kaura Biscuits Kano	800	3,800
15)	Nigerian Bottling Company, Benin	2,500	2,500
16)	Nasco Biscuit, Jos	900	900
17)	Other Users	16,150	16,150
			50,000

Source:- Raw Material Research & Research & Development Council (RMRDC).

Supply of Ginger Extract:- Nigerian was able to produce 79,000 metric tons of raw ginger in 1995 and during the same period (1995) Kaduna State has 37,000 tons as its annual production. This shows that Kaduna State provides at least 46% of the Nation's Supply of raw ginger.

There is no law banning the importation of ginger, thus, all competing extracts are imported. Also note worthy is the decline in the supply gap which could resulted out of the emergence of 2 new extracting factories sited in Kachia and Kafanchan in Kaduna State.

Globally the United States of America (U.S.A) produces 70%. While Spain, United Kingdom (U.K), France, Germany, Indian and Nigeria collectively produce 30%. Also worth noting is the importation figures for ginger extracts in Nigeria. The figures in tons of the supply which could not meet the demand of at least the major users are shown in table 4.6.

Table 4.6 The Supply of Ginger Extract in Tons

Year	Quantity in tons
1988	31,998
1989	28,204
1990	38,400
1991	42,111
1992	41,031
Source:- Federal Office of Statistics	

Supply Gap:- The increase in demand for ginger extract couples with slight increase in supply creates a supply gap. Although the present and projected supply gap is decreasing with increasing supply. This can be seen in table 4.7 below.

Table 4.7 Present and Projected Supply – Gap for ginger Extract in Nigeria in tons

Year	1992	1993	1994	1995	1996	1997
Extracted Supply	41,031	43,083	45,237	47,449	49,874	52,368
Expected Demand	51,250	52,531	53,844	55,190	56,570	57,984
Supply Gap	10,219	9,448	8,607	7,691	6,696	5,616

Source:- Federal Office of Statistics – Kaduna.

- 1993 N.I.D.B Market Investigation.

The declining supply gap is at an average rate of change of 11.23% per annum.

The present and projected global supply, demand and supply gap is for Ginger Extracts in tons are presented in table 4.8

Table 4.8 present and projected Global Supply gap for Ginger Extracts in tons.

Year	1992	1993	1994	1995	1996
Supply	361,152	379,210	398,170	416,079	438983
Demand	535,062	548,439	562,150	576,204	590,609
Supply Gap	173,910	169,910	193,980	158,125	151,626

Source:- Institute of Agricultural Research, Agronomy Department. A.B.U, Zaria.

The average decline rate of change in the supply gap globally is 7.98% per annum. While the prevailing Domestic and International prices of ginger extracts and recommended prices are shown in table 4.9

S/NO	PRODUCTS	INTERNATIONAL PRICE RANGE $/KG	PROPOSED EXPORTPRICES $/KG	N/KG
1)	Ginger Essential	53.00 – 58.00	55.00	1,210.00
2)	Ginger Oleoresin	63.00 – 68.50	65.00	1,430.00
3)	Ginger Powder	1.20 – 1.50	1.00	22.00

($=22) as at 1996 Government exchange rate

Source:- N.I.D.B. (1996)

Export Market:- The Nigerian ginger as stated earlier is one of the best species in the world as indicated by Raw Material Research and Development Council. But China is posing a serious threat due to its mechanised farming with little or no impurities at the final stage of packaging of the raw product.

With the 26 ginger processing plants in the world as previously stated, the national export promotion council is helping in the promotion

marketing and development of these products overseas. As the demand steadily increases and with the supply slowly increases, the producers and buyers formed a cartel making the market entry very difficult in order to avoid demand saturated (influx) of the commodity in the market which could be detrimental to the sub-sector.

Letters of intent to purchase from the marketing agents helps in international market penetration. Another important factor that would make the penetration easier is for these products to meet the set standards locally and internationally. The contractual sales agreement would always involve the manufacturers in getting the international market for the extracting companies thereby making the penetration easier. Some internationally specialised marketing agents are:-

1) Toison Associates Ltd.
39, Fredrick Street,
Cross Land Moor HD45 Q
Hudders Filed, Yorkshine
England

2) Messrs. Michael Souter (GB) Ltd
Wood Nuffs Yard,
The Duver Street, Helvins,
Isle of wright, England

Prospects of Ginger and its Extracts

The high demand in both the domestic and the global markets coupled with adherence to International market standard make penetration easier despite the buyers and sellers cartel with their Oligopolistic tendencies.

Packaging in different weights to facilitate easy transportation of the products helps in no small measure towards customers satisfaction according to their specification. The reason behind the different weight is that the ginger extracts are not all that bulky.

Nigerian Export Promotion Council (NEPC) in collaboration with United Nation – Food and Agricultural Orgnisation (UN-FAD) make provision of export incentive, promotion and finding buyers over sea based on strict quality control and good management. The ginger market is supplier oriented market due to excess demand of the product

and short fall in supply. Therefore the supplier always dictates as well as controls the market. This can be illustrated by the table below which is domestically based. The products are non-perishable, if properly harnessed it would provide employment avenues beside being a contributor to the national economy and this would make the government attention inevitable toward providing some incentive to the sub-sector.

Table 4.10 – Extracts from Requirements of the Food, Beverage and Tobacco, Sector for spices, flavouring and colourings.

S/N	Raw Material	Unit Metric tons	Current Requirement	Requirement at full capacity	Short fall	No. of Respondents Sampled
1.	Essential ginger oil M25B	MT	12,000	15,000	3000	1
2.	Oleoresin oil (S.D)	MT	0.600	0.800	0.2000	1
3.	Essential oil CSF	MT	0.180	0.280	0.100	1
4.	Essential oil	MT	0.270	0.300	0.030	1

Source:- Raw Material Research and Development Council (RMRDC) – 1996

Problems Associated with Ginger & its Extracts

Raw Ginger:- Beside the insincerity on the part of the sellers (mixing up grades), impurities found, production and processing are managed by unskilled personnel, economic instability, there exist also the problems of fungi, bacteria and insects or pests infections as well as market fluctuation.

The magnitude of any of the above impediments would certainly result in a sub-standard product. The farming process is not mechanised due to poor technology.

Ginger Extracts:- The market is import oriented as demand is satisfied through import, while prices are determined by producers through cartel

distribution. The oligopolistic market competition makes new entrants into the business to face vary strong local and international competition. Therefore makes penetration very difficult due to European ginger cartel.

The project could be capital intensive in nature. Thus makes the siting of factors for the processing of extract difficult. The project cost could cost at least ₦44.08 million as can be seen from table 4.11

Table 4.11 Cost of Establishing Ginger Extract Processing Factory

Summary	Foreign ₦ "000"	Local ₦ "000"	Total ₦ "000"
Land and Buildings	-	6,513.00	6,513.00
Plant and Machinery	16,777.00	3,942.00	20,719.00
Services & Utilities	726.00	835.00	1516.00
Other Assets	-	1,250.00	1,250.00
Prelim. Expenses and Fees	-	954.00	954.00
Interest During Construction	-	2,244.00	2,244.00
Working Capital	1,045.00	4,387.00	5,432.00
TOTAL	22,065.00	22,015.00	44,080.00

Source:- N.I.D.B Kaduna (1996).

Another thing that could be a cause for concern is how the project would be financed i.e. who would be ready to financed it or invest in such a venture that is oligopolistically controlled by an International cartel? The financing could be in the manner presented in table 4.12.

Table 4.12 Method of Financing Ginger Extraction factory

Financing Source	Foreign ₦ "000"	Local ₦ "000"	Total ₦ "000"	Rate of Investment (%)
Ginger & Processing Co.	-	17,628.00	17,628.00	40%
SME Term W/Capital	1,045.00	-	1,045.00	2.4%
SME Term Loan	21,020.00	-	21,020.00	47.6%
N.A.C.B. W/Capital	-	4387.00	4387.00	10.0%
Total	22,065.00	22,015.00	44,080.00	100%

Cotton Lint/Seed:- The market season of these products usually start from November through February and sometimes up to May, to take care of late picking. Over 90% of cotton seed grown in Nigeria were ginned by British Cotton Growers Association (B.C.G.A) in the late 1960, with only 7% used for local textiles and the 83% was for the British textiles.

Cotton and Agricultural Agencies Ltd. (CAAL) later Cotton and Allied Products (CAP) was established in 1987 to perform the commercial function of B.C.G.A and Nigerian Cotton Board (NCB). During the period of Structural Adjustment Programmes (SAP) many Ginneries sprang up competing with C.A.P e.g. Funtual, Zamfara Textiles, Arewa Cotton and Allied Products.

The Food and Agricultural Organisation (FAO) of United Nations and the consortium for the study of Nigerian Rural Development projected Nigerian Consumption of raw cotton up to 1985, shown in table 4.13.

Table 4.13 - Projected per Capital Consumption of Fibres and Cotton in Nigeria.

Year	Projected Population (millions)	Per Capital	Total Cotton (Tons)
1963	56.5	2.05	51,000
1966	60.8	2.02	55,000
1970	67.0	2.25	67,00
1975	75.9	2.70	91,000
1985	99.6	3.60	160,000

Source: Glen R. Johnson, et al Strategies & Recommendations study of Nigeria development Michigan: Michigan State University Press 1969 Pg. 95

By extension, the above projection is further extended up to 1994 by textile manufacturers association (TMA) and cotton farmers Agency Kaduna. Below is a table showing the estimated cotton production in Nigeria over the years.

Table 4.14 Cotton Lint Production in Nigeria (Tons)

Year	Seed Cotton Production	Cotton Lint Production
1985	48,000	12,420
1986	55,000	14,760
1987	85,000	30,600
1988	93,000	33,480
1989	120,000	43,200
1990	120,000	43,000
1991	100,000	36,000
1992	150,000	54,000
1993	105,000	37,800
1994	55,000	19,800

Source:- Textile Manufacturers Association (T.M.A) Through Cotton Farmers Agency – Kaduna.

In the late 70's when agriculture was given the priority it deserves, the average cotton production by the then provinces, indicated that the region of Zaria province produced 40,000 – 50,000 bales between 1960 – 69 as shown in the figures 8,9&10. But figure 47 has shown a decline on the production peak by provinces to 36,000 bales. This unfortunate situation of declined could be as a result of the emergence of petroleum coupled with poor incentive given to the farmers.

Nigeria has over 120 textile manufacturers (see the attached) appendix b and c) with combined production capacity of over 9000 million meters of fabric annually this is as against the 56 textile mills in the 70's and 13 existing ginneries. See appendix b and figure 42 the distribution of major cotton textile mills. The estimated annual requirement is conservatively put at 600,000 bales and (305 tons) or 1.066 million meters excluding export. Most textile manufacturers source over 30% of their lint requirement from neighbouring countries such as Benin, Chad, Niger and Cameroon. It is abundantly clear that the existing ginneries can not supply the requirement of cotton lint.

FIG 4·7(a) — PEAK PRODUCTION BY PROVINCES

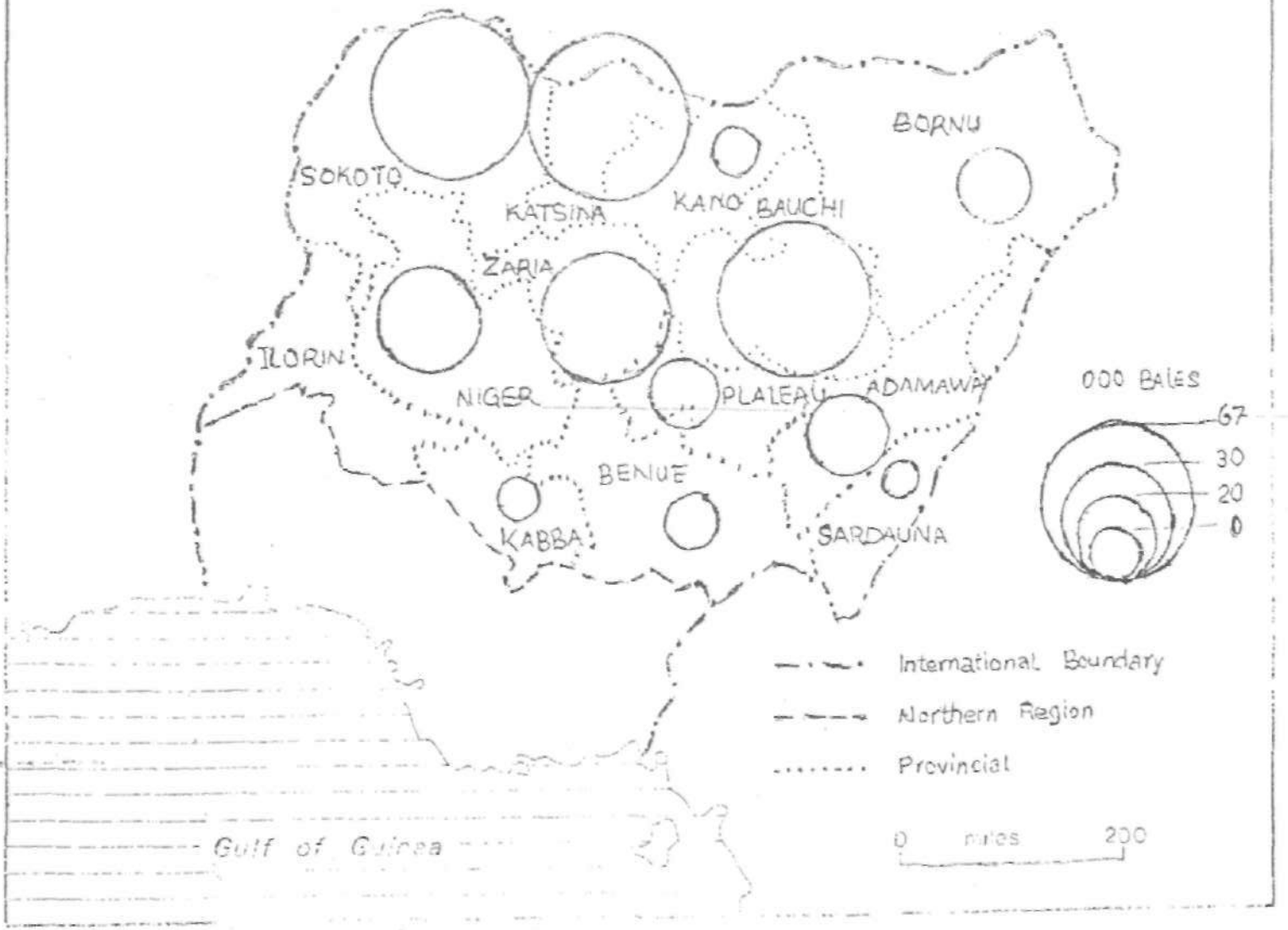


FIG 7(b) AVERAGE COTTON PRODUCTION BY PROVINCES.

