

MARKETING OF AGRICULTURAL FOOD GRAINS IN SELECTED MARKETS IN ZARIA AREA

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ABSTRACT

This study describes the organizational structure and marketing processes of the traditional agricultural marketing system with emphasis on the links between the village producer and the urban consumer using four food grains staple crops marketed in Zaria marketing area. The findings of the study showed that there is considerable organization in the marketing process and the intermediaries provide productive marketing services at reasonable costs given their technical environment. The study further showed that farmers received 78%, 79.4, 79.8 and 83% of the prices from the four major staple food grains. The analysis of inter-market price relationships revealed price spread in excess of transfer costs in the study area, implying imperfections in the markets. Other findings in the study discovered that traders do not have monopolistic power to attain such profits. Evidence supporting this view includes the finding that little storage takes place by traders in the urban daily market of Zaria. In the urban markets trader's monthly purchases are about equal to monthly sales. There is a continuous flow of grains to these urban markets from the rural areas. The large amount of grains is stored by farmers.

INTRODUCTION

The expanding urban population in Nigeria is making an ever greater demand on agricultural production and marketing systems. This has prompted concern about efficiency and performance of these systems and result in suggestions for instituting some changes. The design for changes and formulating a more effective marketing policy requires a research to provide information on the performance of the traditional marketing systems.

The objective of this paper is to describe the organizational structure and processes of the traditional agricultural marketing system, to examine inter-market price relation, price margin, seasonal price and to examine some aspects of the system with reference to maize, sorghum, cowpea and millet. The general description is the results of a field study of the organisation of agricultural produce marketing systems in Zaria region. The performance aspects analysed are the marketing margins in the major rural-urban links and the ability of the system to allocate supplies over time and space. The margin analysis is based upon a 13 months study undertaken during 2004/2005 marketing season of market channels, intermediaries and market transactions existing in one urban market, one rural market isolated from motor transport and one rural market accessible to motor transport in the zaria area. The inter-market price differentials and seasonal price movement were examined by analysing prices in 10(ten) locations

within Zaria region, for 2004/2005 using data from the zonal office of the state Agricultural Development Programme (ADP).

The location of the markets studied and the area of the Zaria regional marketing system is shown on Fig I. Four major food grains produced in Zaria region are sorghum, millet, maize and cowpea. Other crops produced in the area are rice, pepper, tomatoes, onions, cassava, groundnut and sugar cane. The four main food chosen for the study are important staple foods both in urban and rural areas of the state in general and especially in Zaria area.

Marketing can be defined as the process of making goods available for consumption (Baker, 1981). The implication of this definition is that marketing covers all business functions, including production and in its broadest sense it covers all production decision. Thus; it can be argued that, in farming such decision as the variety of crops to grow, or the breed of animals to keep are marketing decisions. It is also seen as the performance of all business activities which involved the flow of goods and services from the point of initial agricultural production until they are in the hands of the ultimate consumer. Macro view of marketing emphasize the flow of foods through marketing channels and the nature of the various firms handling these goods. The micro-view on the hand is that of the individual participant in marketing. It is the performance of all business

activities which direct the forward flow of goods to consumer and accomplished the farmer's or the firms objectives of making profit.

The traditional agriculture marketing system encourages the participation of a large number of individuals at the various types of markets and exchange points where marketing services assembly, storage, transportation and break-of-bulk are performed. The process is highly dependent upon the structure of production, which is characterised by many widely – scattered small farmers who each have small quantities to market. Basic staple foods such as maize, sorghum, cowpea and millet, and any crop stored chiefly by the producer and marketed through out the year, are likely to move through other types of exchange points and are often stored by intermediaries within the marketing channel. Perishable crops are also more likely to move through types of exchange point other than markets, especially since most rural markets are held only periodically.

Shepherd defines a market as “a group of buyers and sellers with facilities for trading with each other. In this sense, the most simple form of marketing takes place between households at village level or at some exchange point such as roadside station. The next most complex form of marketing occurs where people meet periodically in some organised manner to buy and sell goods to satisfy their needs as well as exchange information with relatives, friends and strangers.

