

**RELEVANCE OF STANDARDIZATION AND GRADING IN MARKETING OF GRAINS IN NIGERIA.
A SURVEY OF SELECTED MARKETS IN KWARA STATE.**

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ABSTRACT

This study examines the relevance of standardization and grading as a facilitating function in marketing of grains. The various measurement units, their acceptability and adoption by the consumers and traders along with the relationship of prices to different grades of grains was critically assessed.

The study revealed that there is no uniformity in any of the units and no rigid basis for sorting products into lots. Fifty-three percent of the respondents complained of frequent changes in the volume of a particular unit of measurement and 83% of the consumer respondents indicated their willingness to pay more if grade of choice are available. It is further revealed that very often, consumers are given less quantity than what they bargained for and this constitutes a major problem for collection of accurate price data.

To standardize grains marketing provision of containers that cannot be easily altered in size or volume is imperative.

KEY WORDS: Standardization and grading, grains marketing, Kwara State, Nigeria

INTRODUCTION

Standardization and grading is a crucial facilitating function in the marketing of agricultural products. This function has been so well accepted in developed countries that it seldom receives any attention. In Nigeria however, the situation is such that well known terms of weight and measures do not always mean the same thing either between states or districts, within towns, cities or villages or even within a particular localized market. Different expressions for the same quality are also found. However, without such standards, modern marketing would be next to impossible in our local markets. There exist situations in which prices paid for various grades of grains bought do not actually reflect preferences, there is little relationship between the qualities of grains bought in the market and price paid by consumers.

Since grade factors and consumer preferences are not easy to determine, a complication is presented in measuring and choosing standard quality for grains. Some quality factors are specific and measurable while

others such as flavour, taste and texture are subjective.

The problem of standardization and grading is further compounded by consumers having to haggle for prices. This often leads to consumers buying the same products for different prices in the market.

Standardization results in meaningful price quotations. By having widely accepted grades, prices quotations for a given grade of commodity in one market can compare to similar price quotations from other markets. If the producer is acquainted with the quality standards, he can know the relative worth of his products. Standardization also makes sales of goods by sample or description possible. However this would be impossible if buyer had no confidence in the grading system.

To achieve the essence of establishing a system of standardization and grading and the associated benefits, there is an urgent need to review the organization and operation of the prevailing system with a view to make suggestion aimed at correcting any anomaly. This is what this study primarily sets out to achieve.

The specific objectives of this study are to:-

- 1) Highlight the importance of standardization and grading as an important tool in marketing of grains;
- 2) determine the extent of use of standard measures and grades in the marketing of grains.
- 3) determine the relationship between the price of the various grades of grains studies; and
- 4) make recommendation based on the findings of the study.

The remaining part of this study consists of four sections. Section II reviews relevant literature, Section III describes the methodology employed while Section IV presents the finding of the study. Section V gives the summary, recommendation and conclusion.

REVIEW OF RELEVANT LITERATURE

Grading is described as sorting of commodity into lots on the basis of predetermined quality criterion or criteria, while standardization is the establishment and maintenance of the uniform measures of quality. Thus grading is an integral part of standardization (Olatunde, 1976).

The principal objective of a grading system is to make the markets work more efficiently. Hays, (1973) recommended that efficiency results can be measured in terms of price, profit, products and service volumes and quantities, product innovation and technical progress.

Ilori (1967) observed that the important features of organisation of traditional markets in Yorubaland are the absence of standardized grades and weights and the great diversity of local measures used. He reported that goods were sold by volumes, units, bundles or heaps rather than by weights. This makes difficult the collection of price statistics, particularly when different weights of a commodity sell for the same price in different market.

Adekanye (1971) observe that there were no standardized measures of quantity and quality in Nigeria foodstuff markets. She identified over ten measures in Egba Division of old Western State and they vary in name, size, and volume from one part of the division to another.

Absence of uniform grades in local markets are not peculiar to Nigeria. Agillon *et al* (1979) made the same observation in Philipines. Based

on their findings, they recommended the use of standard specifications for different fresh fruits and vegetables which are to be traded, each specification covering the grading of a particular crop.

The grading of any agricultural commodity offered for sale assumes that buyers recognize difference in quality. According to Whetham (1972), the basis of any official grading is that grade should be accepted by majority of buyers as corresponding to their preferences. Whether for immediate consumption or for further processing. The requirement of large processors in industrialized countries are precise and in order to meet such requirements there is the need to establish traditional markets.