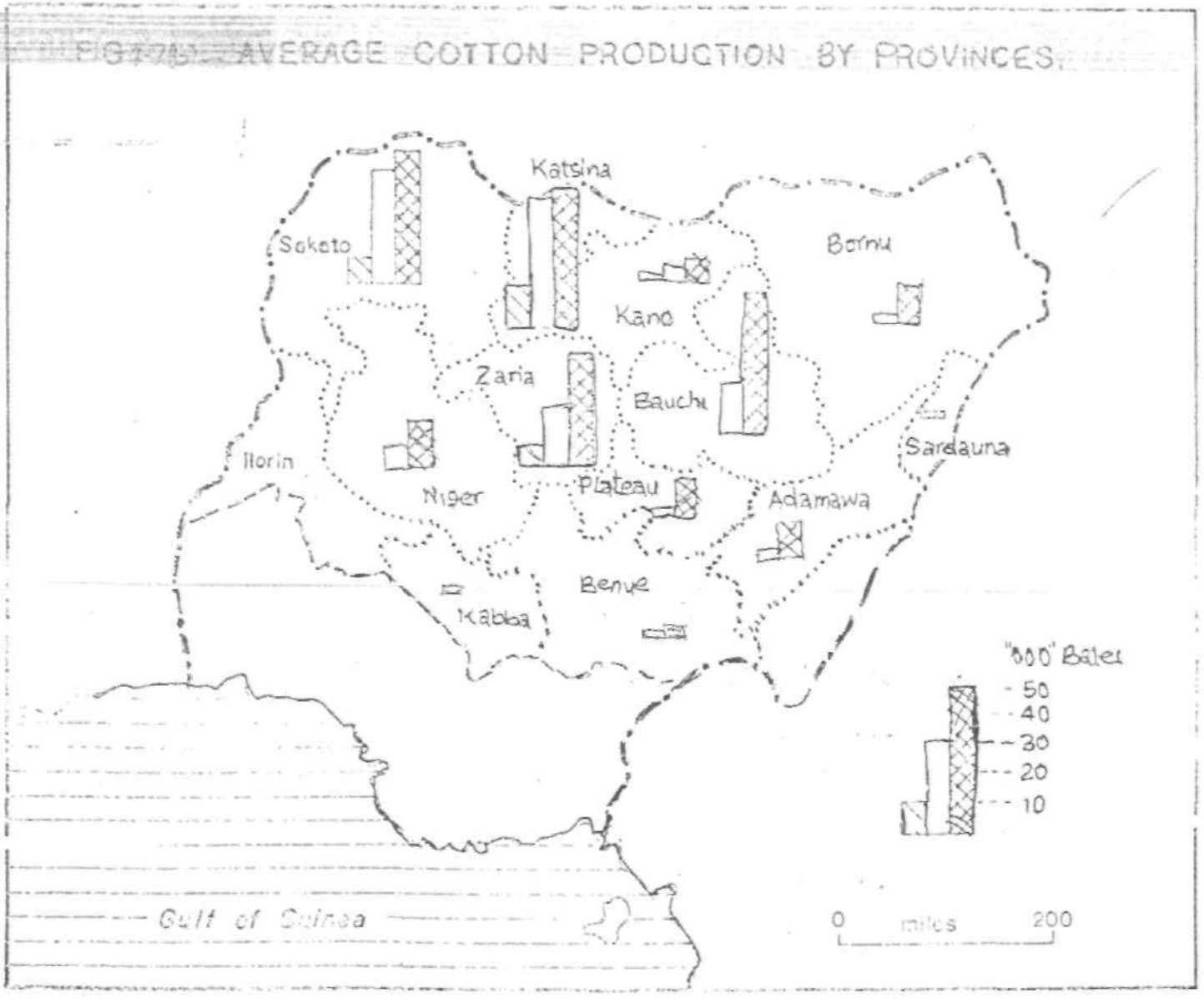
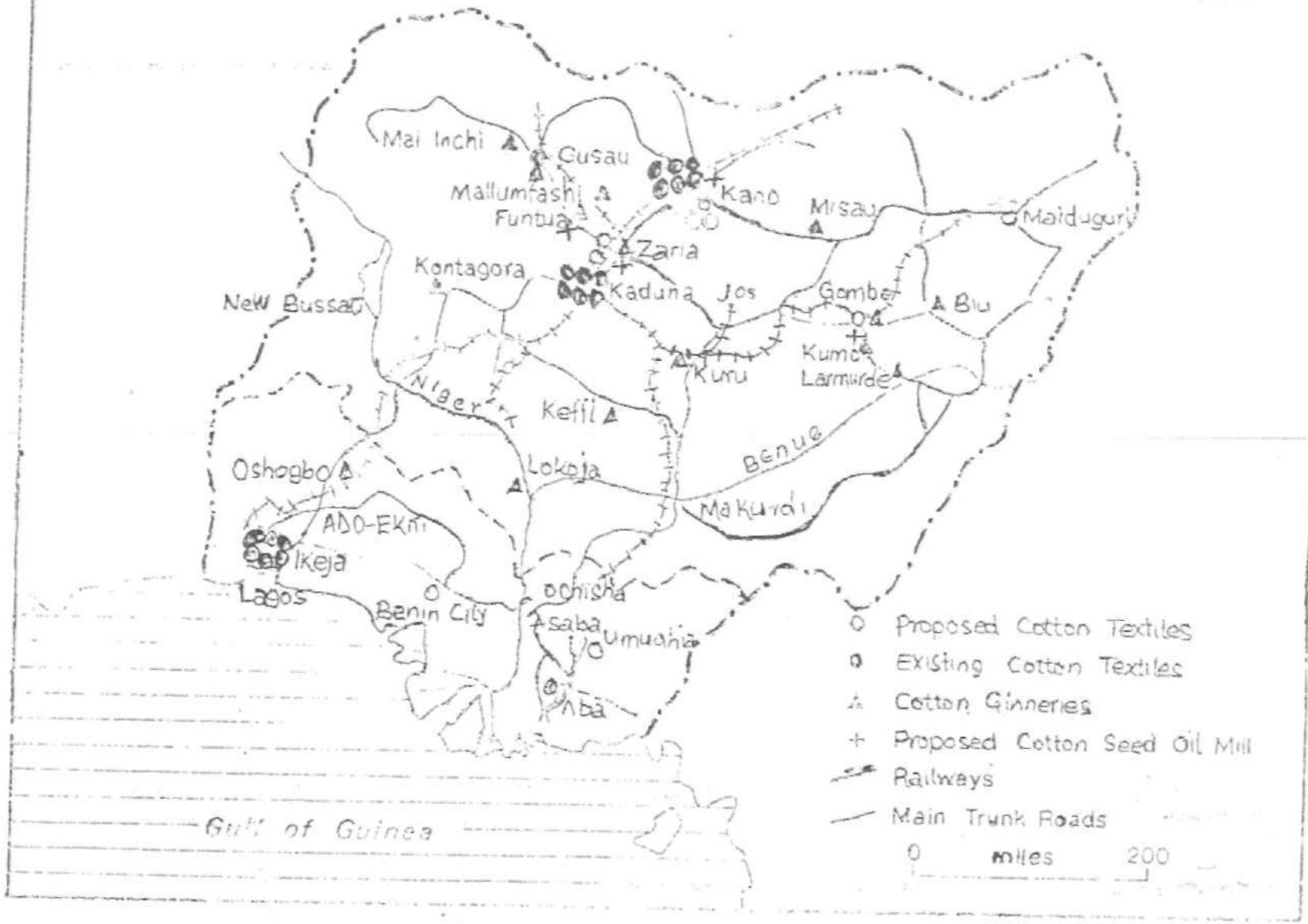
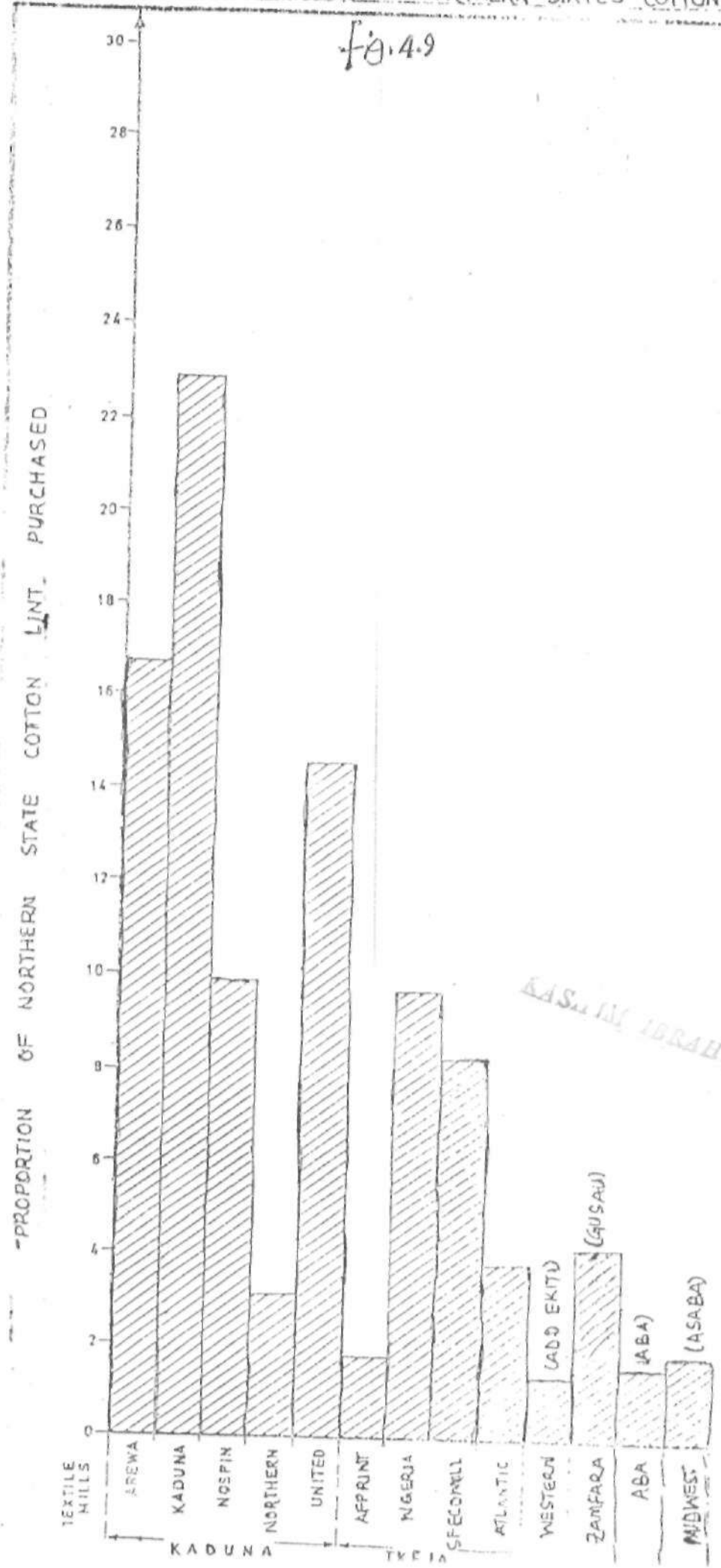


FIG 13 NIGERIA : DISTRIBUTION OF MAJOR COTTON TEXTILES MILLS



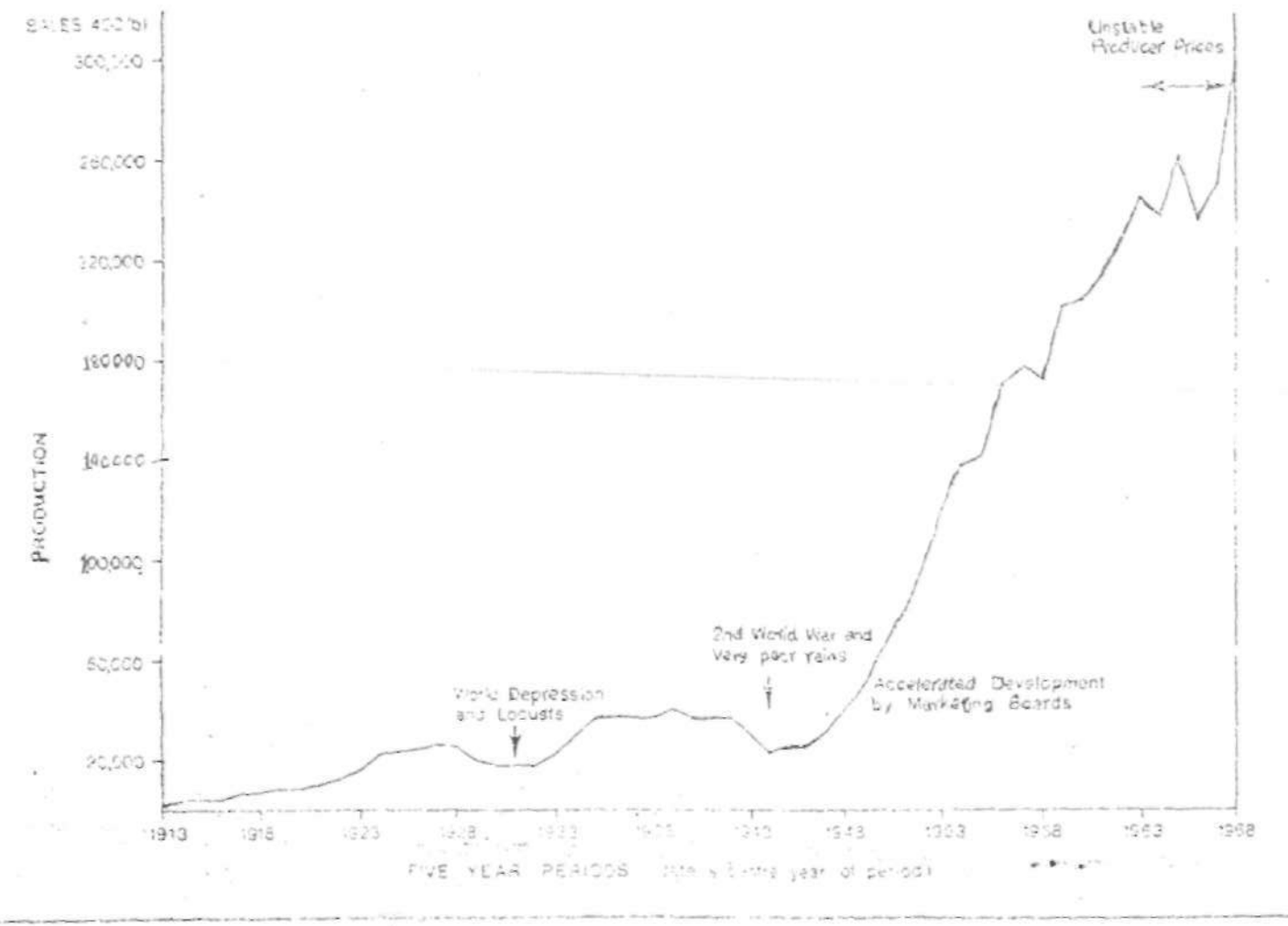
7 NIGERIA: PERCENTAGE INTAKE OF NORTHERN STATES COTTON LINT BY TEXTILE M

Fig. 4.9



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FIG 4.10 NORTHERN NIGERIA COTTON PRODUCTION – FIVE YEAR ANNUAL MOVING AVERAGES 1911 – 1970



Kaduna State has 6 textiles mills with installed capacity of 295168, 5260 in spindles and looms respectively, while it has 2 ginneries. Zazzau and cotton allied production (CAP) ginneries are bother located in Zaria.

Selling price per ton:- The prices are established through the forces of demand and supply, as income is directly proportional to demand which is also proportional to consumption. The table below shows the extract from the table 2.2 of textile products made in Nigeria showing installed capacity, current production, capacity utilization and unit price.

Table 4.15 Extract from textile products showing their installed capacity, current production, capacity utilization and unit price.

Product	Installed capacity	Current production	Capacity utilization (%)	Unit per price (₦)
Cotton seed	88,096 tons	49,837.6 tons	56.57	65/kg
Cotton lint	152,830 tons	109,684.67 tons	71.77	90 – 120kg

Source:- Raw Material Research and Development Council (RMRDC) – 1996

The continuation of the table would be seen in appendix F. the textiles mills in Kaduna zone has the highest percentage in take of Northern States cotton lint by textile mills in 1971 followed by Lagos – Ikeja zones as shown in figure 13. Source Northern States Marketing Board, Kaduna. But presently 50% of the textile mills are located in Lagos zones, while only 25% is for the Northern zone with concentration in Kaduna and Kano. See appendix B for the textile mills.

Patronage:- The characteristic feature of local products are lower quality with bad packaging as some of the local customers prefer such low quality product, due to poor economic standing or low purchasing power. Those who are affluent or economically buoyant would often prefer foreign products due to higher staple length used in the production of cotton yarn for export.

Cotton and Agricultural processors (CAP) Ltd. is liasing with Federal Department of Agriculture in order to develop cotton seed for long staple. This would not only improve Nigerian's foreign reserve but would make our textile abandon the use of short staple for long staple grade for a better, good quality product that can compete with imported products, as well as in the international market. That is why Cotton and Agricultural Processor Ltd. is spending not less than ₦100,000.00 – ₦200,000.00 on Research and Development which is being financed through internally generated funds.

Cotton and Agricultural Processors Ltd. (CAP)'s objective of ensuring a good quality product is gathering momentum and this can be seen from its monthly turn over of ₦10million, by providing good quality product at an affordable price compared to the imported ones as stated by the company's General Manager Operations.

Packaging:- The packaging of this product(s) is either through the use of poly – *propylene sheets and rope or grey cotton fabric and mild steel wire. The* cotton lint is parked into bales weighing up to 400 bales on staple length. The price for the sheet and rope is ₦45.00 and 25.00 respectively. Cotton seed as well as cotton Dust are being bagged in plythene sacks.

Storage:- The product (cotton Lint) is usually stored in a ware house with storage facilities. They are well constructed stored specifically for that purpose. The product(s) does not require any special preservation, this makes the storage less problematic. The only thing could be the cost of depreciation of available storage facilities as well as the maintenance cost.

Ginning Process:- The ginneries, on receiving the purchased seed cotton store them according to grades, through the in take section. From there it would then move to pre-cleaning machine and thereafter to the main machine feeder for the processing point. At this point we have the main product which is the cotton lint as well as bye-product which is the cotton seed and cotton Dust. Then finally comes the packaging.

FIG 4(b) NORTHERN NIGERIA COTTON PRODUCTION 1915 – 1970

The cotton lint is grade as follows:-

A grade – 33/32 – 1 inches

B grade – 1 – 33/32

C grade – 31/32 – 1 inches

D grade – Below - 31/32

The low grade has a myriad of impurities e.g. broken leaves, stalks, stained tinged by contamination or adulteration. But the high grade does not have all these which makes the quality to vary. The high grade has high market value the low grades are use for low quality fabrics while the high grades are for best quality prints.

Set Standards:- The Nigerian cotton lint is one of the best in the West African sub-region based on the conducted field survey. The international standard can only be achieved through quality control devoid of the following:-

i) Contaminated raw material which causes damages to machines

ii) Polythene impurities found in lint

iii) Mixing low and high grade cotton lint

iv) Occasionally stones or gravels are found

The quality control could also be through the following:

i) Up-dating Technology as a key to a greater success.

ii) Use of jute – bags for packaging instead of polythene bags

iii) Pre-inspection before introducing the seed cotton to machines as this would reduce or eliminate problems.

iv) Adjust machines for proper ginning, while bad grades are sorted and for separated ginning.

v) Liason with extension workers for advise as well as use of insecticides.

Available Markets:- Seventy percent (70%) of the over 100 million Nigerian population wear 100% cotton fabrics. Majority of them being low income earners with over 120 textile manufacturers and less than 15 ginneries to serve them, although some of large textiles establish their own ginneries.

The domestic market will expand as long as the texture and quality meets the local test. And with this increasing population the demand would certainly increase as shown in figure 4.10

The thirteen (13) Ginneries we have nation – wide have installed capacity to produce about 340,000 bales of cotton lint. This represents only 70% of textile mills requirements. The combined production capacity is over 900 metres of fabrics, shown in figure 4.11.

As earlier stated 50% of these over 120 textile mills are located in Lagos while 25% of it are concentrated in Kano and Kaduna. It is strategic in over-all industrialisation effort due to its high absorptive capacity of engineering goods and services, besides providing employment.