RESEARCH METHODOLOGY

The selection of the villages and markets was based on two important criteria

(1) the fact that differences between village, towns and markets may arise as a results of differences in case of communication with and in distance from urban areas. This can be stated in terms of Von Thunen's concentric ring theory and also transferability hypothesis that “farm prices will tend to decrease with increase in distance from

urban centre” (Newman, et al 1963). This accounted for the selection of at least one rural village and market that is:-

- i. Accessible by road transport
- ii. Not accessible or isolated from major transport routes.

(2) The fact that markets are periodic in nature and in the absence of high degree of commodity specialization, a functional classification of markets is not possible (Gana, 1976, Hays, 1975).

Markets were then selected based on the following hierarchy of market periodicity, although care was taken to include villages with little or no market functions as shown on the diagram (fig 1) below.

- i. Urban daily markets
- ii. Twice – weekly market
- iii. Weekly markets
- iv. Village without markets

Markets that are accessible by road and were chosen for the study were Giwa, Anchau , Zaria City, Sabon Gari, Samaru (Zaria) Gadan Gayan, Makarfi, and Ikara. Those uses for the study not accessible include, Gimba, Tabanni, and Awai.

The ability of marketing system to allocate grains over time and space, were analysed using inter-market price relations, while seasonal price relationships was calculated using the net seasonal rise in prices. Market margins were got by calculating the difference between the price consumers paid and the price the farmer got.

Random sampling was used to select respondents for interview from the available channels of distribution and prices received.