According to William *et al* (1970), the price of all grades of commodity tend to move up and down together, although price premium and discounts between grades often change from season to season and may exhibit trend over time. The authors further observed that there is usually great substitutability among grades of the same commodity even though each has some unique characteristics. Thus, the main demand shifter for a particular grade is the change in price of its closest substitutes, and these are typically other grades of the same products. Nymberg (1970) used price relationship among vegetable oil to illustrate that the greater the substitutability among products, the more closely prices of the products are likely to be related.

The grading and sorting of commodities cannot be said to be costless. Thus Dalrymple (1968) brought out the question as to whether or not the gains from grading in terms of improved economic efficiency justify the added costs. These studies have helped the tone for ours.

METHODOLOGY

The study covered the defunct Ilorin Local Government Area of Kwara State. Respondents were selected from the grain sellers and consumers in Ilorin township and surrounding towns and villages. The LGA had an estimated population of 474,385 as at the time of study in 1988. The major occupations of the populace are farming, petty trading weaving, pottery, dyeing, leather works, embroidery and mat-

making. However, trading in agricultural products is becoming prominent.

Local markets within Ilorin are daily filled with traders and purchasers. The markets surveyed are Ipata, Oja Oba, Ojo Ago, Baboko - daily markets and Otte, Alapa, Oke-Oyi, Ganmo and Shao - 5 day interval markets. Ganmo and Otte markets although outside Ilorin LGA, were surveyed because of their proximity to Ilorin and their importance in grain marketing.

Two sets of questionnaires were administered. A set was administered to the grain-traders and another set administered to the grain buyers. A total of one hundred and forty questionnaires were administered to the traders both at wholesale, retail levels as well as the farmers that occasionally brought their surplus to the market. Sixty-eight questionnaires were administered to buyers. Questionnaires were administered relative to the size of markets.

The grains of interest in this study owing to their available and varieties are rice, cowpea and maize. Additional information was collected by direct interviews and observational techniques. Correlation analysis was used to determine the relationship between the prices of various grades of grain.

RESULTS AND DISCUSSION

The wholesaler who performed collection and distribution as well as storage functions constituted an essential link in marketing channel of grains and were involved in carrying out the essential function of standardization and grading. The other set of people involved were farmers and departmental stores that also trade in grains, they constituted only about 6% of traders in the market. Most wholesalers were men who travel to various places outside the state to buy grains in 50kg or 100kg bags for resale to the other classes of middlemen, who in turn sell to the consumers.

In all the markets, retailers were mostly women who bought grains in bags and resold to the final consumers or processors and caterers in smaller quantities.

Retailers constituted the largest number of traders of grains. This could be as a result of the marketing functions they perform in order to increase the marketing system efficiency. These

include spatial, time and distributive functions. They also perform facilitating function.

The study revealed that 72% of the grain traders had been in the business for more than five years. The remaining 27 per cent had less than five years experience in the business.

The educational background of the respondent traders and consumers are presented in Table 1. While only 23 per cent of the traders had at least secondary education, over 72 per cent of the consumer respondents had achieved this educational status (Table 1). It is further revealed that about 41 per cent of the traders are illiterate while only 15 per cent of the consumers fall within this category.

All the traders sell their products mainly in the market, none of them undertake any further processing of the grains into other forms. Although traders were noted to have displayed various grades separately, they could hardly realise the need for using standard and uniform measures as they consider ability to outwit customers as part of expertise in marketing.

Buyers favour certain sources of their grains than the others for various reasons. While 15 per cent favoured the farm gate source, 57 per cent favoured the retailers, 27 per cent favoured wholesaler while just 3 per cent favoured the supermarkets.

Certain characteristics of grains were noted to be determinants of quality by purchasers. These characteristics were also the bases on which traders displayed their commodities in the market.

In grading of rice, intrinsic, external and acquired characteristics were observed. The observed local rice varieties include "Ofada" and "Tapa" types. The paddy forms of which were also available. Identification by variety was however not easy for other processed forms in the markets. The external characteristics include size and length of grain. Rice is sorted into long, medium and very short grains. It was noted that the imported rice are long grained, improved local varieties mainly medium while local varieties are short grained.