If properly harnessed it is in fact an import substituting alternative source for textiles. Thus conserve foreign exchange which can be used in industrial development. Besides the conservation of foreign exchange, textiles are major employers of labour, for instance United Nigeria Textiles Limited (U.N.T.L. now U.N.T. Plc.) and Kaduna Textiles Limited (KTL) are among the major textiles employers of labour with 1000 – 3000 workers per plant.

The main market for Nigerian cotton in textile mills. Some of the textiles that uses 'A' grade for fine material which are on high demand, sometimes use 'B' grade. Class 'A' users are A print in Lagos (22.4%), U.N.T.L Kaduna (20.7% Western Textile in Ado Ekiti (13.5%).

Demand for cotton lint:- About seventy (70%) percent of cotton lint requirement by these textiles is locally obtained while the short fall in supply and demand is met through importation.

The domestic production of textiles in Nigeria, which are in million of meters signifies the level of affinity to consumption of cotton lint by our textile mills. While the estimated per capital consumption of textile fabric is at seven (7) linear meters. Source Nigerian Textile Manufacturers Association (N.T.M.A.). although the current per capital consumption has declined to 4.5 linear meters due to economic recession and fall in real income as well as change of taste to second hand clothing at a cheaper cost or price.

FIG 4·11
Cotton Markets Today



FIG 4.12 DISTRIBUTION, CAPACITIES, ANNUAL AVERAGE AND PEAK PRODUCTION BY GINNERIES



The domestic production of textiles in Nigeria is shown in table 4.16

Table 4.16 Domestic production of Textiles in Nigeria

Year	Cotton Textiles	Synthetic Fabrics	Knitted Fabrics	Total Consumption
1980	439	62	15	516
1982	348	61	16	415
1983	348	65	65	426
1984	247	28	28	287
1985	276	18	11	305
1986	105	34	26	155
1987	333	197	35	565
1988	341	231	32	604
1989	350	221	31	602
1990	339	391	17	747
Average Annual Growth (%)	1.2	24.6	7.3	6.1

Source:- Basic Data from Federal Office of Statistics (F.O.S),

Economic Indicators Nigeria Trade Summary, Various Issues.

The above data show an increase from 516 to 747 i.e. 1980 – 1990 although it declined due to economic down torn between 1982 and 1985 but rebounced back to be on the increase between 1986 and 1990.

The Gross Domestic Product (G.D.P) is not expected to grow appreciably in the foreseeable future. The projected quality demanded for textile fabrics in Nigeria 1996 – 2002 (million meters) is shown in table 4.17.

Table 4.17:- Projected Quantity demanded for Textile Fabrics

Year	Quantity
1996	800
1997	800
1998	800
1999	800
2000	800
2001	800
2002	800

Source:- NIDB Market Survey (April; 1997)

i) The Gross Domestic Product (G.D.P) is not expected to grow appreciably

ii) The Demand Projection is also held constant due to dormancy of some economic activities that has direct bearing on the farmers and buyers of the textile products.

iii) Therefore per capital consumption of textiles fabrics during 1996 – 2002 period is also held constant.

The estimated annual cotton requirement is at least 600,000 bales with a conversion factor of 0.180 from cotton lint to fabrics. The required cotton lint to meet the above projection is placed at slightly over 1.066 million meters with 5% rate of increase per annum is shown in table 4.18.

Table 4.18 – Projected Cotton Lint Requirements of Nigerian Textiles

Year	Projected Requirements ('000' meters)
1996	1066
1997	1119
1998	1175
1999	1234
2000	1296
2001	1361
2002	1429

Source:- N.I.D.B.

The lowest demand for cotton lint to produce the required textile fabrics is estimated at 659,317 bales per annum and if it is compared with the projected supply, a supply gap of 338,125 bales would emerged.

Supply of Cotton Lint:- The thirteen (13) ginneries supply about 70% of cotton lint to textile mills, while the remaining 30% of the lint requirement is from neiboughring countries (Benin, Chad, Niger and Cameroon). It was reported in 1990 by Cotton Lint and Agro-Allied Processing Agency that there was a short fall in supply of 40,000 tons.

Therefore going by the present estimated annual cotton requirement to be supplied which is conservatively put at 600,000 bales and (305 tons) or 1.066 million meters, it means that these ginneries only supply about 420,000 bales and (213.5 tons) or 746,200 meters, while the remaining balance of 180,000 bales (91.5 tons or 319,800 meters) are supplied through importation.

In forecasting the future supply of cotton lint, also has to be made is the forecast of future supply of domestic fabrics. Available information from RMRDC indicates that there are 17,541 looms in the Nigerian sub-sector capable of producing about 670 million linear meters of textile fabrics at full capacity per year. And, of the total 17,541 looms in Nigeria, Kaduna State has 4884 representing 27.84% which is capable of producing about 186.53 million linear meters of textile fabrics at full capacity.

However, out of these 17541 looms only about 17,014 looms were actively operated in 1993 producing about 650 million linear meters. See appendix D with the list of number of spindles and looms in the Nigerian textile and their installed capacity.

The growth rate is at 2% per annum of 1996 out put of the projected supply. Nigeria products less than half (1/2) of its cotton lint requirement the projected supply of domestic textiles is shown in table 4.19.

Table 4.19 – Projected Supply of Domestic Textiles

Year	Projected Supply (million meters)
1996	772.0
1997	746.6
1998	761.6
1999	776.8
2000	792.3
2001	808.0
2002	824.2

Source:- N.I.D.B. (1997)

Table 4.20 – Projected Supply of Cotton Lint in Nigeria.

Year	Projected Supply (Bales)
1996	727,993
1997	742,452
1998	757,369
1999	772,484
2000	787,934
2001	803,693
2002	819,767

Source:- N.I.D.B. (1997)

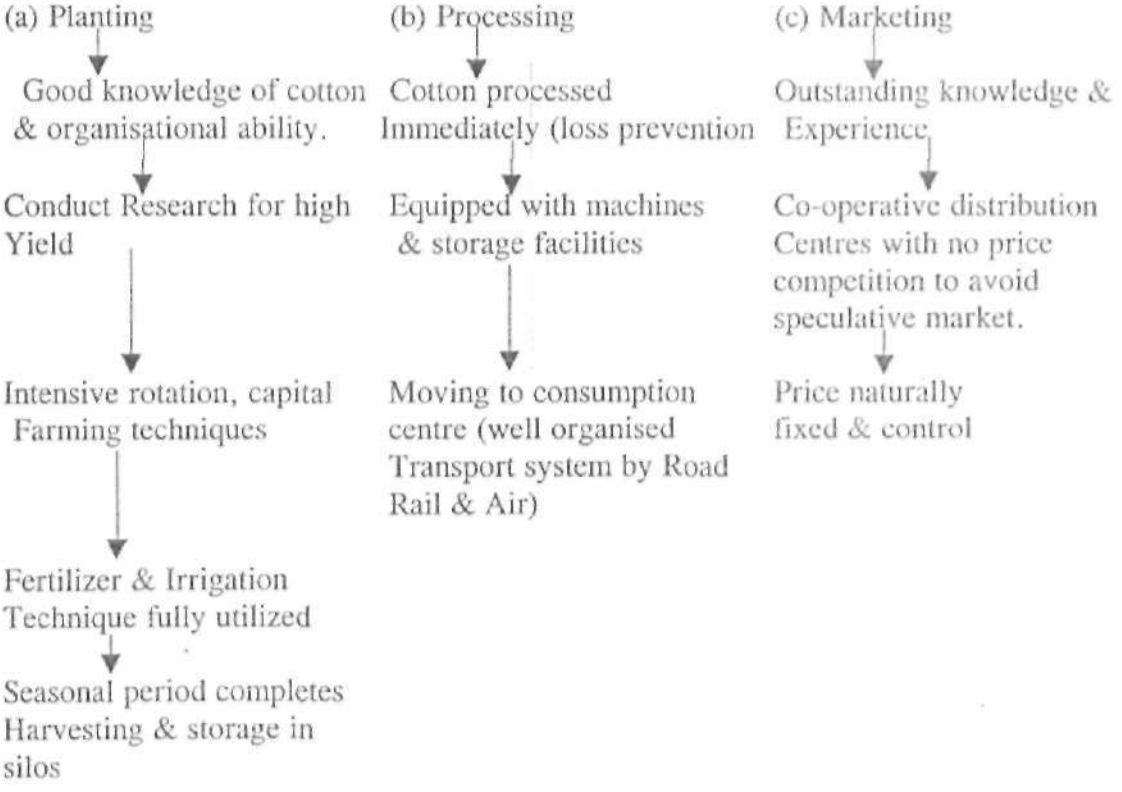
In 1991 the population was about 88.5 million with a lowest demand of textiles fabrics at 659,317 bales per annum and a supply gap of 338,125 bales of cotton lint. The output of the thirteen ginneries are absorbed by 120 textile mills due to high import tariffs with outstanding orders to meet.

The 1995/1996 cotton production increased by 26% by making cotton seed price decrease by 10%. The distribution is through accredited agents and textiles manufacturers.

bales in 1979/80 to 1985/86 season as indicated by Nigerian Cotton Board (NCB).

Cotton, blended with other growths are likely to continue enjoying world demand. New strains have been developed through cotton breeding centre to meet spinning industrial demand. Spinning tests are now carried at Kaduna textile mill instead of Shirley Institute in England.

Educating farmers to use modern techniques improves their productivity potentials, which make them specialised in cash crops production. One of such modern techniques is the employment of vertical integration directly or indirectly by KTL or UNTL through the following:-



The integrating forward suits textile milling processing which certainly improves the present outlets. This will include planting to the harvesting period directly or indirectly. Another important outlet as an alternative outlet is through internal consumption via owned processing plant. A department can be created that would charged with the responsibility of planting and marketing of

Other suppliers of cotton lint and other textile materials can be seen from the list of suppliers of raw materials textiles and weaving apparel as shown in appendix E.

Problems Associated with Cotton Lint:- Problems vary with time, new varieties and localities. Any adverse effect on income, population, urbanization, taste, price and climatic condition certainly would have negative consequences, with direct effect on the demand for fabrics which in turn affects Gross Domestic Product (G.D.P) vis – versa. There is this problem of a Possible risk of fire out break which has negative bearing on cotton lint.

Absolete equipment and lack of spare parts are militating against operation at full capacity. The needs for more spare parts dye to wear and tear as some of parts are imported.

Diseases that affect seed cotton which in turn affect the yield. These diseases are either caused by bacterial blight (Xenthomonas malvacearum), pests (boll worms or red boll worm), stainers and Bugs (feed on leaves and excrement on lint, stains it pale yellow which affects the quality.

Prospects:- Clothing as one of the most important basic necessity after food and shelter. Clothing is a product of cotton lint, the demand for clothing is non-transient element, but a whole factor of basic needs.

The quality of textiles manufactured in Nigeria competes favourably with imported ones. With increasing population and given the right condition the demand for textile fabrics is high and indeed the cotton lint.

If cotton lint is improved to 1000 meters square meter to equate a per capital consumption of 1.7kg, the average for West Africa sub-region, accompanied with more attractive producer prices it could explore the entire market.

Nigerian Cotton Lint market being supplier market oriented as the demand for fabrics out strips supply. The demand increases from 248,000 bales to 660,569

the harvested products in the form of contra sales i.e. through inter departmental sales. While the surplus can be external disposed.

Mechanised farming through the use of mechanical cotton pickers that is capable of gathering matured seed cotton with a minimum waste and without causing damage to the fibre, plant or un-opened bolls. Beside minimising waste it also reduces myriads of impurities. Thus the quality grading would certainly improve.

Government Incentive:- As an encouragement for backward integration to sourcing raw material locally, the government imposed a tariff rates of 80% on imported cotton yarn. This has ensures long – term viability of new Ginning and Spinning factories in 1987. Also imposed was 60% import duty on cotton lint along with other fibres. This led to the rising of this product from 69,000 bales in 1985/86.

The enlightened of farmers and the introduction of high yield cotton seeds at cheaper rate by the government has immensely contributed in the increase of production. But when the ban was lifted in 1997 on importation with 40% custom tariff this has increase the supply gap. To explore the home market as an import-substitution, government evolves the policy of encouraging industrialisation. The rapidly increasing demand for textiles goods and with at least 100 million people provides a potentially a largest single national market.

Export Market:- The Nigerian Cotton has a favourable market Over Seas due to cleanliness and rare quality of being blendable with other growths as indicated by Meister Publishing Company (1970). Lancashire had been the principal oversea market for cotton from Northern Nigeria. Between 1935 & 38 United Kingdom (U.K) had 75% to 80% of Nigerian annual raw cotton.

The direction of Nigerian raw cotton export in percentage shown is in table 4.

Table 4.2[1]*The direction of Nigerian raw cotton export in percentage*

Importing Country	1935	1938	1965	1968
United Kingdom (U.K)	75.5	80.0	18.6	15.0
West Germany	22.6	8.1	2.7	0.3
Holland	1.4	3.1	29.2	12.8
France	0.9	2.7	4.5	7.7
Italy		2.4	2.7	29.4
Belgium – Luxembourg			30.0	29.4
Japan			13.5	3.3

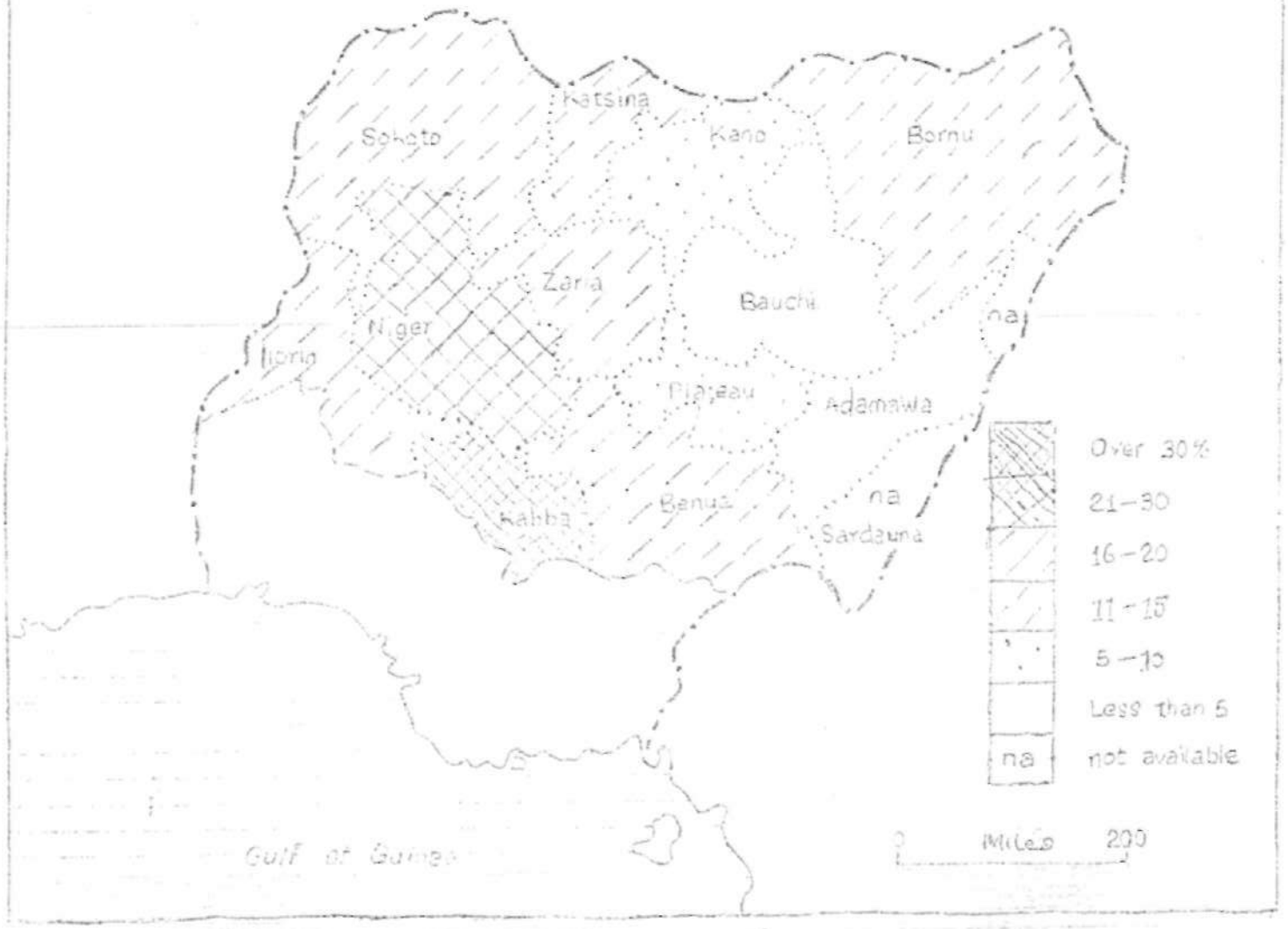
Source:- Turner R. 1940 Journal of export on Agriculture F.O.S. 1968 Annual abstract of statistics, Lagos.

As home market for cotton textiles levels out some mills would either close or look for an Overseas market. And depending in the rate of consumption to economic development, source – *Federal Ministry for Information.*

Local Weavers:- The highly skilled local weavers enjoy high demand for their products. The consumption of Hand woven material is not included although it is very significant due to lack of comprehensive measures or estimates. But an assumed estimated proportion of cotton consumed by local Hand weaving industries can be sees from figure.

Skillful dealers in traditional dress now use manufactured cloth which is decorated according to demand or specification by using dying pits. The cotton produced is very suitable for their weaving process at mills, while that of *Southern States is commercially inferior* due to high rainfall, diseases & pests. Hand weavers that use machine spun thread couple with inadequate storage facilities makes local markets diminishing, although it still remains a threat.