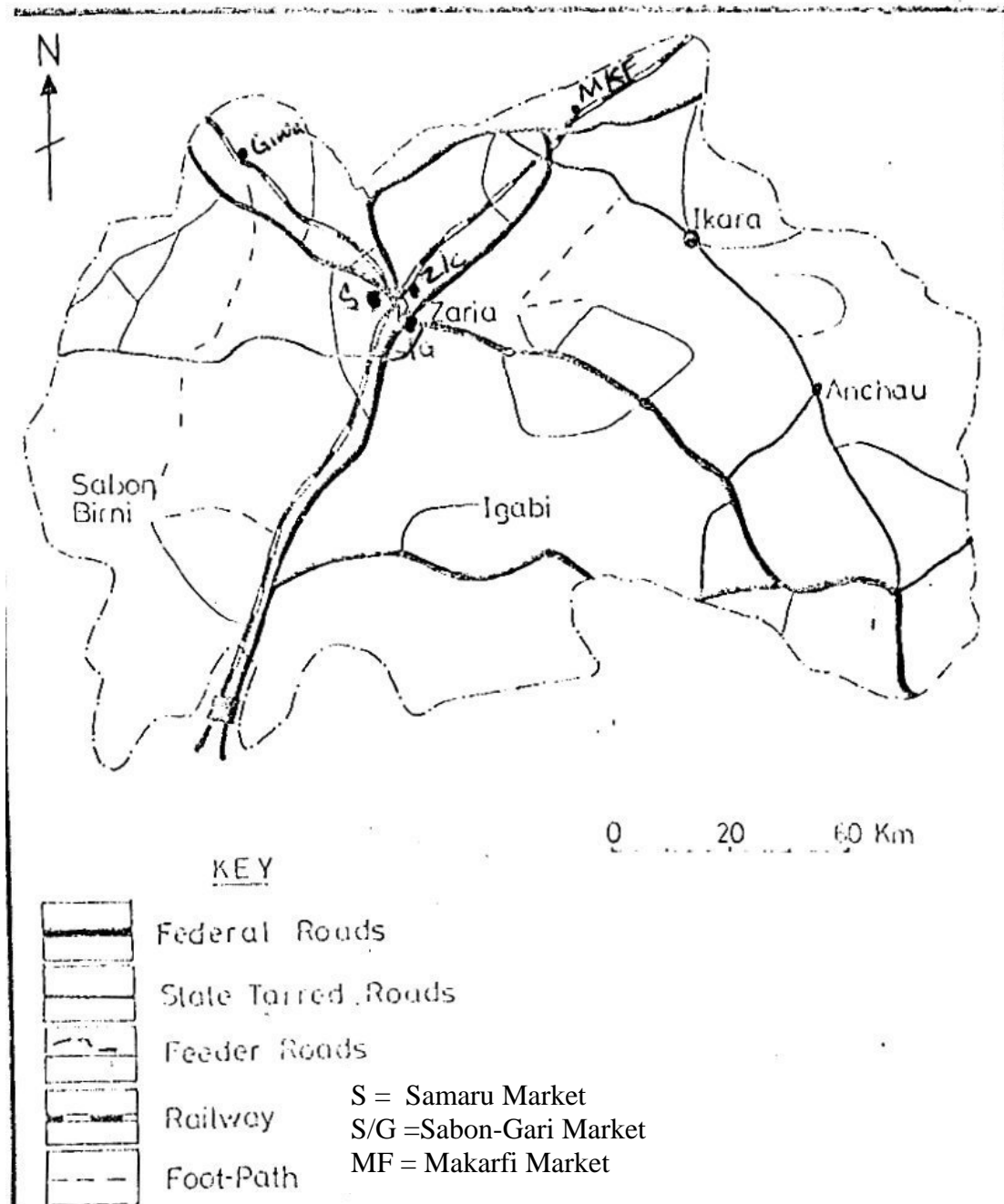


Fig. 1 Map showing transportation network in the study area and markets used for the study.

RESULT AND DISCUSSION

Markets in the study area can be classified according to their location either as rural or urban markets. Rural markets are markets that are located in rural areas and can be classified according to their accessibility by transport route into isolated and non isolated rural market.

i. Isolated rural markets

The isolated rural markets serve mostly village and community needs. They are isolated from the outside community by not being close to a motorable road and are not linked by any. The only mode of transport to these markets is by foot, bicycle, motorcycle, donkey and big lorries during the dry season. Occasionally, local assemblers purchase grains in these markets and take it to other markets either isolated or non isolated. The amount of grains moved from these markets could be very little. Storage facilities in those markets are minimal and therefore little produce is stored. The supply of agricultural produces such as maize, sorghum, millet and cowpea (over 90%) came from the nearby villages within 9km radius of the market.

Generally, very few products are moved from these markets to the urban community markets.