Acquired characteristics are those acquired during processing. These include the percentages of broken grains, presence of foreign matters, cleanliness of products, characteristic odour or swelling ability when

cooked. For instance it was easy to identify the local "tapa" variety due to its roughness and presence of large quantity of foreign matters.

The major observable criteria for cowpea grading in the market are variety, source, colour, old or new product as well as the use for which it is to be put. Classification by variety is however restricted to whether it is an improved or local variety since varieties are not usually known to traders.

Characteristics based on size and colour peculiar to certain sources are used to identify cowpea from a particular source. The Sokoto cowpea for example are small or medium in size and white. While improved varieties like Ife-brown are brown in colour and bigger in size.

Maize grading is basically on the colour and use for which is to be put. Only two types of maize are available - white and yellow.

Table 2 presents a summary of the characteristics the buyers and sellers use in sorting their grains. Such criteria used include size, taste, colour, cleanliness, use and other characteristics such as last seasons harvest, colour, swelling ability and the products nutrition effect. There is very little emphasis placed on each of the criterion by buyers and sellers. A combination of these characteristics are usually considered in sorting into lot and for the consumers' choice. These qualities or characteristics should form the basis of standardization.

The study revealed that there are various unit of measurements of grains available in the markets investigated. The bags used for the grains included manufactured sack designed to contain an average of 50kg weight of grains with the inscription of National Directorate of Employment Programme on them. Used fertilized bags and juste bags are other types of sacks used to bag grains. This usually weight between 105 - 120kg. It should be noted however that neither cowpea nor maize were weighed to ascertain the weight of the content after bagging.

Another popular unit of measure is the 4 - gallon kerosene tin. This unit is also very much varied like others not only from market to market but from trader to trader.

Another important unit of measurement with great variability and in common use is the 'mudu'

or 'peregi'. A standard 'mudu' is a metal container designed to contain about 1kg of any type of grain. However, there are as much variation in the 'mudu' as there are traders in the market. Various weight range of this and 'mudu' as there are traders in the market. Various weight range of tins and 'mudu' observed in the market are summarised in Table 3.

It was observed that sellers usually use smaller measures to sell to unsuspecting consumers after bargains have been struck. In order to avoid this trap, well informed buyers request for the use of more standardized measures like milk tins for the purchase of their grains.

The 'mudu' being the most commonly used unit of measurement is the most abused. Traders have at least 2 types of mudu.

The result of the correlation analysis between the prices of various grades of grain are presented in Table 4 through 6. Given that different grades of each type of grain are supposed to be substitutes, theoretically, one would expect their price to be very highly correlated. However, the weak correlations between the prices of different grades of grains observes in Table 4 through 6 may be due to difference in actual measurements, prices and even adulteration of the grades operating in the market. These results give an empirical backing to the need for standardization and grading in Agricultural marketing.

SUMMARY, RECOMMENDATIONS AND CONCLUSION

The benefits derivable from establishment of standardization and grading of grains include simplification of bargaining process, enabling price quotations, payment for agricultural products can be made in advance, keeping off low quality produce from the market, maintenance of effective marketing competition, production of better quality products and improvement in the farmers' income.

Trading in grains like other agricultural commodities exhibits a lack of uniform grades and standardization. Constant grades and measures are not often available. Measures of quality and quantity are established but are allowed to vary over space and even among

individual sellers. For simplification of bargaining process, there is the need for an effective connection between the system of standardization and grading. Grade needs to be standardized, precise specification of units of measurement be formulated, be agreed upon by those in trade and made known to all concerned for adoption.

There is the need to sort produce into homogeneous lots not only because buyers can obtain the exact quality they want but also fraudulent practices may be prevented.

This study revealed that different prices exist for the same unit of product in the same or at different markets in the same locality. This makes price quotations and analysis of agricultural researches intended for improving marketing situation a difficult task.

The lack of standardization in the market has resulted in consumers not recognizing the quality of a particular commodity and therefore giving it appropriate premium to encourage its production.

In view of the significance and contribution of standardization and grading to the improvement of grain marketing efficiency, the following recommendations are made to enhance the adoption of the system.