FIG 4·13 ESTIMATED PROPORTION OF COTTON CONSUMED BY LOCAL HAND WEAVING INDUSTRIES



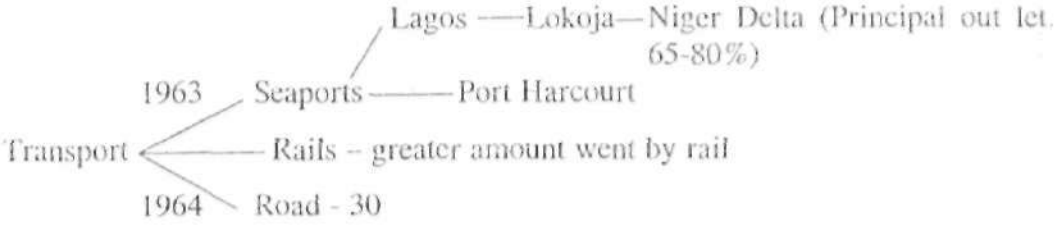
Transportation and Communication Gap:- With recent technological break through in transportation, communication gap has almost been eradicated , be eliminating the distance that a customer or client has to cover. Issues of common interest and for the mutual benefit of all parties are finalised within the shortest possible time through the available communication media.

Also payment has been simplified through letter of credits. With regards to transportation it can be executed in the cheapest and easiest way possible using Sea, Rail, Road or Air depending on the circumstances surrounding the transaction.

Cotton Seed:- Cotton seed can be considered as one of the bye-products of cotton lint. Besides the seed, oil can be extracted and finally there is cotton seed cake. All these are useful products in their particular applications.

In the late 1960's about 50,000tons per annum of cotton seed produced by the ginneries which were owned by the B.C.G.A., but 30,000tons per annum representing 60% were exported while the remaining 40% was used for planting or fueling in the ginneries. The cotton seed issued were free to farmers, the cost for distribution was #15/ton, and about 20,000tons per annum was distributed, costing a total of #300,000 per annum. Source:- B.C.G.A. 1950 Annual Report.

The transportation of cotton seed then was like the way cotton lint was transported through these routes shown below:-



But as a result of cotton breading centres in our Institutions, newer seeds have been introduced with better yield, ginning and other commercial

characteristics, for example Samaru 26 C introduced in 1953 was replaced in 1960, while Samaru 26 Y was replaced by Samaru 68 and 69 by 1972. The curative and preventive measures to militate against disease have yielded a positive result.

Currently the raw material requirement of the fats and oil sub-sector as published by RMRDC – 1996 is shown in table

A) Table 4.2 Raw material requirement of fats and oils sub-sector

Raw material	Unit	Requirement at full capacity	Current requirement	Short fall
Cotton Seed	Metric ton	682,000	185,600	496,400

While an extract from Raw materials for feed production shows that: Table

B) Tabe 4.2 extract from Raw materials for feed production

Product type	Requirement at full Production capacity (MT)	Current Annual Production figure	Short fall (MT) & (%)
Cotton Seed	96.00	54	42 M.T & 43.75%

M.T metric Tons, Source – RMRDC – 1996

Both the above figures A & B have shown some element of improvement from previous years in the late 1960's when little was known about its contents. However, one can deduce from the table of textile manufacturers in Nigeria showing their capacities, current production, capacity utilization and unit price as well as appendices E of the list of textiles suppliers.

1) Cotton seed produced are partly re-cycled back to the farmers for the next farming season.
2) Only a certain percentage is provided for cotton seed oil.

Major and Minor Producing States:- The categorization is based on the quantity of seed cotton produced. It is a known fact that the far north produces more seed cotton than the central part of it, with the exception of Borno.

The major producing states are Katsina, Bauchi, Gombe, Zamfara, Sokoto and Yobe. While the minor producing states are Kaduna, Niger, Kebbi and Borno. Source – RMRDC (1996).

Cotton Seed Oil:- *Sun seed is a company sited in Zaria, Kaduna State along* Jos road, which extracts oil from cotton seed beside the local method of extraction called "Kwanturola" usually used in house holds. The cotton seed oil is usually used for cooking. It is also used in margarine (Butter) and sometimes soap manufacturing.

Cotton Seed Cake:- *Is a reach food for livestocks estimated as follows by* Lyons in the early 1970's.

Cattle – 10millio

Goats – 13 – 15 million

Sheep – 5 – 6 million

There is a large potential home market for cotton seed cake in Nigeria.

Re-cycling of Seed by farmers:- the Colonialists re-cycle 20,000 tons of cotton seed to farmers for their farming season, when there were only 56 textiles. But currently with over 120 textiles around as shown in appendix (B) the ratio is 56:120 of textiles mills.

The analysis will then be per the ratio of requirement for seed is at least 1:2 all things being considered i.e. 20,000tons to 40,000 tons. This assumption does not include farmers who sell to oil extraction firms as well as livestock farmers.

Limitation to Investment in the Sub-Sector

1) Lack of accurate National Statistics on fats and oil production, local consumption and export.
2) Acute scarcity and high cost of raw materials caused in part by excessive smuggling.
3) Lack of government incentive on investment.

4) High excessive installed capacity with a large proportion of old equipment which are in efficient, frequent breakdown and are costly to repair or replace.

5) High cost of import technology required for oil refining, fractionalisation and hydrogenation.

6) Capacity utilization is about 30% on the average, this indicates that there is a high level of excess capacity.

7) The short fall may be due to old equipment and machinery, lack of required raw materials, in ability to pay back debts and shut down of some parts.

Source – RMRDC (1996)

Soya Beans:- It has high value of protein, rich in calcium, phosphorus and several natural vitamins and iodine compound. Soya Beans can in the form of milk, powder or flour, cake, oil and condiment (Dawdawa) and Maggi cubes.

The major producing states of Soya beans are Benue, Nassarawa, Plateau and Niger. While the minor producing states are F.C.T, Kaduna, Kano, Bauchi, Gombe, Adamawa and Taraba. In 1988 estiamated Hecterage X1000HA was 215. But of the estmated crop only 70 was cultivated leaving 145 uncultivated – RMRDC.

Soya Beans Milk:- It is white fluid, Sweetened or unsweetened dairy product with flavour. It is being stored in a refrigerated trucks, coolers and frizers. **Packaging:-** It is usually packaged in polythene, pouches, plastic bottles, Aluminium foil or Tetra pak multi – larger paper pouches. The cheaper the packaging the shorter the shelf life of the product. The polythene pouches are the cheapest while Tetra pak is the most expensive with shelf life of 7 days and six (6) months respectively.

Table 4.24: Packaging Soya Milk

Product	Unit Packaging	Requirements in 1st year	Price/Unit
Soya Milk	100 ML Pouches	3 millions	10 kobo
Soya Milk	Carton of 50 pouches	60,000	N1.50

Source:- NIDB (1996)

Demand and Supply of Soya Beans Milk:- In 1989 about 85.5 million was consumed, which increased at the rate 3% per annum – NIDB project appraisal (1996). With regards to the supply, in the 80's milk and cram were imported which grew from 1980 through 1983, but declined thereafter due to scarce foreign exchange and Naira depreciation, thereby causing a negative growth rate of 3.8% p.a between 1980 – 88. Source:- NIDB (1996) as shown in table 4.25

Table 4.25: Importation of Milk & Cream in tons "000"

Year	1980	1983	1988
Milk & Cream	157,846	295,240	42,240

Source:- NIDB (1996).

However, the expedition (undertaking/speed), exploitation of Soya beans milk production has been almost totally ignored in Nigeria. The 1989 multi – Disciplinary Task Force (MTF) on food and beverages report extensively covered the technical & scientific equipments of this product. But as at 1996 there was only one established commercial concern for Soya Milk, Farina Ltd, located in Lagos State. Other Dairy products that monopolised the market are shown in table 4:-

Table 4.26: Other Dairy products that monopolised the market

Name of Product	Product Installed Capacity ("000")	Annual Current Production "000" lts	Types of Raw Materials	Source of Raw Materials
Soya Milk	500	300	Soya Beans	Local
Yoghurt Drink	1250	162.5	Milk powder	Foreign
Ice Cream	182.5	73.0	"	"
Dano full Cream	4000	20	Sugar, acid	"
Dano Low fat	4000	20	"	"

Source :- RMRDC (1996)

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Table 4.27: The project Supply, Demand and Supply Gap of Soya Beans Milk Beverages in the Markets (Millions Lts).

Year	1989	1990	1991	1992	1993	1994
Expected Supply	85.5	88.1	103.2	106.6	109.8	1131.1
Expected Demand	125.7	129.4	133.2	137.2	141.3	145.5
Supply Gap	40.20	41.3	30.0	30.6	31.5	32.4

Source:- NIDB (1996)

Table 4: indicates that the demand is on the increase, while the supply gap is on the decrease due to increase in supply.

The ingredients required, their prices and source for Soya Beans milk are as follows:-

Table 4.28: Prices and Source of Ingredients required for Soya Beans

	Item	Unit Price N	Source
1.	Soya Beans	4,000/ton	Local
2.	Sugar Syrup	10,000/ton	Local
3.	Flavour	120,000/ton	Import/Local

Source:- NIDB (1996)

The project cost for Soya Beans Milk Plant & Financing Method:- The project cost could be capital intensive which can be financed through term loans and overdrafts. To set up for installing Soya Milk factory or plant one needs to have the following.

Table 4.29: Soya Milk Plant, Project Cost & Financing Method

Project Cost				Financing				
Summary	Foreign N"000"	Local N"000"	Total	Source	Foreign N"000"	Local N"000"	Total	%
Land & Building	-	590	590	Zuma				
Plant & Machinery	1410	241	1651	Food	-	1222	1222	30
Services & Utilities	-	512	512					
Other fixed Assets	-	245	245	NIDB/SMF Term loan	1523	1027	2550	64
Preliminary Expenses &	-	133	133					

Fees								
Interest During Construction	-	207	207	Overdraft	-	250	250	6
Working Capital	-	250	250	Afri Bank				
Contingencies	113	361	474					
Total	**1520**	**2499**	**4022**		**1520**	**2499**	**4022**	**100**

Source:- NIDB (1996)

The suppliers of plant and equipment of such plant or factory supply are as follows:-

		Quotation Equivalent in ₦"000"
1.	Merssrs Actimonde 10, Ave. de Secheron Geneva, Switzer Land	1,389
2.	Messrs Ankur Services Pot. Ltd. 3E, "Sub hodaya" Boggulakuta Hyderabad, India.	2082
3.	Messrs Bayzone Ltd. 16, Berkeley Street London Wix Sae, England	1674

Source:- NIDB (1996)

Soya Beans Flour Or Powder:- As one of the derivatives of Soya Beans, the Soya beans flour has high value of vegetable protein that complements all cereals. The following steps are the stages followed in the preparation of Soya beans flour

1) Remove the stones, sticks, leaves and dis-coloured or damaged Soya beans wash in water to remove dust and dirt.
2) Cover the Soya beans with twice the volume of water and boil for 20 – 25 minutes.
3) Wash the beans and drain
4) Cover the beans with twice the volume of clean water
5) Soak for 12 hours, change the water twice i.e. after 6 hrs
6) Remove the skin

7) Spread the beans in thin layer on clean paper, cloth or trays with good air circulation and expose to direct sunlight.

8) When completely dried, either;

a) *Grind the dry beans into a fine flour on a grinding stone or at a* local mill. Store the Soya beans flour in a clean tin to prevent deterioration of the flour by insects and moisture.

b) Store the dry beans in an empty tin, until some Soya beans flour is needed. The sun – dried Soya bean will keep longer than the Soya bean flour.

Note:- If poor weather conditions do not permit the Soya beans to be dried within 36 hours, use an electric fan or roast (fry) the Soya beans to speed up the process. Slow drying may procure high bacteria. Counts and purification. *Mould producing toxic substance may also be present in poorly dried and* stored Soya bean flour. Properly dried and stored Soya flour can keep almost indefinitely.

Uses of Soya Bean Flour:- The increase in the uses and by extraction increases the out lets. Below are some of the new found uses of Soya beans

a) For baking- Product (delight), frying products (snacks). Cakes and Biscuits are rapidly increasing in popularity in Nigeria, these products can be baked in oven.

b) *As fortification with local food. E.g. in Tuwon Masara, Dawdawa etc.*

c) For enrichment with pap, porridges, Soy-Amala, Soy-Eba etc.

The procedures to be followed in the processing of the above can be found in appendix II. flour mills, Biscuits and other confectionary requires Soya beans as raw materials, the total requirement of this sector all things being considered at full capacity is 450.68 metric tons. But the current capacity requirement is 96.90 metric tons, while the short fall is 353.78 metric tons.

It is used for the processing of flour, Instant Soya and magarine gem. The Raw Material requirement for the flour mills, Biscuits, Confectionary in metric tons (MT) is shown in table 4:

Table 4:30The Raw Material requirement for the flour mills, Biscuits, Confectionary in metric tons (MT).

Raw material	Unit	Requirement at *full capacity*	Current capacity requirement	Short fall	product
Soya Beans	MT	225.34	48.45	176.89	Flour
" "	"	200.00	40.00	160.00	Instant Soya
" "	"	25.34	8.45	16.89	Magarine (marnic Gem)
Total	"	450.68	96.90	353.78	

Source:- RMRDC (1996)

Soya Beans Cake/Meal as Feeds:- The livestocks and poultry feeds: cake/meals can obtained during the filtration after cleaning, steeping and grinding the Soya beans. The sub-sector requires at least total of 74,001.24 metric tons at full capacity, but only 29,280.52 MT is current capacity requirement with a short fall of 44,720.72 MT as supply gap.

Table 4:31The Raw Material Requirement for Livestocks and Poultry Feeds Production

Raw material	Unit	Requirement at full capacity	Current capacity requirement	Short fall	product
Soya bean cake/meal	MT	27,140.36	14141.56	12,998.80	Livestock feeds
Soya bean	"	26,400.00	9,773.00	16,627.00	Soya cake Livestocks
Soya bean meals	"	604.50	340.00	264.50	Chick mash
"	"	1128.70	525.96	613.74	Grower mash
"	"	192.00	120.00	72.00	Layer chick
"	"	3,840.00	3,300.00	540.00	Mash layers
Soya cake	"	295.68	16.00	279.68	Growers chick
"	"	14,400.00	1,064.00	13,336.00	Mash layers
Total	"	**74,001.24**	**29,280.52**	**44,720.72**	

Source:- RMRDC (1996)

Limitation of Soya beans fats oils:- The sub-sector which is also a derivative of Soya beans is exposed to so many limitations for attracting investment, despite its prospective potentials, that could boast its outlets. The following are some of the limitations as enumerated by the RMRDC

1) Lack of accurate National Statistics on fats and oil production, local consumption and export.
2) Acute scarcity and high cost of raw materials caused in part by excessive smuggling.
3) Lack of government incentive on investment
4) High excessive capacity of installation with a large proportion of old and ageing equipment which are inefficient, breakdown frequently and are costly to repair or replace.
5) High cost of imported technology required for oil refining fractionation and hydrogenation.
6) Capacity utilization is about 30% on the average which indicated that there is a high level of excess capacity.
7) The short fall may be due to old equipment and machinery, lack of required raw materials, in ability to pay back debts and shut down of some plants.

However, despite the above mentioned limitations the sub-sector's current capacity requirement is 315,503 metric tons as against the requirement at full capacity of 450,757 metric tons with a short fall of 135,254 metric tons as the supply gap. Therefore if the above limitations can be overcome, such supply gap would be part of history. the table below shows the raw material requirement of the fats and oil sub-sector

Table 4.32: The Raw Material (Soya Beans) Requirement for Soya fats/oils sub-sector

Raw material	Unit	Requirement at full capacity	Current capacity requirement	Short fall
Soya Beans	MT	414,357	297,730	116,627
Full fat Soya (growers layer)	"	5,000	4,000	1,000
	"	604.50	340.00	264.50
Full fat Soya Bean	"	31,400	13,773	17,627
Total	"	**450,757**	**315,503**	**135,254**

Source:- RMRDC (1996)

Problems and Prospects of Soya Beans

Problems:- There is the existance of keen competition from other varieties of dairy Products that Monopolised the market. Yoghurt drinks e.g. Jamil Yoghurt, Ice Cream, Dano full cream, Dano Low fat or cheese.

The short shelf life of Soya beans milk, Unstable prices of the raw materials as well as water waste beside the Capital intensive nature of the Soya beans Milk Project plant discourage investment in the sector. This poses a high risk on the return on investible funds.

Another area that is posing a problem is the eight limitation enumerated by the RMRDC, facing fats & oils sub-sector. The limitations have bean highlighted earlier in the sub-head under Soya beans fats and oils.

Other area of concern that have negative effects on the production as well as the quality of the product are:-

i) Lack of Sufficient Working Capital
ii) Lack of Sufficient Scientific Equipment
iii) Poor storage facilities
iv) *Frequent weeding.*
v) Diseases usually caused by some insects, bacteria and fungi
vi) Excessive rainfall destroys or reduces the quality of the product.
vii) Problem of drying facilities
viii) Destruction of sacks as well as the Soya beans grains by Rodents.
ix) High cost of labour, transportation, lack of electricity and poor communication facilities coupled with the problem of illiteracy.

Prospects:- With Federal Government encouragement on the utilization of Soya beans by establishing a utilization committee, co-ordinated by the *International Institute of Tropical Agriculture (IITA)* Ibadan. A.B.U. Zaria through its NAERLS have developed new use of Soya bean in line with local needs.