ii. A non-isolated (accessible) rural-markets

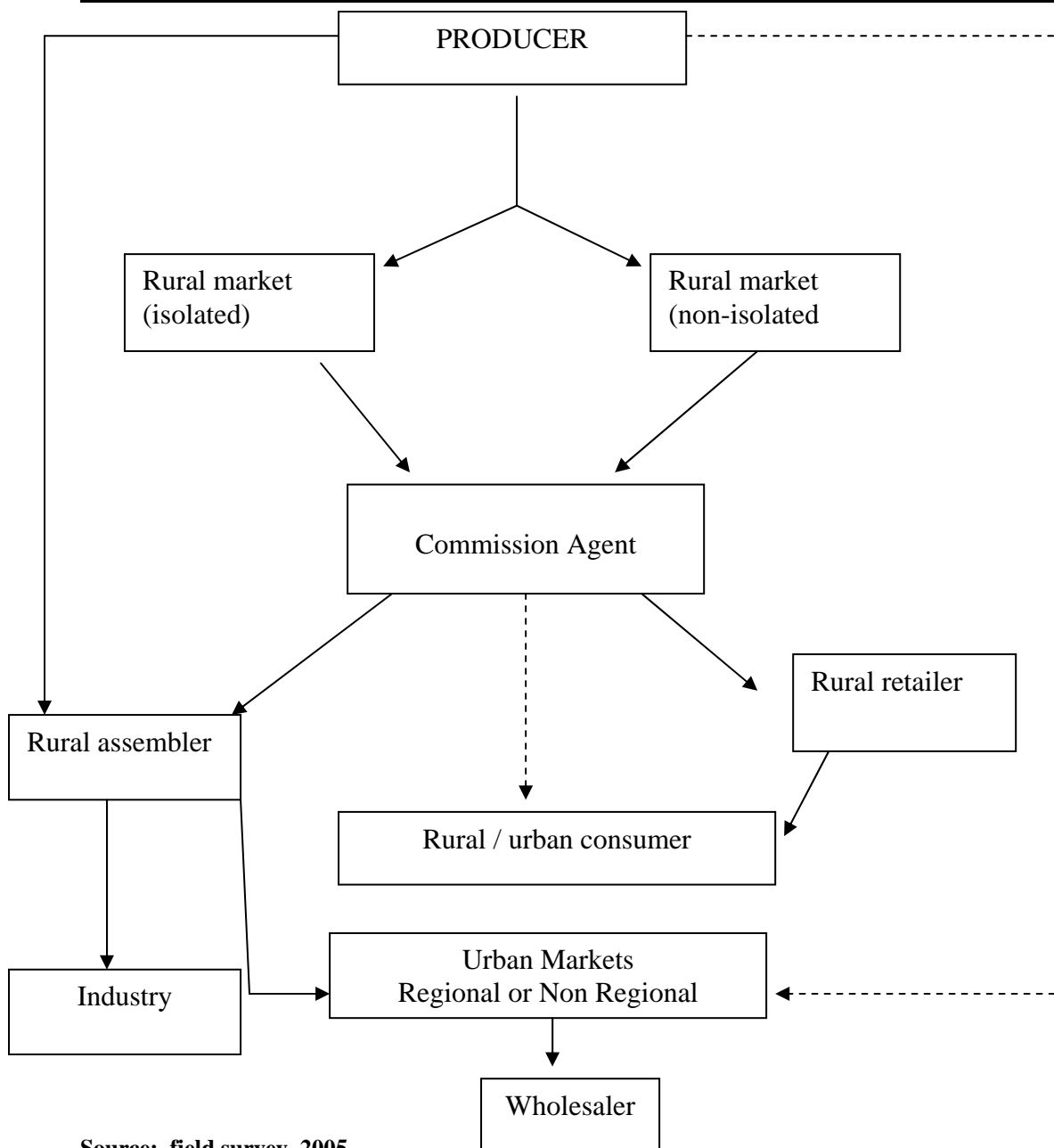
Accessible rural markets serve the village and local community, they are located on the road or nearby motor-able road. In addition, to accessibility by lorry, the markets are also distinguished from the isolated market by a large number of buyers and sellers. Producers and the isolated rural markets are linked through these accessible rural markets to urban centres. These rural markets serve as focal points for collecting products to be transported to urban areas. It is through these markets that most produce moves to the urban population or centres. The markets usually meet only once, or at most twice, a week

and draws farmers and local traders, in many cases from a distances of 20 – 30km. A typical day at an accessible rural market will find producers, local assemblers, transporters and village retailers all actively participating in product exchange. However, as in the case of isolated rural markets, there are minimal storage facilities at the markets, even, through the supply of agricultural produce comes from a much larger area surrounding the market. Over 60% of maize, sorghum, cowpea and millet come from beyond an 8km radius of the market, and 25% come from a distance of over 34km from the market.

Urban Markets

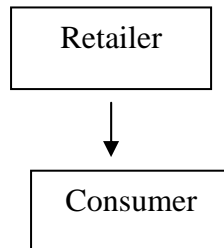
Urban markets, can be regional or inter-regional. Regional urban markets are defined as those in relative large cities, which are located in the immediate geographical regions producing the crop, where as the non-regional urban markets serve areas of the country which are not producers of the crop or are outside a region's immediate area of production. Apart from these geographical distinction, the functioning and features of these markets are similar. This distinction is relevant because movement of products from regional to non-regional urban markets usually involves at least one or more marketing intermediary.