1. The provision of special containers with inscription of the unit it represents inside and of various other sub-divisions will solve the fraudulent practices of the sellers. Such containers could be made of plastics which can be produced in large number with government supervision and enforcement of its use by the traders. This method is already in practice in Oyo, Osun, Ondo State. This could be a better alternative to the use of scale as this is impeded by portability and low level of education of market women.
2. Although the discussion here centres on grain marketing in Ilorin and its environs, it is relevant to other foodstuff and the rest of Nigeria. A grading scheme should therefore not be undertaken in isolation for single commodity or for a specific part of the country. It should be done nationally. While these quality specifications should be mandatory prices could be determined directed by

market force so that at the beginning of every season, minimum prices could be announced after a review of market situation.

3. It is suggested that the standard organisation of Nigeria comes up with a grading and standardization policy for agricultural products taking into consideration the following: size, colour, moisture content and pest infestation depending on the nature of the commodity. Some measures rely heavily on the grader's sense of taste, smell, touch which varies between people. The question of grade limits is very important as they determine total returns.

In practice, this may be very difficult as demand and production techniques change over time and taste and preference may be a function of new grades.

For effective grading scheme, grades should

- i) be consumer oriented;
 - ii) be based on measurable, easily interpreted and understood criteria;
 - iii) take into account the condition of production and qualities produced;
 - iv) be as comprehensive as possible so as to take into account all income groups;
 - v) relate costs of grading to returns so as to maximise returns.
- 4) Finally, regular checks by an inspectorate body which could be incorporated into the marketing section of each local government could be established in conjunction with media stations which could conduct occasional surveys to inspect and report the adoption of the established standards by traders and appropriate punitive measures against the defaulters be taken.

The relevance of standardization and grading in the marketing of grains in Nigeria has been clearly established. It is then imperative that adoption of simple but functional system of standardization and grading be adopted as this will go a long way in improving efficiency in marketing Agricultural products.

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TABLE 1: Educational status of Trader and Consumer Respondents

EDUCATIONAL LEVEL	TRADER %	CONSUMER%
Illiterate	40.50	14.50
Primary	36.50	12.90
Secondary	15.50	29.10
Post Secondary	<u>7.50</u>	<u>43.50</u>
	<u>100.00</u>	<u>100.00</u>

Source: Market Survey.

TABLE 2: Grain Quality criteria used by Buyers and Sellers

Criteria	RICE		COWPEA		MAIZE	
	%Buyer	%Seller	%Buyer	%Seller	%Buyer%	Sr
Size	34.8	33.7	27.0	46.6	-	-
Taste	60.6	40.9	87.0	63.3	-	-
Cleanliness	22.7	50.6	-	-	-	-
Pest Infection	-	-	19.1	21.7	-	-
Colour	-	-	-	-	71.4	67
Use	-	-	-	-	62.4	38
Others	31.8	28.9	17.0	6.5	11.9	5.6

Source: Market Survey.

TABLE 3: Weight Range of Measures as Observed in the Markets (in Kg)

UNITS	RICE	COWPEA	MAIZE
Sack	45 - 50	105 - 120	90 - 100
Kerosene tin	15 - 16.7	17.5 - 20	15 - 18
Kobiowu	2.5 - 3.0	2.8 - 3.2	2.8 - 3.0
"Mudu"(Peregi)	0.8 - 1.0	0.75 - 1.0	0.75 - 1.0
Milk Tin	0.2	0.2	0.2

Source: Market Survey.

TABLE 4: Correlation Matrix of Prices of Three Grades of Rice

	Px ₁	Px ₂	Px ₃
Px ₁	1.00		
Px ₂	0.13	1.00	
Px ₃	0.16	0.05	1.00

Where Px₁ = Price of Local Variety of Rice of Grade A₃
 Px₂ = Price of Improved Local Variety of Rice of Grade A₂
 Px₃ = Price of Imported Rice of Grade A₁

TABLE 5: Correlation Matrix of Prices of Three Grades of Cowpea

	Y ₁	Y ₂	Y ₃
Y ₁	1.00		
Y ₂	0.60	1.00	
Y ₃	0.20	0.15	1.00

Where Y₁ = Price of brown cowpea of Grade A₁
 Y₂ = Price of white cowpea of Grade A₂
 Y₃ = Price of mixture of brown and white beans of Grade A₃

TABLE 6: Correlation Matrix of Prices of Two Grades of Maize.

	Z ₁	Z ₂
Z ₁	1.00	
Z ₂	0.158	1.00

Where Z₁ = Price of yellow maize of Grade A₁
 Z₂ = Price of white maize of Grade A₂

The grade A₁, A₂, A₃ are used arbitrarily to specify the three grades of the grains observed in the market.

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