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The supply gap of Soya beans as a raw material for the production of Soya milk, fats and oils, flour, livestocks and poultry feeds production have shown the level or affinity for more production of Soya bean. The supply gap stood at 25.00 MT, 135,254.00MT,353.78 MT and 44.729.72MT, for Soya milk, fats & oils, flour and feeds production respectively, totaling 180,353.50Mt as at 1996. Going by the existing supply gap it means that the market would still be supplier oriented market for both farmers and retailers to monopolise.

With the new democratic dispensation with subsidies in telecommunication, repairs of urban and rural roads and continued research of the existing problems earlier stated would in the near future be a thing of the past. Currently the re-organisation and mergers of development banks like N.I.D.B, N.A.C.B. & Peoples Bank is a welcome development towards financing short and medium term loans that would ensure financing capital projects and working capital fund.

Pepper (Chillies):- The absence of organised primary production and lack of appropriate technology to enhance the quality and presentation of the product makes maintenance of records as well as an appreciable impact in the sub-sector difficult. Therefore most of the companies involved in the commercial production and marketing of spices flavouring are Multi-Nationals.

Harvesting Period:- The harvesting period is a long one. It starts from October all through to April or May. The harvesting is gradual on monthly basis due to variation in maturing of fruits from the main stems.

The reddish colour is a sign of maturity and the fruit is ready for harvest. It shatters to small pieces if left for sometime without harvesting. The variety that retains the colouration is the best. Besides that, it also retains its seeds until harvest e.g. Dan Kauru, Idon in Kaduna State and Dan Bauchi in Bauchi State are the best. These variety can retain its colouration and seeds up to 6 months to 1 year. Dan Meyere still in Kaduna State beside being longer, does not retain its colouration nor its seeds. The bulk of chilly-peppers are of local geno-type.

Product Source:- Kaduna and Kano States are the major producers of pepper while Katsina, Bauchi, Jigawa and Zanfara are minor producers. The Northern part of Kaduna State are indeed the major producers of this product.

Uses:- Local uses can hardly be met by analogues as indicated by RMRDC (1996). But the major users are Cadbury and Vegfru. Ikara tomatoes factory had once started production of Ikara tomapep but because of inconsisting policies, poor management, obsolete equipment, the factory could not sailed through the competing market.

Available Market:- The locally traded variety is birds chilly. Restaurants, Hotels, House-hold as well as food and beverages processing companies are the available markets.

The product is an exportable one which if properly harnessed could be a source of foreign exchange that would have a positive bearings on foreign reserves.

Farmers Production Capacity:- The total annual production in 1995 was about 26,480 tons, of which 2,500 tons are birds chilly. Cadbury and Vegfru are the large scale pepper production companies. The variety of birds chilly are as follows:-

1) Yar Bauchi
2) Yar Kauru
3) Yar Ida
4) Yar Meyere

Problems & Prospects

Problems:- Some of the Problems associated with the product are as follows:-

1) It is usually infected by viral diseases, although it is quite resilient.
2) It is also a labour intensive product from planting to harvesting, shattering also leads to crop and seed loss as well as contamination.
3) Drying in an open and under sun is responsible for both colouration loss and contamination of the product.

4) Aphids secrete gummy honey dew directly on the fruit surface, which affects the quality of the product.

5) Another problem is means of transportation use in conveying the product as lorry or trailers, donkeys and bicycles. These helps in shattering the fruits which affects the quality and weight of the product.

Prospects

1) varieties are combined in order to find a stem with leaf resistance to major diseases which would ensure high yield and synchronous fruiting to ease harvesting.

2) Drying methods are improved or developed as a means to preserve the colour and purity of the product – solar driers were invented by University of Maiduguri and Kaduna Polytechnic.

3) Materials with the host plant resistance are developed to take care of hemipterous insects and aphids.

4) Another noteworthy prospect is the extract from requirements of the food, beverage and Tobacco, sector for spices flavouring and colourings.

Table 4:3The extract from Requirements of the Food, Beverages and Tobacco, sector for spices flavouring and colourings.

Raw material	Unit	Requirement at full capacity	Current capacity requirement	Short fall
Pepper Mint Oil	MT	13,446	47,559	34,113

Source – RMRDC (1996)

This shows that pepper (chillies) as the raw material has a supply gap of 34,113 metric tons which needs to be satisfied in the near future.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY

The abstract in the text has summarised some of the fundamental or principal issues examined in the thesis. The properties of these agricultural products and their product lines varies with one another as their available sources varies. The Northern part of Kaduna State are the main producers of cotton lint & seeds as well as pepper – chillies. While the Southern part of the state are the main producers of Soya beans and Ginger.

The cost & selling price:- The prices are not stable, it fluctuates year in year out. When price(s) rises for example this year, it falls the other year due to in flux of the product as a result of market forces of demand and supply. For the details of these prices it can be seen from table 4.4 range of *product/derivatives*.

Advantages:- The advantages associated with these products and their product lines are enormous. Beside providing employment for both skilled and unskilled personnel, they contribute to the National economy in the Nation's Gross Domestic product (G.D.P) as well as improvement of foreign reserve. This can be viewed from the perspective of these products as an import substitution with export potentialities. The bye-products of Ginger, Soya Beans and cotton seed are used as livestock feeds.

Prospects:- The prospects of these product(s) is very high considering the fact that the market is supplier oriented market, where demand is higher than the supply. Most of the extracting or processing companies as well as textile mills and ginneries are operating below capacity. Consumers awareness of the various uses of these products and their derivatives would certainly increase the demand of such products. Government incentive towards small scale entrepreneurs as well as liberalisation policies would encourage investors both local & foreign toward industrialisation on a large scale. Institutions have significantly contributed in two (2) dimensions by identifying a number of uses and diseases as well as the curative measures associated with the products.

Clear statement of the problems:- The major problems that transcend across these products are not far fetched as this includes (1) poor financial support or backing (2) Competition is very high as demand is satisfied through import and market prices are carteled determined. (3) Diseases affecting the product quality due to pest, bacterial and fungi infection. (4) Crude or primitive method of production (5) obsolete nature of machines and spare parts (6) lack of modern technology due to poor Research & Development. (7) poor advertisement & Sales promotion.

The procedures followed:- Primary field data was collected through questionnaires and personal interviews. While the secondary source, the literature survey was conducted by consulting relevant journals, Newspapers and textbooks. The questionnaires was given to the selected few sample of 30 participants of which 24 was returned. The analysis of the data has been done in consideration of independent and dependent variable by simple descriptive analysis with conclusion and recommendations final made.

The major findings:- A lot has been achieved in the areas of product line, uses, users, available market, packaging, available storage facilities, demand and supply as well as export market.

Product line:- The product line found in Ginger include Essential oil, Oleoresin, Powder and Tonic. Cotton lint has short and long staples which can be in the form of fine yarn, grey baft and cotton dust etc. the cotton seed beside being used as seed for the next farming season, oil could also be extracted and cotton seed cake. Soya beans has flour, cake, oil, milk and condiments as its product line. But pepper has Tomapep, pepper mint oil as a product line, chillies have the following varieties Yar Bauchi, Kauru, Ida and Meyere. For more details see table 4.4 range of product/derivatives.

The product uses:- Ginger product can be used in six different forms or ways as flavourant, spices, Tonic etc. while Soya Beans as a source of protein can be used in at least eleven ways such as soft drink beverages, cakes, Biscuits, Rolls, Cottage cheese etc. cotton lint uses are woven, knitted fabrics of textiles materials. More uses can be seen in appendix G. while cotton seeds are used in

planting, cooking oil and animal feeds. Pepper and chillies have numerous local uses to such an extent that hardly could any menu be prepared without pepper or chillies as flavourant, spices etc.

The product(s) users:- The major users or out lets for cotton are Ginneries, Textile mills & Spinners, while local weavers follow. There are over 120 textile mills in the country. But in the case of cotton seed the users range from Ginneries, farmers house holds (cooking oil) and livestock feeds. While for ginger the retailing outlets include Restaurants, Hotels, meat processing industries, Backeries etc. for details see table 1.1. The outlets for Soya beans & pepper like ginger include House holds, livestock farmers. Cadbury, leaver brother etc.

Available market - the available markets of all these products are the outlets mentioned, which are the local market(s) and International markets.

Packaging:- The packaging of these products varies from one product to another. The packaging of ginger extract could be 500ml amber-coloured glass bottles or sealed Aluminium bottles etc. Soya beans milk need either polythene pouches. The story is different in the case of cotton lint, polythene sheets and rope is used in tying or grey cotton fabric with a mild steel wire are also used in tying the cotton lint. While the cotton seeds, cotton dust and pepper are bagged.

Available facilities:- The ginger extracts are stored in a cool, dark place before and during shipment, while Soya beans milk are stored in Refrigerated truck, cooler & fridge – freezer (refrigerator). The rest of the products are either kept in a local store or ware-housing.

Demand and Supply:- The market for all these products are supplier oriented markets due to high level of demand as against short level in supply. The demand is always on the increase despite the small increase in supply which could not equate the un-saturated demand. Some of these product are import substitution products. therefore if our local products are properly harnessed

would certainly check the competing extracts imported. The market forces of demand and supply are hardly allowed to play their respective roles due to either monopolistic or oligopolistic tendencies of the principal actors in the market.

Export market:- The National export promotion council always helps in the promotion, development and marketing of our products overseas. As the demand steadily increases, the supply also slowly increases. Another important catalyst in the promotion and penetration of our products overseas are the agents who issue letters of intent to purchase. But the cartel formed at the International market makes the penetration difficult for new products in the world market.

5.2 CONCLUSIONS

The following conclusions were drawn from the analysis:

i) The agricultural products examined in the thesis and their product lines, retailing is becoming increasingly more competitive with many participants engaged in all types of competition horizontal and vertical inter type

ii) Each participant (the companies) produces a wide range of products which are supplied to their outlets. These products are supposedly the same as similar products from other companies although marketed under different trade names and slight difference in quality.

iii) Prices of the products vary between the companies and in some cases the differences could be quite significant. This probably depends on the perceived quality (by the companies) or the production cost. Alternatively, it could be a pricing strategy that exploits the general consumer inclination to assume that more expensive products are more qualitative.

iv) Some of the product lines (Ginger and Soya beans) and their uses are not yet known or the consuming public are not fully aware of such new product extracts. A lot of advertisements and sale promotion needs to be carried out.

v) In view of increasing competition, perhaps, some retail outlets are introducing some secondary services (delivery, discounts, credit sales

and end of the year gifts) in order to entice consumers to patronise their product(s). This will enable them to achieve high sales, maintain and probably expand their segment of the market.

vi) There is ardent need for financial backing on both the two extreme ends that is the production of these agricultural products by farmers for a better product and the processing sector of this agricultural product. This would ultimately be the turning point for a mechanised farming and a modern technology products that can compete globaly.

vii) The improved seedling as well as curative and preventive measures should be made accessible to farmers at an affordable price. This would be a sort of encouragement for them.

viii) There is ample opportunities or prospects for the examined products under the new dispensation of economic libralisation policies that attracts both local & foreign investment, based on government incentives.

ix) The companies respond to competitive strategies in different ways in the textile industries and ginger processing companies in particular. Some of them in engage in differentiation while other beside engaging in the product different nation, do introduce some innovation for adoption by the consuming public (Ginger Companies)

x) The numerous uses and users identified, it will highly be a welcome idea if there will be private participation fully in the areas of Soya beans, pepper – chillies and ginger, at it is now obtain in cotton lint & seed by textile mills, ginneries, livestock farmers etc.

xi) The management of retail outlet is so flexible that once there is sufficient working capital, the financier could open an out let in any of the good available location with minimum staff. The number of employees normally depends on the size and capacity of the outlets.

xii) The retailers of the processed products are not engaged in the exclusive kind of distribution. This means that they sell not only the products of the parent companies, unless there is an agreement to that effect that prohibits them from directly handling a competitive line of products.

5.3 RECOMMENDATION

i) Government should give an incentive which might include pioneer status, attractive loan terms, free land, free tariffs on equipments etc. as one of the priority sector due to its foreign exchange (forex) earnings ability

ii) Sanctions should be imposed on importation of similar products as this would ensure long term viability of new ginning spinning as well as extraction factories.

iii) Government should continue to encourage the institutions to put more effort on research and development, while the consuming public should be enlightened. Also to be enlightened are the farmers (or research findings).

iv) More infrastructural facilities need to be provided, these would include electricity, water and good roads.

v) There is need to unify taxes from Federal, State and Local Governments as this would ensure removal of multiple taxes and levies as well as cumbersome procedures on tax reliefs.

vi) In order to encourage local production government needs to create an assuring investment climate to potential investors.

vii) Government should ban the exportation of raw oil seeds inspite of government libralisation policy as this will help to meet local demand. But subsequently, the liberalisation policy should be encouraged only on the exportation of value-added oils and cakes which improve foreign exchange earnings and create jobs opportunities.

viii) There should be more breeding programmes and the propagation of hybrid seeds with high oil contents are required.

ix) Research & Development on several aspects of oil seeds production and utilization need to be intensified by both government and the private sector. Emphasis should also be placed on secondary and tertiary processing stages.

x) Increase in hectarage of land cultivated for oil seeds using improved planting materials as well as educating farmers on harvesting is very necessary. Early warning & effective control programmes should be put in place.

xi) Introduction of mechanised harvesting and pre-processing devices or mechanised farming systems, policies and strategies that minimise production cost should be recognised and effectively set on full implementation.

xii) The production of edible protein from oil seeds to enhance human nutritional demand should be encouraged. This can be made possible only if there is easy access to farm lands, special soft loan (working capital) that increases production and processing capabilities by government agencies and financial institutions.

xiii) In order to boost sales, parent companies should take due cognisance of the products most frequently purchased and consequently produce more units of such products.

xiv) Since these agricultural products their demand is very much in elastic, companies should consider acquiring or constructing more outlets. This will greatly enhance their sales turn-over.

xv) Further studies should be conducted on consumer preferences, affordability and their general perception of the products.

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APPENDIX A – **QUESTIONNAIRE** Date:-

REQUEST FOR ANSWERING A QUESTIONAIRE ON RETAIL OUTLETS OF SOME AGRICULTURAL PRODUCE

We have selected your humble Self/Organisation because of your/its immense contribution in the sub-sector of the economy due to your/its immense experience.

How ever, all information given would be strictly protected in confidence without prejudice. The research is in fulfilment of the undersigned M.B.A programme with A.B.U. Zaria. Therefore your assistance and co-operation would be fully appreciated.

The research intends to identify the following:-

1. How best these outlets and retailers could improve on their skills and gains while final consumers gets these products or produce at a cheaper rate.

2. To identify some of the problems, their causes and effects associated with the sector, and in particular cotton Seed/Lint, Ginger, Soya beans & pepper.

3. What is currently obtainable as regards to improvements & developments viz Problems, Solutions, Strength, Weaknesses and opportunities on the retail outlets.

Please tick where appropriate while you fill the space provided, where the space is insufficient please use the attached plain sheet.

Thanks, in anticipation of your kind response.

Yours faithfully,

Muhammad I. Aliyu.

Please tick where appropriate while you fill the space provided.

1) Do you process your products or produce through traditional or Scientific method? Traditional ☐ Scientific ☐

2) Do you often have defects arising from processing of your products or produce? More often ☐ Often ☐ Not Often ☐

3) What kind of problems or difficulties do you face while processing?

---

4) How do you rectify these difficulties or problems?

---

5) What is the response of your consumers regarding your products or produce?

Very Satisfactory ☐ Satisfactory ☐ Needs improvement ☐

6) How do you intend to improve on the processing?

---

7) What are the set standards for a quality products or produce?

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8) What is the processing line of your product or produce?

---

9) (a)What are the various methods of processing use?

(b) What are the problems associated with the method use?

---

10) How possible can the processing line be reduced or shorten without affecting the quality?

---

11) *Is the processing a seasonal* Yes☐ No☐

What are the hazards or risks associated with the processing of the products or produce?

---

12) What are the mitigating solutions?

STORAGE

13) How do you store your product or produce?

In store ☐ Ware house ☐ Traditional ☐

14) Do you have storage facilities for your product or produce?

Yes ☐ No ☐

15) What are the storage facilities?

---

16) How do you preserve your products or produce?

---

17) Do you encounter problems or difficulties? Yes ☐ No ☐

What are the problems?

---

18) How do you solve them?----------

---

19) What are the cost incurred due to storage?----------

20) How can it be reduced?----------

21) What other alternative storage or preservation methods available do you have?----------

SKILLS

22) How long have you been in this field? 5yrs☐ 10yrs☐ over 10yrs☐
What are your experience(s) regarding the field's sadness and joys?

23) Do you acquire any training? Yes☐ No☐
What are the benefits associated with the acquire training?----------

24) What are the areas to be improved or developed?----------

OUTLETS

25) How do you sell your product(s) or produce?

Wholesaling☐ Retailing☐

What other alternative outlets do you have?----------

---

26) How do you improve on the present outlet(s)?----------

---

27) What are the encountered problems or difficulties?----------

---

---

28) What are the applied solutions?----------

---

29) What is your monthly turnover on sales? K

COMMUNICATION GAP

30) How do your consumers offer complaint on products or produce?

More often☐ Often☐ Not at All☐

What are the complaints?----------

---

31) Do they offer suggestions on the products or produce? Yes☐ No☐

What are the suggestions?----------

---

32) What are the problems or difficulties encountered in reaching your customers?----------

---

---

33) How do you mitigate them?----------

PATRONAGE

34) Do you have competitors? Yes☐ No☐

What characteristic features do the competitor's product(s) or produce have different from yours?----------

---

---

35) How often do your customers prefer foreign product(s) or produce?