Urban markets are the major sources of products and goods for the urban consumers. The frequent meeting and potential greater volume of the urban market enables the traders to acquire more permanent physical facilities than found at rural markets. Most market stalls have locks to provide for secure storage of produce. The supply of agricultural products comes from a much larger area than at rural markets and from any different location. In the case of the Zaria urban market, more than 30% of the supply of maize, sorghum, millet and cowpea comes from within a radius of 35km, and 40% came from over a distance of 60km.



Source: field survey, 2005

Fig. 2: Marketing channels for maize, millet and sorghum.



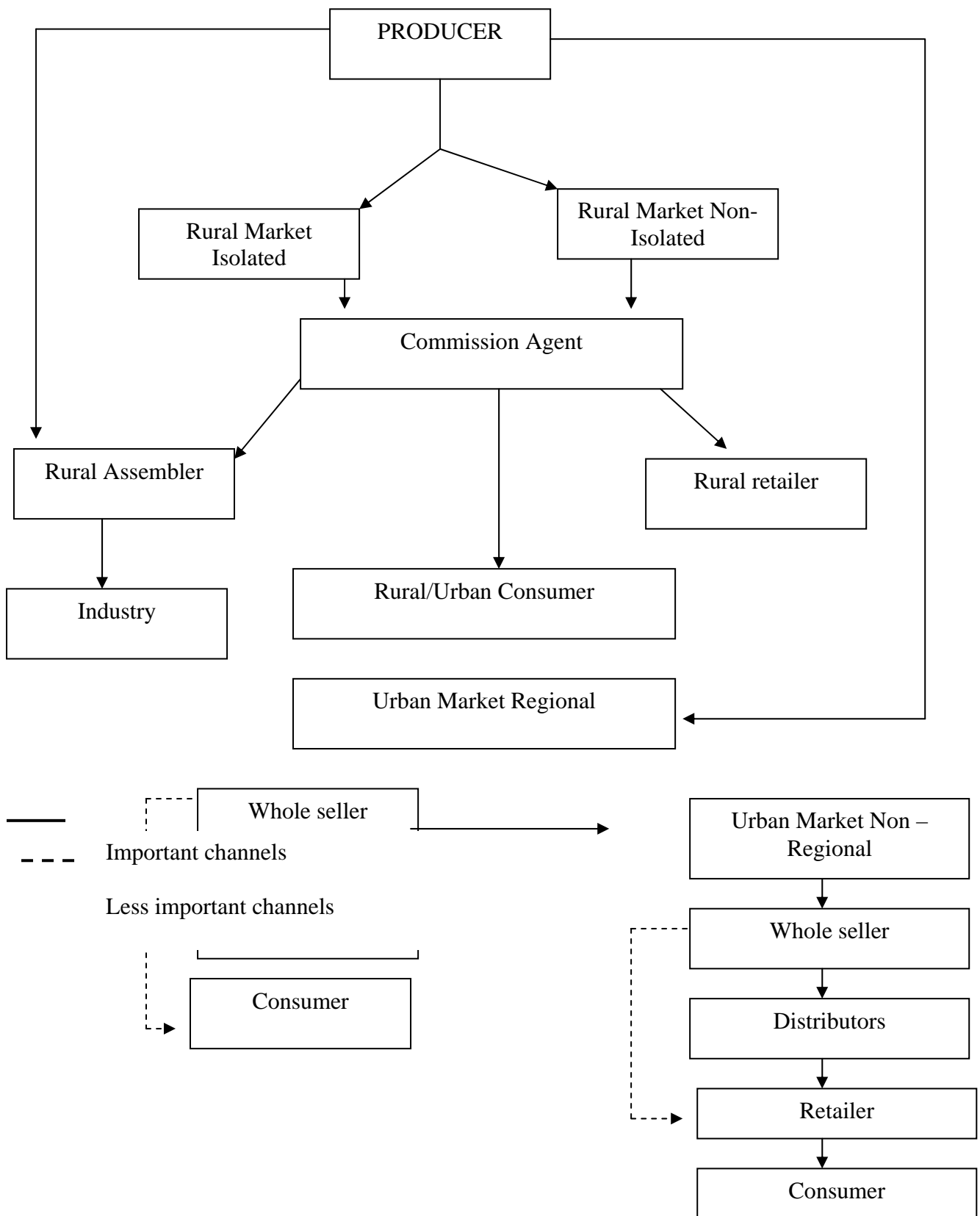


Fig. 3: Marketing Channel for cowpea

The marketing channels for the selected food grains is not a simply unidirectional flow of grains. It is characterised by having many participants and consequently long distribution channels as shown above.

Fig. 2 above shows how grains may move through these channels. The producer usually retains grains for seeds, gifts and domestic consumption before marketing any. The producer brings his grains to one of the markets (isolated or non isolated) and sells to either the rural assembler or rural retailer and sometimes to rural or urban consumers, usually through the commission agents. On the other hand, while the rural retailer markets his grains within the village market, the rural assembler takes his grains to either an urban market or to an industry e.g. (Flour Mills).

However, marketing channels may vary from crop to crop. For example, cowpeas are traded over long distances. Thus they have longer chain than maize, sorghum and millet whose trade tend to be in sub regional areas as shown in fig. 3 above.

The survey also discovered that marketing surplus which is an indication of how much in excess above the farmers own consumption needs are produced or made available for sale, were very little. It also showed that producers bought some grains which they had earlier sold in the year. However, most of the grain produces had large proportions of production consumed by farmers themselves. This has resulted in fragmentary marketing of grain by farmers. Thus the small sales of individual farmers make the bulking activity in marketing necessary. However the marketing surplus vary from location to location and by years.

SOME ASPECT OF MARKETING PERFORMANCE