More often☐ Often☐ Not at All☐

What are their reasons?----------

---

36) How do you intend improving on the product or produce?----------

37) What other problems or difficulties do you face?----------

38) How do you solve them?----------

RESEARCH & DEVELOPMENTS

39) How often do you make research or develop your product(s) or produce?
More often☐ Often☐ Not at All☐ Buy Over☐

40) How successful was the research and development?
Very successful☐ Successful☐ Unsuccessful☐

41) What problems and difficulties do you face?----------

42) How do you mitigate them?----------

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43) What is the estimate cost incurred per research or development? ☐

44) How do you finance the research & developments?----------

FINANCIAL SUPPORT OR BACKING

45) How do you finance your working capital? Self☐ Loan☐ Self/Loan☐

If financially backed, how would you exhaust it?----------

46) Have you ever, enjoyed any financial support? Yes☐ No☐

From what source or sources?----------

47) How would you cope without financial support?----------

48) What are the problems faced due to limited resources?----------

49) How do you solve them?----------

GINGER

50) How often do you have fungi arising from partial drying?

More often☐ Rarely☐

How do you prevent the occurrence?

Complete drying☐ Chemicals used☐ Traditional☐

What other defects or diseases you often get?----------

---

51) How do you cure them?----------

---

52) Any other problems or difficulties?----------

---

53) How do you mitigate it?----------

---

54) What are the uses or usage(s)?----------

---

55) Do you have problem of mixing of low grade with high grade?

Yes☐ No ☐

What are the differences between low and high grade?----------

56) What method do you applied in drying Ginger?----------

57) Any other method applied for drying Ginger?----------

58) Do you have problem Of underweight? Yes☐ No☐
What are the reasons for underweight?----------

59) What are the prospects of the produce presently or in future?
High☐ Average☐ Low☐

60) How do you promote & develop the existing sales machinery to increase sales?----------

61) Do you diversify your investment and retail outlets? Yes☐ No☐
Later☐ How do you diversify?----------

62) How successful is the diversification?

Very Successful☐ Successful☐ Unsuccessful☐

63) Do you embark on backward integration (i.e. Producing-Processing-Retailing) Yes☐ No☐ Later☐

64) What are the prospects and consequences for embarking on backward *integration?*

Prospects	Consequences

65) What are the ways employed in getting & enticing the consumer for your local products or produce than imported ones?----------

---

---

66) Do you export your products or produce? Yes☐ No☐ Later☐

How do you export it?----------

---

67) What are the prospect and consequences?----------

---

68) What are the set standards for exporting produce?----------

---

---

69) Do you import other things in return for your exported products or produce? Yes☐ No☐ Later☐

How do you go about it?----------

---

70) What are the prospects & Consequences for importing?

Prospects	Consequences

APPENDIX B – THE LIST OF 126 TEXTILE MILLS IN NIGERIA

1. Otta Textile Limited, Lagos
2. Strang Textiles Limited, Lagos
3. Chemispin Fibres, Lagos
4. Nitol Limited, Lagos
5. Group Textile (Div. of UAC of Nigeria Limited) Lagos
6. Kelwalram Medic Limited, Lagos
7. Kelwalram textile Accessories Limited, Lagos
8. Nigerian Embroidery Lace Manufacturing Company Limited, Lagos
9. Amarilo Umbrella Company Nigeria Limited, Lagos
0. Lagos Textile Mills Limited, Lagos
11. A. D. Gulab (Nigeria) Limited, Lagos
12. Golden Coast Limited, Lagos
13. Austrian Nigerian Lace Manufacturing Limited, Lagos
14. Normanco (Nig) Limited, Lagos
15 Morlof Industry Limited, Lagos
16. Chtra Kitting & Weaving Manufacturing Company Limited, Lagos
17. DRK Alheri Industry Limited, Lagos
18. Isitol Industries Limited, Lagos
19. Aktex Nigeria Limited, Lagos
20. Med-velt Nigeria Limited, Lagos
21. Softe Limited, Lagos
22. Novelty Industrial Company Limited, Lagos
23. SRM Textile Industries Nigeria Limited, Lagos
24. West African Thread Company Limited, Lagos
25. Spint Mills (Nigeria) Limited, Lagos
26. United Chemical Fibres, Lagos
27. Sematex Limited, Lagos
28. Veraman Industries Nigeria Limited, Lagos
29. Damilola Industries Nigeria Limited, Lagos
30. Tarpaulin Industries Nigeria Limited, Lagos
31. Ola-Iya Industries Nigeria Limited, Lagos
32. Abbey International Fabrics Limited, Lagos
33. K. Issardas textile Industries Limited, Lagos
34. Sunrise Tarpaulin Manufacturing Company (Nig) Limited, Lagos
35. Plasco Textile (Nig) Limited, Lagos
36. Salformat (Nigeria) Limited, Lagos
37. Textile Specialties Nigeria Limited, Lagos
38. K. R. Textile Allied Products, Lagos

39. Fablon Limited, Lagos
40. Richland Industries Nigeria Limited, Lagos
41. Foresight Trading Company (Nigeria) Limited, Lagos
42. Nigerwest Embroidery Company Limited, Lagos
43. Baby care Products, Lagos
44. Assan Industries (Nig) Limited, Lagos
45. International Spinning Mills (Nig) Limited, Lagos
46. Life Holdings (Nig) Limited, Lagos
47. Nima Manufacturing Company Limited, Lagos
48. Nigerian Carpet Manufacturing Company Limited, Lagos
49. Oriental Carpets (Nigeria) Limited, Lagos
50. King Manufacturing Company Limited, Lagos
51. Skyway Industry Nigeria Limited, Lagos
52. Cutlas Carpets Nigeria Limited, Lagos
53. Funso Limited, Lagos
54. Nlom Limited, Lagos
55. Dagazua Carpets Limited, Lagos
56. Kaduna Textile Mills Limited, Kaduna
57. United Nigerian Textile Limited, Kaduna
58. Supertex Limited, Kaduna
59. Velour Products Limited, Kaduna
60. Afro Spinners (Nigeria) Limited, Funtua, Kaduna
61. Unitex Limited, Kaduna
62. Funtua Textiles Limited, Funtua
63. Hamada Carpet Nigeria Limited, Kaduna
64. Cotton & Agricultural Processors Limited, Zaria
65. Nigeria Spinners & Dyers Limited, Kano
66. Kano Textile Printers Limited, Kano
67. Universal Textile Industries Limited, Kano
68. Normit Limited, Kano
69 Holborn Nigeria Limited, Kano
70. M/S Textile Mills Limited, Kano
71. Universal Spinners Limited, Kano
72. Interfex Nigeria Limited, Kano
73. The Nigeria Braiding Manufacturing Limited, Kano
74. Brocade Manufacturing Company Limited, Kano
75. Kano Citizen & Trading Company Limited, Kano
76. Falid Dayekh & Co. Limited, Kano
77. Northern Textile Manufacturing Limited, Kano
78. Gidan Bassam Industries Limited, Kano
79. Nigerian Knitting & Weaving Industries Limited, Kano
80. Madratex Limited, Kano
81. Nigerian Textile Products Limited, Kano
82. Quadrant Industries Limited, Kano

83. Adhama Garments & Textile Industries Limited, Kano
84. Lakhi Textile Industry Limited, Kano
85. Safari Garments, Kano
86. Edo Textile Mills Limited, Benin City
87. Bendel Pharmaceutical Limited, Benin City
88. B. J. Industries Limited, Benin City
89. Nigerian Urethane Company Limited, Benin City
90. Bendel Laundry, Benin City
91. Delta Pack Limited, Sapele
92. Bendel Textile Mills Limited, Asaba
93. S. I. O. Edogun Industries Limited, Asaba
94. General Cotton Mills Limited, Onitsha
95. Continental Medical Complex Limited, Enugu
96. Nilbetex Industry Limitedc, Aba
97. Unison Textile Mills Limited, Aba
98. Gisamga International (Nigeria) Limited, Aba
99. E & O Chukwu Nigeria Limited, Aba
100. Rosies Textile Mills Limited, Aba
101. Niger Garments Manufacturing Limited, Aba
102. Colayborne Textile Mills Limited, Aba
103. Duke Knitting Industrial Nigeria Limited, Aba
104. Boof Industries Limited, Aba
105. Jerry Macs Agencies Nigeria Limited, Aba
106. Oge Nigeria Limited, Umuahia
107. Jackson Davos Limited, Calabar
108. Tradimex Nigeria Limited, Calabar
109. Central Knitting Industries (Nig) Limited, Iperu-Remo
110. Thomas French Nigeria Limited, Otta
111. Novelty Emb. Lace Manufacturing (Nig) Limited, Ijebu-Ode
112. Onajobi Textile Upholstery Fabrics, Limited, Shagamu
113. Prospect Textile Mills (Nig) Limited, Ilorin
114. Mark Textile Mills Nigeria Limited, Idumu, Kwara State
115. Northern Nigeria Fibre Product Limited, Jos
116. Hamada Carpet (Nig) Limited, Katsina
117. Carpet Royal (Nig) Limited, Ibadan
118. Niyi Ibikunle (Nig) Limited, Ibadan
119. Femo (W. A.) Limited, Eruwa, Oyo State
120. Modern spinning Mills Limited, Shagamu
121. Olufoam & Plastics Industries Limited, Shagamu
122. Odua Textiles Limited, Ado-Ekiti
123. Okene Chinese Carpets Nigeria Limited, Okene
124. Radiao Rubber Industries Limited, Igbaja, Kwara State
125. Loye Textile Industries Limited, Agbamu
126. Glorious Industries Limited, Oro Town, Kwara State

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APPENDIX D – LIST OF REGISTERED TEXTILE MANUFACTURERS IN NIGERIA

The list of registered textile manufacturers is shown as follows:

Aswani Textile Ind. Plc
Isolo, P.O. Box 93
Oshodi, Lagos

Atlantic Textile Nig. Co. Ltd.
State Highway, Ilupeju
P.O. Box 2504
Lagos

Bendel Textile Mills Limited
Dennis Osadebe Road
P M B 1025
Asaba, Delta state

Bellhope Plastics Industry Limited
Km. 17, P/Harcourt/Aba Express Rd
P O Box 7897
Port Harcourt

Blanket Manufacturing Co.
Ltd, Tudun Wada Light
Ind. Layout, Lagos Byepass
P O Box 136
Kaduna

Bhojsons Industries Limited
State Highway, Ilupeju
P O Box 311
Ikeja, Lagos

Century Polyester Limited
Plot 64, Ikorodu Ind. Estate
P O Box 1278
Ikorodu, Lagos

Coats West African Thread Co. Ltd
15/17, Burma Road
Apapa, Lagos

Chellco Industries Limited
Plot A1 & E2, Kudenda Ind.
Area, P O Box 1847
Kaduna

Delta Packaging Company Limited
Ogorode (Near Sapele)
P O Box 1074
Sapele

Cotton & Agric. Processors
Ltd. 8, Rwaff Road
P O Box 411
Zaria

Diamond Spinners Nigeria Limited
13E LSDOC Ind. Estate
Amuwo Odofin
P O Box 66411
Lagos

Dalamal Textile Mills Ltd
Plot 2, Block E
Isolo Industrial Estate
P M B 1097
Oshodi

Elite Textile Industries Limited
Plot 7, Block H, Isolo Scheme
P O Box 3671
Lagos

Dorji Textile Mills (Nig) Ltd
1, Ukwa Road
Industrial Layout
P O Box 568
Aba

Euro Sport Wear Nigeria Limited
Plot 1A, Segun Irefin Street
Ikotun, Egbe via Isolo
P O Box 736091
Victoria Island, Lagos

Alkem Nigeria Limited
Block D, Plot 4
Amuwo Odofin Ind. Estate
P O Box 52385
Falomo, Ikoyi
Lagos

Angel Spinning & Dyeing Limited
Plot 8, Sharada Ind. Estate
Phase III
P O Box 6661
Kano

Arewa Textile PLC

Arcee Textile Industries Limited
Plot 2B, Block A, Oshodi Industrial

Enpee Industries PLC
Industrial Avenue, Ilupeju
P O Box 906
Lagos

Fintex Limited
Inuwa abdulkadir Road
Kaduna South
P O Box 276
Kaduna

Five Star Industries Ltd.
Isolo
P O Box 4305
Lagos

Gaskiya Textile Mills Plc
Plot 583, Nababa Badamasi
Road, Bompai
P O Box 3481
Kano

General Cotton Mills Limited
Niger Bridge Road
P M B 1601
Onitsha

Kaffar Industrial Company Limited
201-303, Agege Motor Road
Mushin
P O Box 264
Lagos

Hong Kong Synthetic Fibres Co. Ltd
158, Ilogbo Road
Otta
Ogun State

Aba Textile Mills Limited
Industrial Layout
P M B 7125
Aba

Afprint Nigeria PLC
Isolo
P O Box 3623
Lagos

Fahid Dayekh & Company Limited
Plot Km. 1327, Ind. Road
P O Box 516
Kano

Funtua Textiles Limited
Sokoto Road
P O Box 64
Funtua,
Katsina

GDM Textile Manufacturing Ltd
Block G, Plot 3
Oshodi Scheme II
P O Box 6370
Lagos

Globe Spinning Mills (Nig) Ltd
Plot 3, Block A
Amuwo-Odofin-Oshodi Ind. Layout
Apapa-Oshodi Expressway
P O Box 9631
Ikeja, Lagos

Holborn (Nig) Limited
Tudun Murtala, Kano
P O Box 6777
Bompai, Kano

Ijora Textile Mills Limited
10, Harbour Road
Ijora
P O Box 320
Lagos

Horizon Fibres Limited
Choba (former Nissco Base)
P O Box 7680
Port Harcourt

Abel Abu Industries Limited
Ebute Road, Igbogbo
Via Ikorodu
P O Box 1455

Aflon Nigeria PLC
Isolo
P O Box 3623
Lagos

Integrated Fibres Limited
Waje District
Dakata-Kawaji
P O Box 13555
Kano

International Textile Ind.
Nig. Ltd. Industrial Estate
Isolo, P O Box 2604 Lagos

Kaduna Textile Limited
1, Textiles Road
P O Box 68
Kaduna

Kano Textile Printers Ltd.
9, Independence Road
P O Box 3224
Kano

K Issardas Textiles Ind. Ltd
State Highway
Ilupeju
P O Box 6420
Lagos

Marklint Complex Limited
Plot D/106 "A" Industrial
Layout, Oji River
P O Box 436, Enugu

Niger Garment Mfg. Co. Ltd
Plot 'B' Industrial Layout
P O Box 568
Aba

Nigerian Fishing Net Ind.
Ltd., Plot 3, Block E
Amuwo-Odofin Ind. Layout
P O Box 1039
Lagos

Jaybee Industries (Nig) Limited
Town Planning Office Way
Ilupeju
Lagos

Kano Textile Industries Limited
28, Dantata Road, Bompai
P O Box 2893
Kano

Kay Industries (Nig) Limited
2, Henry Carr Street
P O Box 157
Ikeja, Lagos

Lucky Fibres (Nig) Limited
56, Awolowo Road
Ikoyi, Lagos

Nichemtex Industries Plc
NIDB House (6th floor)
Broad street
P O Box 4815
Lagos

Nigerian Bag Mfg co. Ltd
Erie-Moore Road, Igannnu
P O Box 589
Apapa, Lagos

Nigerian Rope Limited
Erie-Moore Road
P O Box 115
Surulere, Lagos

Nigerian Synthetic Fabrics Ltd
Industrial Avenue, Ilupeju
P O box 128
Ikeja, Lagos

Nigerian Spinners & Dyers Ltd.
8, Independence Road
P O Box 138
Kano

Nigerian Textile Mills Plc
Oba Akran Avenue
P. M B 21051
Ikeja

Nitol Textile Mfg. Co. Ltd
10, Ijora Cause-Way
Ijora, Lagos

Nasco Fibre Products Limited
Old Airport Road
P O Box 694
Jos

Northern Textile Mfrs. Ltd
46A, Milverton Avenue
P O Box 920
Aba

Spintex Mills (Nig) Limited
NIJ House
20, Adeyemo Alakiya Street
P O Box 71789
Victoria Island
Lagos

Subaco Limited
2, Dupe Otegbola Industrial Way
P O Box 295
Satelite Town
Lagos

Nigerian Weaving & Processing
Company Limited
Industrial Avenue, Ilupeju
P O Box 287
Lagos

Nigerian Weaving, Spinning
& Printing
Company Limited, Plot 14,
Iganmu Ind. Estate
P O Box 1013
Lagos

Sunflag Nigeria Limited
28, Eric-Moore Road, Iganmu
P O Box 320
Apapa, Lagos

Supertex Limited
P O Box 549
Kaduna

Texlon Nigeria Limited
Amuwo-Odofin
Apapa-Oshodi Expressway
P O Box 6411
Lagos

United Nigeria Textiles Plc
Plot 0, Kaduna Industrial Estate
P O Box 365
Kaduna

Unitex Limited
P O Box 365
Kaduna

Reliance Textile Ind. Limited
Plot 6, Block A
Ogba Ind. Estate, Ikeja
P O Box 6778
Lagos

Terytex (Nig) Limited
Barde Road
P O Box 2756
Kano

Textile specialities (Nig) Ltd
28, Adesiyan Street, Ilupeju
P O Box 365
Lagos

United Spinners Nigeria Limited
Isolo-Apapa Expressway
P O Box 905
Lagos

Nortex (Nig) Limted
Kaduna South Industrial Estate
P O Box 276
Kaduna

Ogba Chukwu Company Limited
1, Ukwa Road/Plot "C"
Industrial Layout
P O Box 278
Aba

Specomill Textile Limited
1, Awosika Avenue
P O Box 146
Ikeja, Lagos

Stretch Fibres (Nig) Limited
Plot 118, Trans Amadi Ind. Layout
P O Box 3596 Port Harcourt

Universal Spinners Limited
Independence Road
P O Box 2243
Kano

Universal Textile Industries Limited
Independence Road
P O Box 2243
Kano

Vinkay Industries (Nig) Ltd
Plot 588, Oregun Ind. Estate
P O Box 352
Ikeja, Lagos

Wab Terry (Nig) Ltd
Plot 8/9, Block V, Dada Ogabi
Apakun Oshodi
P O Box 260 Lagos

West Coast Weaving Works Ltd
Akanni Doherty Street
P O Box 797, Ikeja, Lagos

Western Textile Mills Plc
Gbagada Industries Limited
P O Box 2800
Lagos

Woollen & Synthetic Tex. Mfg. Ltd
Oba Akran Avenue
P O Box 507
Ikeja, Lagos

Zamfara Textile Ind. Limited
Zaria Road
P O Box 64
Gusau

Zaria Industries Limited
Zaria - Jos Road
P O Box 361
Zaria

APPENDIX D

Nigeria has over 120 Textile Manufacturers with combined production capacity of over 900 million meters of fabric annually. The present estimated annual Cotton requirement is conservatively put at 600,000 bales and (305 Tons) or 1.066 million meters excluding export. Most textile Manufacturers source over 30% of their Lint requirement from Neighbouring Countries such as Benin, Chad, Niger, and Cameroun. It is abundantly clear that the existing ginneries cannot supply the requirement of Cotton Lint.

In forecasting the future supply of Cotton Lint, forecast has to be made of future supply of domestic fabrics. Available information from RMRDC indicates that there are 17, 541 looms in the Nigerian Textile Sub-Sector capable of producing about 670 million linear meters of textile fabrics at full capacity per year. Out of these only about 22,000 looms were actively operated in 1993 producing about 650 million linear meters. Below is the list of number of spindles and looms in the Nigerian textile.

INSTALLED SPINDLES AND LOOMS IN MAJOR TEXTILE FIRMS

TEXTILE	INSTALLED CAPACITY	
	SPINDLES	LOOMS
LAGOS AREA		
Afprint (Nig) Ltd	46,080	1,030
Arcee Textile	-	224
Atlantic Textile Manufacturing	12,000	114
Aswani Textiles Ind. Ltd	-	680
Bhojsons Ind. Ltd	-	397
Dalamal Textile Mills (Daltex)	-	208
Enpee Ind. Ltd	-	408
Elite Textile Ltd	-	24

Five Star Ind. Ltd	-	447
GDM Textiles	-	187
Nichemtex Ind. Ltd	30,912	1,022
Nigerian Tex. Mills Ltd	45,000	1,434
PCC Ltd	-	364
Speco Mills Textiles	36,000	540
Woolen & Synthetic Tex	-	54
Western Textiles Mills	12,096	112
WCWW Ltd	-	48
HKSF Fibres	-	500
Spintex Mills Ltd	25,592	100
Sunflag (Nig) Ltd	-	295

KADUNA AREA

Arewa Textiles Ltd	52,200	1,644
Kaduna " "	42,000	700
Nortex (Nig)	25,490	300
UNT PLC	33,260	2,240
Funtua Textiles	15,000	376
Unitex Ltd	55,000	-
Supertex (Nig) Ltd	72,218	-

KANO AREA

Gaskiya Textile Mills	27,472	174
Nigeria Spinners & Dyers Ltd	10,000	-
Northern Textiles	620	304
Kano Textile Printers	-	-
Universal Textile & Spinners	26,000	79

OTHER AREAS

Aba Textile Mills Ltd	28,800	850
General Cotton Mills Ltd	36,640	540
Bendel Textiles	20,160	507
Other Mills	28,020	1,497
TOTAL	675,970	17,541

Source: Nigerian Textiles Institute, Kaduna

The above mills mostly depend on the estimated 13 ginneries in the country for their Cotton Lint. However, the ginneries are only able to supply about 38% of the required Lint or 37,354 looms. Below is the list of existing ginneries and their total Installed capacity.

EXISTING GINNERIES IN NIGERIA

GINNING FIRM	LOCATION
1. Dangote Ginnery	M/Kankara
2. Afcot-Ngurore	Numan
3. Inter cost Ginnery	Kontagora
4. Danfulani "	Mayanchi
5. Kano "	Chalawa
6. Zazzau "	Zaria
7. CAP "	"
8. Funtua Textiles Ginnery	Funtua.
9. Zamfara Textiles Ginnery	Gusau
10. Area Cotton & Allied Products	Wawa
11. Nigerian Seed Cotton Company	Malumfashi
12. Amadi Kurfi Ginnery	Gusau

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APPENDIX E – LIST OF SUPPLIERS OF RAW MATERIALS
TEXTILE & WEARING APPAREL

	NAME OF SUPPLIER	RAW MATERIALS AV. STOCK/M	AVERAGE STOCK QUANTITY (TONS)	UNIT PRICE/UNIT N
1.	Cotton & Agricultural Processors Ltd. P O Box 214, Bin Road, Gombe	Seed Cotton	2,300 tons	25,000/TON
2.	Nortex Nig. Ltd. Textile Rd, P O Box 276, Kaduna	Cotton Lint Starch	224 tons 6.5 tons	N120/kg N45/kg
3.	Polyfibre Ind Ltd C, Kudenda Ind. Area P M B 9427, Kaduna	Polypropylene	8.5 tons 4 tons	N240/kgpolypleneme N300/kg
4.	Bonizan Fibres (Nig) Plc 47/57 Mattins Street, PMB 2149, Port Harcourt	Polyester Filament Yarn (textile)	400 tons	N250/kg
5.	Dutsin-Ma Cotton Processing Company, Bye-Zaba Dam P O Box 85 Dutsin-Ma	Cotton lint Cotton seed	980 tons 160 tons	N100/kg
6.	Allon Nig. Plc, 122-132 Oshosh – Ajapa Expressway Isolo P O Box 3623, Lagos	Open-end cotton yarn		
7.	Funtua Textiles Ltd, Sokoto Road, P O Box 64, Funtua	Cotton Lint		
8.	Dangote Farms Ltd, Dangote Chancery Dutsin-Ma Road, Kankara PMB 4007 Mahmudashi	Seed cotton		
9.	Mark Textiles Mills Nig Ltd, Kaduna Oppo Road, Iyamoye PMB 1001	Cotton lint		
10.	Intercot Ltd, 2Km Rijau Road, Kontagora	Seed cotton Cotton lint	5,000 tons 600 tons	N25 N80
11.	Cotton & Agricultural Processing Crop Ltd, BCGA Kontagora	Cotton lint Cotton seed	1.5 tons 90 tons	90,000 6,500

12. Kaduna Textiles Ltd, P O Box 68, Kaduna	Cotton Polypropy lene chips	228.712 tons 15.92 tons	116.14 80.64
13. Clobe Spinning Mills Nig Plc, Apapa/Oshodi Expressway, P O Box 9631, Ikeja	Cotton Lint Polyester	280 tons 130 tons	110-170 170
14. Blanket Manufacturing Coys (Nig) Ltd, Plot 1 & 2 Tudun Wada Industrial Layout P O Box 136 Kaduna	Dyed waste cotton	20 tons	80

2.6 PRICE & PRICE TRENDS

The current prices for most of the raw materials and products are shown in Table 2.2 - 2.4. The prices of the basic raw materials have never been stable and appears to change indiscrimination due to high inflation. Cotton that sold for N3,000 per ton in 1991 now in 1996 sells between N16,000 - N22,000; an increase of over 500%. Infact it sold for higher price in 1995 N44,000 at the being of the season. In the case of jute which sold for N11/kg in 1991 now sells for N400/kg a rise of over 3,600%. The reason being the unfavourable exchange rate and the fact that jute is imported. This has multiple effects on production cost, expressing the need to look for substitutes like polypropylene that is locally available from the petrochemicals.

APPENDIX F - Raw Materials for Textile Industries

The table below shows the various textile raw materials used in Nigeria, their current installed capacity, current capacity requirements, shortfall and unit price for each.

RAW MATERIALS	FULL CAPACITY REQ	CURRENT CAPACITY REQ	SHORT- FALL (GAP)	CAPACITY UTIL. %	PRICE/UNIT N
Seed Cotton(10)	281,525T	174,153T	107,372T	61.86%	N65/kg
Cotton Lint(9)	23,989.44T	13,551.55T	10,437.9	56.50	N90-120/kg
Thread(4)	10,1227.21T (4)	51,101,512 T (4)	50,212.7	50.40	
Cotton Yarn(8)	11,081.92T (8)	6,882.60T (8)	4,199.32	62.11	N100-158/kg
Polyester fibre (3)	2480.4T (3)	1561.50T (3)	918.9T	63.00	N250/kg 860/kg
Dyestuff (4)	40.42T	32.99T	7.441	81.60	N200-2500
Chemicals (5)	1311.23T	735.44T	575.81	56.09	N250-2500
Filament Yarn (1)	2,582.5T	1680T	902.5T	65.51	N300/kg
Metallic Yarn (3)	1430T	1206.11T	223.9T	84.34	
Polypro-pylene(3)	2840T	306T	2534	10.77	N70-90/kg local/ foreign
Jute (1)	1045	156	889	14.93	N400/kg
Leather(1)	45,720 meters	457.2 meters	15262.8 meters	1.00	
Fabrics(3)	3511.30 meters	2103.12 meters	1408.18 meters	60.00	
Candle Wax (1)	60 packets	18 packets	42 packets	30.00	N1500/kg
PP Resin (1)	350T	180T	170T	51.43	Foreign
Latex (2)	10mill T	624T	9993.76		N120/kg
Pry/Sec backing cloth(2)	10.8m M^2	1.45m M^2	9.35m M^2	13.43	N32-40/M^2
Buttons(1)	11,200pcs	8,400pcs	2,800pcs	75.00	N4.50/pc
Gumstay(1)	93,150 meters	46,600 meters	46,550 meters	50.02	N30.00/m
Lining(1)	4,200 meters	3,150 meters	1050 meters	75.00	N45/kg

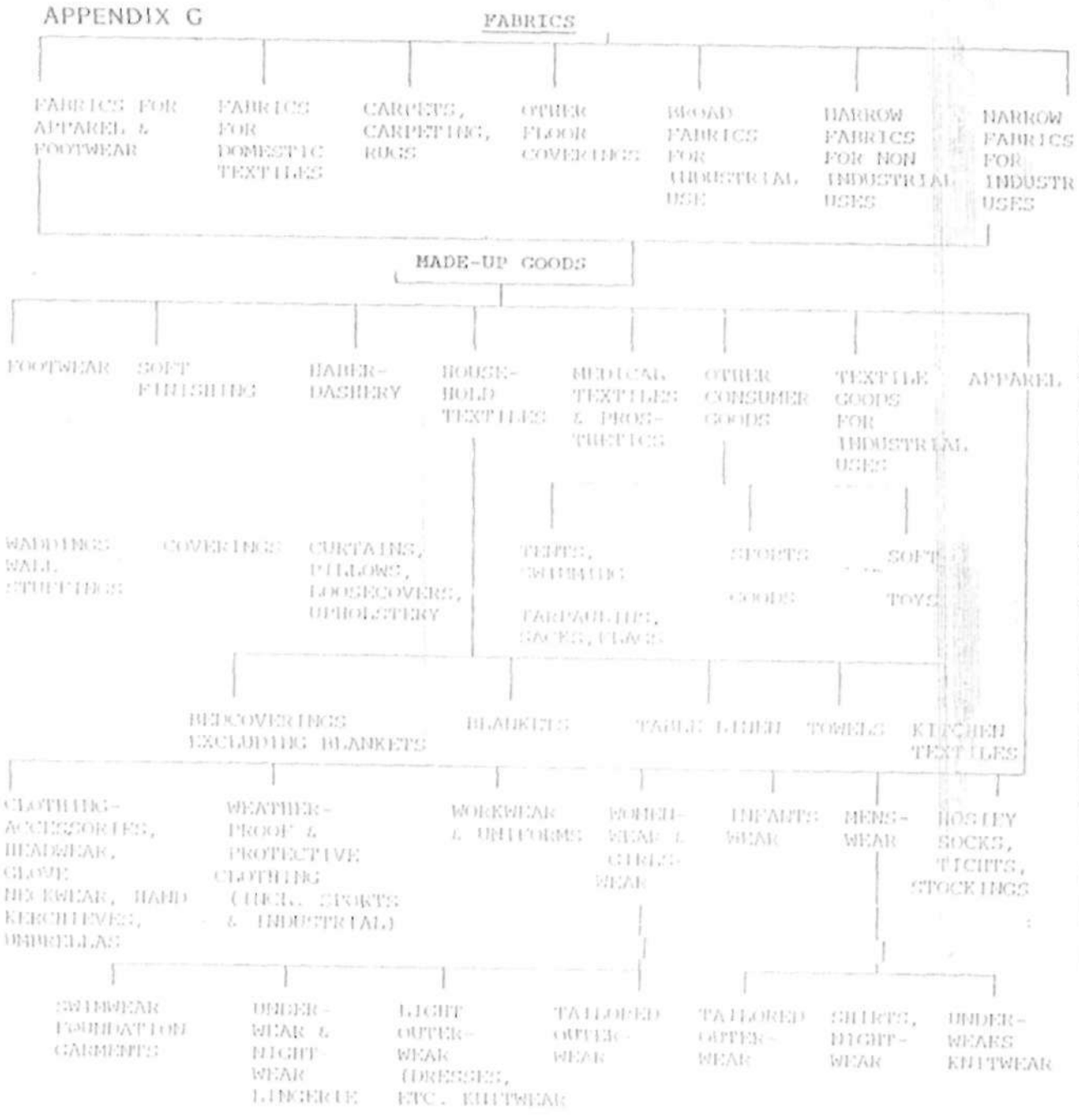
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PRODUCTS

Below is a table of textile products made in Nigeria showing their installed capacity, current production, capacity utilization and unit price.

PRODUCTS	INSTALLED CAPACITY	CURRENT PRODUCTION	CAPACITY UTILIZATION(%)	UNIT PER PRICE(N)
Cotton Seed (6)	88096T	49837.6T	56.57	N65/kg
Cotton lint (7)	152930T	109684.67T	71.77	90-120/kg
Polyester filament yarn (1) (textile)	12,000T	3,000T	25.00	550/kg
Cotton Yarn (6)	12442T	9381.7T	75.40	
Polypro pylene(1)	300T	150.183T	50.06	38/M²
Grey fabric (4)	61.51m metres	46.64m metres	75.83	53/m-110/m
Ahca prusls (2)	51m metres	33m metres	64.71	
Aso-Oke(5)	50606ómetres	450338.7metres	89.39	100-200/m
Carpets(2)	6m M²	0.75m M²	12.50	400/m-1200
Carpet backing(1)	30,000T	15,000T	50.00	260-400
Needle felt carpet(1)	510,000m²	172,948m²	33.91	510/m²
Suiting(3)	25.97m metres	14.4m metres	55.45	65/m
Metalised fabric(1)	160T	2.16T	1.35	
Beddings/ cover(3)	85,00pieces	2,200 pcs	11.88	150-205
Uniforms(3)	18123.408 metres	7461.504 mtrs	41.17	50-145
Hand Towel(4)	3120pieces	1380pieces	44.23	60-65/ps
Suiting(2)	4m metres	0.58m metres	14.50	100/m
Lace (1)	75,000pieces	32,000pieces	42.67	
Blanket(1)	350T	179T	51.14	
Napkins(2)	12,600mtrs	3,400mtrs	37.06	50/mlocal
Head/Tray/ Table cover (3)	2,200	1,400	63.63	100-150
Bags (1)	600,000ps	500,000ps	83.33	550/bundle
Hats (1)	600,000ps	500,000ps	83.33	650/bundle

APPENDIX G



END-USES OF TEXTILE PRODUCTS

APPAREL (WOVEN, KNITTED ETC) - Headwears, Gloves, Weatherproof, Protective Clothing, Workwear, Uniforms, Swimwear, Underwear, Garments, Hosiery, Socks, Tights, Stockings.

Furnishing; Towels; Sheets; Bedspreads, Candle Wicks; Sponge Cloth; Raising Fabrics; Footwears; Cambries; Sewing; Voiles; Linings; Ribbons; Tyre Cords; Canvas; Felt Hats; Carpets, Blankets; Industrial Belts; Fan Belts; Waddings; Wall Covering, Haberdashery; Tents Awnings; Tarpaulines Sacks; Soft Toys; Sport Goods; Umbrellas; Medical Textiles - Prosthesis, Surgical Gowns; Surgical Sutures, Bandages, Artificial ligaments, Cruciate Fixations, Menstual Tampons; Sore Dressing, Crafts; Geotextiles.

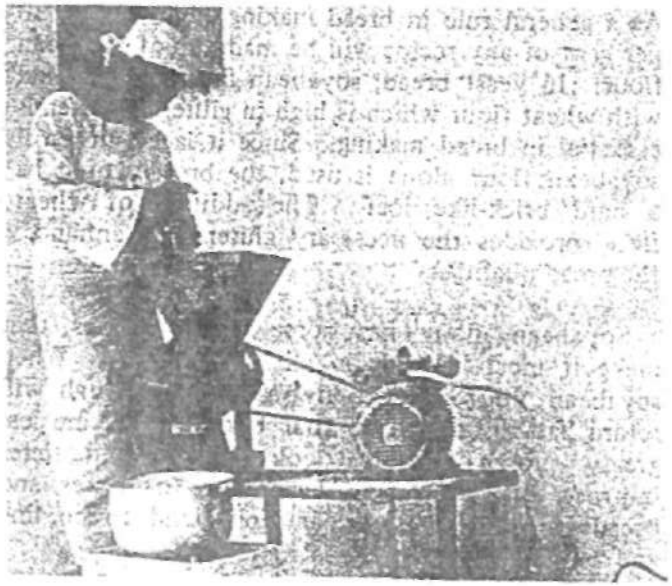
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PREPARATION AND USES OF



SOYABEAN FLOUR

Extension Guide No. 148.