The organisational structure of the traditional agricultural marketing was described earlier. This provides a framework within which the pricing system gives expression to the preference of consumers, and guidance in the allocation of resources.

The structure directly affects the degree of market competition and the efficiency of price formation.

The organisation of study of markets and the conduct of intermediaries are necessary for competition in the marketing system with reference to maize, sorghums millet and cowpea which are staple food grains in northern Nigeria.

PRICES AND MARGIN ANALYSIS

Marketing of the four grains such as maize, sorghum, millet and cowpea involves several different services. The whole system is based on the rural-urban links which in turn form a number of sub-systems each servicing certain urban consumer centres.

Below is an analysis of one of these rural-urban links in the zaria marketing area.

All these marketing intermediaries discussed above perform different services that add to the value of the food grain. These services require labour, time and capital and therefore cost money to farmers and consumers. The difference between the price consumers pays and the price the farmer gets is refer to as the marketing margin. The marketing margins for one rural-urban link in the Zaria marketing area is shown below on table I.

This shows the share of the average yearly retail price of one sack of maize, sorghum, millet and cowpea as received by each marketing intermediary: during the year. The producer received an average of 78.3%, 79.6%, 79.8% and 83.6% respectively for the food grains.

Table I: Share of retail price received by producer and marketing intermediaries

in Zaria area 2004 – 2005.

	Maize %	Sorghum %	Millet %	Cowpea %
Producer	78.3	39.4	79.8	83.6
Local assembler (trader)	4.6	4.9	4.8	4.4
Local transporter	2.5	2.2	2.1	1.1
Rural commission agent	2.0	2.2	2.0	1.1
Rural assembler	3.1	3.0	3.0	2.1
Transporter	2.9	2.3	2.3	1.6
Wholesale commission agent	3.2	2.1	2.1	2.0
Retailer	4.3	3.9	3.9	4.1
Total	100	100	100	100

However, there was a very close correlation between the producer price and the retail price for both maize, sorghum and millet. This relationship indicates that consumer prices changes were being reflected back to the producer. The intermediary with the largest margin was the local assembler, who received about 5% of the final retail price. The marketing margin for local transporters, rural market retailer and lorry transporters all remained fairly constant through out the year.

A comparison of the marketing margins with the costs of performing the marketing services indicate that this rural-urban marketing link functions effectively, and at reasonable cost, given the environment in which it operates.

INTER-MARKET PRICE RELATIONSHIPS

The nature of inter-market price relationship, or the ability of the marketing system to allocate food grains over space, was examined by analysing prices at 10 markets in Zaria marketing area in 2004 – 2005 revealed price spread often in excess of transfer costs, implying imperfections in the markets. Through there was a high degree of competition within the local subsystem, this analysis indicates a possible lack of competition between sub-systems. The results strongly suggests that the excess prices differences between the urban market and the rural ones did not result from planned manipulation under monopolistic conditions. It is rather a result of imperfection inherent in the system which is due to certain characteristics of production and making

effective response to inter-market price differentiates difficult.

Considering the nature of production of these food grains in question, there is a lack of specialisation in production and therefore a lack of concentration in with only small surplus available for inter-market trade, located at many different markets. Although a large proportion of grains are stored, the marketing patterns and storage practise of farmers determine the supply available at any one time and location.

Farmers store grains to take advantage of price rise, though probably the more important reason for store of grains and important determinant of timing of disposal, is the need for cash through the year. This can cause unpredictability in farm marketing and is further compounded by defects in the marketing system, lack of adequate information on crop prospects, surplus areas and prices, and lack of specialisation by traders taking part in trade between markets.

SEASONAL PRICE RELATIONSHIPS

Seasonal price relationships or the ability of marketing systems to allocate food grains over time to the 10 selected locations during 2004 – 2005 were examined by calculating the net seasonal rise, (the rise above that considered consistent with storage) in the four food grains prices studied.

The results showed a considerable amount of variation in seasonal price increase both among markets and between months within the year.

Millet and maize usually harvested in August to September and seasonal price movement show that high and low points are consistent with the harvest period. In all but four instance over the period studies, the yearly seasonal increase in sorghum prices and cowpea were in excess of the calculated expected increase.

Other findings in the study suggests strongly that traders do not have the monopolistic power to attain such profits. Evidence supporting this view includes the findings, that little storage take place by traders in the urban market, in urban markets, traders monthly purchases are about equal to monthly sales; there is a continuous flow of grain to urban markets from the rural areas, and a large amount of grain is stored by farmers to the extend that the rural – urban marketing link in northern Nigeria reflects price change back to the producer, it is the producers who benefit from seasonal high prices.

SUMMARY AND CONCLUSION

The study describes the organisaional structure and the maketing processes of the traditional agricultural system. It also examined some performance aspects with reference to maize, sorghum, millet and cowpea.

The study is important, because it give better understanding of the system which will provide information or formulating a more effective marketing policy. It is however, important to recognized, that agricultural produce marketing systems vary in organisation and complexity so that policy recommendations may require studies specific to location as well as to products.

The descriptive analysis shows that many products were marketed in an organised manner through traditional marketing channels within the major rural-urban link examined in the Zaria marketing area. The farmer received annual averages of 78%, 79%, 79.8% and 83% for the food grain retail prices. The total marketing margins for the grain crops was 77.9% for all the food grains market. Price changes at the retail level were reflected back through market channels to the producer.

Sometime as many as several intermediaries are involved in the distribution channels providing services and receiving a reasonable return for their investment of time and money. Some changes may enable marketing cost to be reduced, such as improving the layout and quality of physical facilities in the

markets and road improvement and the construction of new feeder roads.

The analysis of inter-market price relationships revealed price spreads in excess of transfer coasts, implying imperfections in the market.

Although there was a high degree of competition within the sub-system, this analysis indicates some lack of competition between sub systems. Thus the following suggestion are put forward for policy makers:

1. Policies should aimed at promoting specialisation in production of food crops. This will ultimately allow a larger and more concentrated marketable surplus.
2. There should be provision for more and better dissemination of market intelligence among farmers and traders. This will improve knowledge and combat uncertainties concerning supply and increasing risk associated with inter-market trade.

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