SOYABEAN FLOUR

Soyabean flour has high value vegetable protein that complements all cereals.

About 5 per cent soyabean flour may be added to bread recipes without adversely affecting their baking characteristics. Soyabean flour combines protein with the largely carbohydrate content of bread and makes it more nutritious and comparable to the quality of protein in milk or meat. It does not impair grain or loaf volume; neither the texture nor crumb colour. The flour has a moisture retaining property which enhances eating quality through improved tenderness, (Ziemba: 1966).

As a general rule in bread making, about 20 to 30 per cent of any recipe will be made up of soyabean flour. In yeast bread, soyabean flour is combined with wheat flour which is high in gluten. Gluten is essential in bread making. Since it lacks gluten if soyabean flour alone is used, the bread would be a hard brick-like loaf. The addition of wheat flour provides the necessary gluten and enhances the bread quality.

Soyabean flour has some characteristics that make it most valuable in all home baking. When soyabean flour is used in baking, the dough will retard fat absorption so that baked foods are less greasy, enrich the crust colour and often times improve the flavour. The texture of cakes and breads made with soyabean flour tend to be fine and soft.

The proportion of soyabean flour may be increased up to 100 per cent in some soyabean cookies and cakes. The soyabean flour will help to make them light and moist. Remember the more soyabean flour the more nutritious the end product.

To improve the protein quality of tuwo, eba and many other traditional Nigerian foods, add one part soyabean flour to three parts of local flour. The taste is unaltered but the protein content is greatly increased.

THE PREPARATION OF SOYABEAN FLOUR

1. Remove the stones, sticks, leaves and discoloured or damaged soyabeans, wash in water to remove dust and dirt.
2. Cover the soyabeans with twice the volume of water and boil for 20 - 25 minutes.
3. Wash the beans and drain.
4. Cover the beans with twice the volume of clean water.
5. Soak for 12 hours; change the water twice.
6. Remove the skin.
7. Spread the beans in a thin layer on clean paper, cloth or trays with good air circulation and expose to direct sunlight.
8. When completely dried, either:

   (a) Store the dry beans in an empty tin, e.g. Nido milk tin, until you need some soyabean flour. The sun dried soyabean will keep longer than the soyabean flour. or

   (b) Grind the beans into a fine flour on a grinding stone or at a local mill. Store the soyabean flour in a clean tin to prevent deterioration of the flour by insects and moisture.

NOTE:

If poor weather conditions do not permit the soyabeans to be dried within 36 hours, use an electric fan or roast (fry) the soyabeans to speed up the process. Slow drying may procure high bacteria counts and putrefaction. Mould producing toxic substances may also be present in poorly dried and stored soyabean flour. Properly dried and stored soyabean flour can keep almost indefinitely.

USES OF SOYABEAN FLOUR

(a) For baking - products (delight), frying products (snacks).

(b) As fortification with local food.

(c) For enrichment with pap, etc.

OVEN BAKED PRODUCTS

Cakes and biscuits are rapidly increasing in popularity in Nigeria. Soyabeans can make a great contribution in these foods.

SOYABEAN FLOUR QUEEN CAKES

Ingredients:

- 1 cup soyabean flour.
- 2 cups wheat flour.
- 4 teaspoons baking powder.
- 1 cup sugar.
- 1 cup milk.
- ½ cup margarine.
- ½ teaspoon salt.
- 2 eggs.
- 1 teaspoon vanilla, orange, or lemon juice.

Method:

1. Sieve together the wheat flour, soyabean flour salt and baking powder into a bowl.
2. In a different bowl, cream the margarine and sugar; add flavouring.
3. Add eggs one at a time and beat well after each addition.
4. Add the sifted dry ingredients alternately with the milk; beginning and ending with the dry ingredients.
5. Pour the batter into greased and floured muffin tins or clean empty food tins.
6. Bake in 350°F oven for 15 - 20 minutes.

HIGH PROTEIN SOYABEAN FLOUR BISCUITS

Ingredients:

- 2 cups soyabean flour.
- 1½ cups wheat flour.
- 1 cup sugar.
- 1 teaspoon salt.
- 1 cup margarine.
- 2 eggs, beaten.
- 3 teaspoons baking powder.
- 1 teaspoon lemon rind or vanilla.

Method:

1. Sieve together the baking powder, flour and salt.
2. In a separate bowl, cream the margarine and sugar; add flavouring.
3. Beat in the eggs one at a time.

4. Gradually add the dry ingredients and mix well.

5. Form the dough into round balls on greased cookie sheets about 3" apart.

6. Flatten with the back of a fork dipped in cold water.

7. Bake in 375°F oven for 8 - 10 minutes or until light brown in colour.

8. Cool slightly before removing from the pan.

SOYABEAN ROLLS

Ingredients:

- 2 tablespoonfuls yeast
- 1 cup warm water.
- ¼ cup shortening.
- ½ cup warm milk.
- 2 cups soyabean flour.
- 2 cups wheat flour
- ¼ cup sugar.
- 1½ teaspoonful salt.
- 1 egg.

Method:

1. Dissolve yeast in warm water, let it sit for 15 minutes.

2. Sieve the soyabean and wheat flours together.

3. Combine the yeast mixture, milk, sugar, egg, salt shortening and 2 cups of flour, beat until smooth.

4. Mix in enough remaining flour to make dough easy to handle.

5. Turn dough onto a slightly floured board; knead until smooth and elastic (approximately 10 minutes).

6. Place the dough in a greased bowl; knead until it is smooth; cover and let it rise in a warm place until it doubles in size (approximately 1 - 1½ hours).

ENRICHED SOYABEAN FLOUR PAP

Ingredients:

- 2 heaped tablespoonfuls of akamu
- 2 heaped teaspoons soyabean flour.
- 2½ cups cold water.
- 2 cups boiling water.
- Add sugar and flavouring to taste.

Method:

1. Mix the akamu and soyabean flour with cold water until a smooth paste is formed.

2. Slowly add the boiling water, stiring continuously.

3. Reduce the heat and cook until there is no raw starch taste.

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5. Remove from the heat.

6. Add sugar and flavouring to taste

7. When cool, serve the child using his own cup and spoon. Serve fruit after the meal.

SOYABEAN ENRICHED PORRIDGES

To make the soyabean enriched porridge follow the method used in making the enriched soyabean flour and soyabean milk paps, but use the staple cereal as flour instead of as akamu.

NOTE: Soyabean alele (steamed bean cake) can be served along with paps and porridges to children over six months of age.

When making alele for small children remove the seed coat and grind the soyabeans to a fine paste. It is advisable not to make the pepper content of alele too high, since it may be irritating to young children.

SOY AMALA

Ingredients:

- 4 cups (400gm) Yam or Cassava flour.
- 3 cups soyabean flour (240gm).
- 8 - 10 cups (1360 - 1700ml) water.

Method

1. Put water to boil.
2. Sprinkle soyabean flour into the boiling water and stir vigorously to avoid formation of lumps.
3. Add Yam/Cassava flour to the mixture, a little at a time and stir vigorously to avoid formation of lumps.
4. Stir until smooth and compact in texture.
5. Serve hot with vegetable or ewedu soup.

ENRICHED SOY - EBA

Ingredients:

3 cups of gari

5 - 10 cups of water.

1 cup of soy-flour.

Methods:

1. Put water to boil.
2. Sprinkle soyabean flour into boiling water and stir vigorously to avoid lumps.
3. Cook for 10 minutes. Switch off the heat.
4. Sprinkle gari onto the boiled soy-flour mixture.
5. Mix well until smooth.
6. Serve with soyabean vegetable soup or okra.

ENRICHED SOY-GARI

Gari can be enriched with soyabean during the processing period. In this way, gari soaked and drank as a meal will give not only energy but supply us with the required protein.

Method:

Prepare the cassava for frying the normal way, i.e.

1. Peel the cassava.
2. Soak the peeled cassava in water.
3. Grate the peeled cassava.
4. Put into a bag and set under weight to squeeze out water by setting under pressure.
5. Dry the cassava and sieve, ready for frying.

Prepare the soyabean as follows:

1. Get the soyabean paste.
2. Squeeze out the milk by setting under pressure.
3. Then fry the gari with the dry soyabean paste until it is well dried.

Proportion

1 part of soyabean to 4 parts of gari

SOYA PUDDING (Tuwo made of Sorghum or Maize)

Ingredients:

2 cups corn or sorghum flour (220gm)

2 cups soyabean residue or flour (360gm or 260gm)

6 cups water (1200ml)

Method:

1. Bring water to boil.
2. Stir in soyabean residue or flour and allow to boil for 15 minutes.
3. Stir in the corn/sorghum flour and mix until a soft consistency is formed.
4. Serve with dry or fresh okra or vegetable soup.

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PROCESSING OF SOYABEAN &



MILK PRODUCTS.

EXTENSION GUIDE NO. 147

Home Economics Series No. 11

134

PROCESSING OF SOYABEAN MILK AND MILK PRODUCTS

Soyabean milk is a refreshing and nutritious drink. It is easy to prepare and costs very little when compared with animal milk. Drink the soyabean milk with a little sugar or else make enriched soyabean milk pap, tofu, cheese or yogurt. Soyabean milk can be substituted in any recipe that calls for milk.

For maximum nutrition from each kobo, do not throw away the soyabean milk residue. It could be used for soyabean cake, alele, soup or for flour in baking products.

To improve the protein value of yam, rice, gari, guinea-corn, millet, maize and acha, use soyabean milk instead of water in the preparation of dishes made from these foods. Either use 100 per cent soyabean milk or try ½ soyabean milk and ½ water.

Soyabeans have one great advantage over many other protein sources in that no allergic properties have been associated with it so far. Therefore, it is recommended for infants who are allergic to cow milk.

Preparation

Soyabean milk can be prepared using the following methods:

Method I

1. Remove grits and dirt from the beans.
2. Wash the soyabeans and soak overnight in twice the volume of water.
3. Wash the soyabeans and remove the seed coats.
4. Either grind the soyabeans into a paste or put some of the cleaned beans in a blender. Add twice its amount of water and liquidize until a milky slurry is obtained.
5. To every cup of soyabean paste, add 2 cups of water.
6. Mix well to get good slurry.
7. Pour the slurry into the cloth or nylon bag made for sieving. Twist the cloth until all the liquid is out.
8. Boil the milk in a pan on a very low heat, stirring all the time to prevent sticking at the bottom and burning. For better milk, use a double boiler or steamer to boil the milk for one hour.
9. Add sugar and salt to taste
10. Add flavour such as vanilla or chocolate for variety.
11. Bottle the milk and keep in a fridge. It will keep for 4 days before it gets curdled. Where there is no fridge, keep the bottle in a pot of cold water in a corner of the kitchen. This will keep for 2 days.

NOTE: If there is no double boiler or steamer, simply pour the milk in a smaller pan, and emerse the smaller pan in a bigger one which contains boiling water and cover. Let the bottom water boil for one hour. Ensure that the bottom pan does not boil dry.

Method II

1. Remove grits and dirt from the soyabeans.
2. Wash soyabeans in clean water.

3. Pour double the volume of water into a pot and drop in the clean beans. Bring to boil and continue to boil for 5 minutes.

4. Bring the soyabean down and drain off the boiling water.

5. Pour cold water double its volume and rinse twice.

6. Soak soyabeans in twice its volume of cold water for 2 hours.

7. Wash the soyabeans and remove the seed coats.

8. At this stage, the beans can be completely drained and spread to dry if milk is not yet needed. Dried beans can be stored in clean air tight tins for as long as required.

9. If milk is required immediately, after step 7, grind the soyabeans into a paste or put some of the cleaned beans in a blender. Add twice its volume of hot water and liquidise until a milky slurry is obtained for paste.

10. To every cup of soyabean paste, add 2 cups of water.

11. Mix well to get good slurry.

12. Pour the slurry into the cloth or nylon bag made for sieving. Twist the cloth until all the liquid is out. In case of large quantity, a single gari presser and large bag could be used.

13. Boil the milk in a pan on very low heat for 15—20 minutes stirring all the time to prevent sticking at the bottom and burning. For better milk, use a double boiler or steamer to boil the milk for one hour.

14. Add sugar and a pinch of salt to the milk.

15. Bottle the milk and keep in a fridge as for ordinary cow milk. It should be kept for 4 days before it gets curdled. Where there is no fridge, keep the bottle in a pot of cold water in a corner of the kitchen. This will keep for 2 days.

Method III

This is a faster method and most recommended for commercial purposes.

1. Remove grits and dirt from the soyabeans.

2. Wash the soyabeans in clean water.

3. Pour double the volume of water into a pot and bring to boil.

4. As soon as the water starts to boil drop beans into boiling water and boil for 20 minutes.

5. Wash the beans twice in cold water.

6. Wash the soyabeans and remove the seed coats. At this stage, beans can be treated for storage for future use by draining out the water completely from the soyabeans. Spread the cleaned soyabeans in the sun to dry. Where drying oven is available, the beans can be successfully dried there. When the beans are completely dry, store well and use for your milk when required. The dried beans can be soaked for 1 hour on the day of use. After number seven, proceed with the grinding and sieving of the beans as in method II to obtain your milk or after soaking of dried beans when later required.

NOTE: The clean beans can be used on the same day of processing without drying first. It gives the same result.

Method III has been found to give the best milk taste compared to other methods that have been tried. Also, the milk lasts longer. The method also cuts down on the long processing when milk is required just for the family or where a refridgerator is not available to store a large quantity of milk. Though the volume of milk obtained from this method is low compared to the first method

Procedure for other milk products

1. Cottage cheese (Wara).

This product is commonly found in the southern parts of the country especially among the Yorubas in Kwara State

Ingredients

3 cups of soyabean milk

1 tablespoonful lemon juice or bombom (a special plant) or

2 teaspoonfuls of epsom salt.

Method

1. Put the soyabean milk on very low fire.
2. Add the lemon juice, bombom or epsom salt to the milk and bring to boil slowly.
3. Collect scum if any.
4. Leave to boil until the mixture begins to curdle and chunks form. The process is completed when all the milk has been changed into a clear, yellowish liquid and solid white curds.
5. Allow the curds to stand for a few minutes. The curd will then form a large mass which gradually sinks to the bottom of the container. (The clear yellowish liquid which accumulates on the top is called *whey).* The whey contains soluble protein minerals and vitamins and may be used in many ways to prepare delicious foods.
6. Put the curd in the cheese cone and let stand undisturbed until all the whey drains out The curd would then be firm and ready to come out.
7. Turn out the cheese into the container with the whey water.
8. Leave cheese in the whey until ready to eat or use or store in a bowl of salted water in a cool place.

To keep cheese, it may be cut into pieces and fried in deep fry.

Bombom* is a kind of wild plant found nearly everywhere. It is used by the Fulani in the processing of cheese "wara" in the southern part of the country.

NOTE:

A) Soyabean paste can also be processed for cheese. This will of course be very crumbly. Instead of using soyabean milk use the soyabean paste and water mixture before it is strained to make soyabean milk. Put the soyabean paste and water in a pot and proceed as for cheese.

B) If your soyabean milk gets curdled, do not throw it away. It could be used for cottage cheese.

COTTAGE CHEESE

Procedure

1. To the curdled milk, add a little lemon juice and heat it to boil slowly.
2. Pour it through the cheese bag and squeeze out the liquor to give a solid curd.

TOMATO CHEESE SPREAD

A little bit of tomato paste added to the cottage cheese made, this gives a very nice tomato cheese spread for your sandwiches.

TOFU

Ingredients

2 quarts soyabean milk

3 teaspoonfuls oil

1 tablespoonful vinegar, lemon juice, epsom salt or bombom juice.

Method

1. Bring the soyabean milk to boil.
2. Lower the heat so that the milk simmers slowly rather than boil rapidly.
3. Add lemon juice, vinegar, bombom juice or epsom salt stirring gently until the mixture begins to curdle and chunks form. The process is complete when all the milk has been changed into a clear yellowish liquid and solid, white curds.
4. Allow the curds to stand for a few minutes. The curd will then form a large mass which gradually sinks to the bottom of the container. (The clear yellowish liquid which accumulates on the top is called whey). The whey contains soluble protein minerals and vitamins and may be used in many ways to prepare delicious foods.
5. Put the curd in a cheese cloth lined colander. Fold the cloth over the top of the extra liquid.
6. Place a plate on top of the tofu and set a weight on it to press out the extra liquid.
7. Let it stand for a few minutes until very firm.
8. Put tofu into a large calabash and cover with chilled, seasoned whey. Cover and let stand in a cool place.
9. Leave tofu in the whey until ready to use or store in a bowl of water in a cool place. It is important to change the water every day.

NOTE: For a milder tasting tofu, instead of using vinegar, lemon juice or bombom, add 1 tablespoonful of calcium sulphate or epsom

salt (magnesium sulphate) which has been mixed in 1 cup of water. These can be purchased at most local chemist shops. The curd made by mixing calcium sulphate or epsom salt (magnesium sulphate is very similar to "wara" with a bland taste.

SOY — YOGHOURT

Yoghourt can also be made from soyabean milk. Bring 1 quart of soyabean milk to boil. Remove from heat and cool for 30 minutes. Add 2 or 3 tablespoonfuls of dairy yogourt and mix well. Keep in a warm place for 2 or 3 hours or until the mixture reaches the desired consistency. Save 2 or 3 tablespoons of yoghourt to start your next batch.

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