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## ANALYSIS OF GROUNDNUT HAULM MARKETING IN SELECTED MARKETS OF KANO STATE, NIGERIA

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### ABSTRACT

The study analysed the marketing of groundnut haulm in Badume and Rimin Gado markets in Kano State. Multi-stage sampling technique was used to select 97 respondents for the study. Data were sourced primarily by using questionnaire and were analysed using descriptive statistics, marketing margin, marketing efficiency and return on investment. Findings revealed that 100% of the marketers were males with mean age of 54.9 years, signifying they are in their energetic and active ages. They also had a mean household size of 18 persons, average groundnut haulm marketing experience of 26.2 years and one form of education or the other. The profitability analysis showed that groundnut haulm marketing was generally profitable and efficient in the study area. However, comparatively, marketing of the haulms was more profitable and efficient during the peak season (March to June) with a gross margin of ₦2,600 and efficiency of 156.52% per 120kg of groundnut haulm than during the off-season (July to October) with a gross margin of ₦1,950 and efficiency of 154.93%. The return on investment also showed a similar trend of ₦56.5 and ₦54.9 per naira invested for both the peak season and off-season, respectively. Marketers had problems of inadequate storage facilities, high transportation cost and lack of standardized measures in the market. It is therefore recommended that for more efficient deployment and utilization of market resources, government should provide basic market infrastructure such as adequate storage facilities, standardized measures and cheap and efficient means of transportation that can enhance more efficient and profitable marketing of the commodity in the study area.

**Key Words:** Groundnut haulm, Marketing Margin, Marketing Efficiency, Return on Investment, Marketing channel.

### INTRODUCTION

Livestock production is one of the major occupations in Northern Nigeria and constitutes a major segment of the income of rural households in the region. Most rural households in the region raise a combination of poultry and ruminants (cattle, sheep and goats) for both subsistence as well as raising household income after selling them (Thorpe & Duncan, 2012; Ahmed et al., 2021). A major and critical component of livestock production is the feedstock. Livestock feeds are principally of two types: those of cereal and of legumes (cowpea, groundnut and soya bean) origin which are fed either in compounded form or as pasture or fodder. This accounts for the preponderance of different crop-livestock production systems in Northern Nigeria. However, a major obstacle to increasing livestock productivity in this region is the scarcity of feeds during the dry season. This scarcity is normally exacerbated by severe droughts, desert encroachment, population pressure, insecurity and violent conflicts over scarce pasture and water resources (Pachauri et al., 2014). This situation has led to increasing emphasis on dry fodder production which is seen as an alternative means of addressing feed scarcity for ruminants during the dry season.

In Northern Nigeria, groundnut haulm normally referred to as *harawar gyada* in Hausa is one of the preferred fodder fed to ruminants during the dry season when green pastures are scarce (Bdliya, 2007). Several studies have shown that groundnut haulm is superior to cowpea haulm (*harawar wake*) in terms of feed conversion efficiency, improved weight gain and crude

protein (Ribadiya et al., 2015; Tekle & Gebru, 2018). Because of this, they are priced higher than cowpea haulm (Samireddypalle et al., 2017). Therefore, groundnut haulm is regarded and widely utilized as a major source of protein for fattening ruminants for higher incomes before major religious festivals when these animals are usually in very high demand across the country (Ahmed et al., 2021).

Many studies have been done on livestock fodder production and use in Nigeria (Garba et al., 2014; Nuwam, 2015, among others), but majority of them focussed on the cultivation and nutritional analysis of fodder at the exclusion of its marketing. To the knowledge of the authors, apart from Ahmed et al. (2021) that carried out a study on groundnut haulm marketing in selected states of Northern Nigeria, much has not been done in this area, particularly in Kano State which is a major livestock rearing and trading centre in northern Nigeria. Therefore, this study among other things, identified and described the socio-economic characteristics of groundnut haulm marketers, assessed their profitability and marketing efficiency, traced the marketing channel of groundnut haulms and identified the constraints against groundnut haulms marketing in selected markets of Kano State, Nigeria.

### METHODOLOGY

The study was conducted in Rimin Gado and Badume markets in Rimin Gado and Bichi Local Government Areas (LGAs) of Kano State, respectively because of the high intensity of groundnut cultivation and groundnut haulm marketing in these Local Government Areas.

Rimin Gado LGA which is 20 km west of Kano State capital is located between latitude 11.965°N and longitude 8.25°E while Badume in Bichi LGA is located between latitude 12°11'24"N and longitude 8°19'0"E. Both LGAs are known for their extensive cultivation of sorghum, millet, cowpea, groundnut and marketing of the same crops together with livestock rearing (Wikipedia, 2023). These two LGAs and markets were purposively selected for the study because they are known for groundnut production and marketing especially the haulm. The two markets hold periodically. While Rimin Gado market holds every Sunday, Badume market holds on Wednesdays. Badume market is one of the oldest markets in Bichi LGA and is said to have been in existence for more than 60 years.

### Sampling Procedure

Retail marketers of groundnut haulm were sampled for the study. A pilot survey revealed a sampling frame of 71 groundnut haulm retail marketers for Rimin Gado market while that of Badume market was 130, making a total of 201 groundnut haulm retailers. Using a Raosoft calculator at confidence level of 95% and margin error of 10, 97 respondents were obtained as the sample size for study: 41 for Rimin Gado market and 56 for Badume market. A structured questionnaire capturing the relevant information was used to collect the data. Interview was done in Hausa language while the responses were recorded in English.

**Table 1: Sampling Frame and Sampling Size for Groundnut Haulm Marketers in the Selected Markets**

Market	Sampling Frame	Sampling Size at 95% Confidence Interval
Rimin Gado	71	41
Badume	130	56
<b>Total</b>	<b>201</b>	<b>97</b>

### Methods of Data Analysis

The data collected were analysed using descriptive statistics, marketing margin, marketing efficiency and return on investment.

#### Marketing Margin

Following Ahmed et al. (2021), Marketing Margin which is the difference between revenue and total marketing cost is specified as:

$$MM = \text{Revenue from sales (R)} - \text{Total Marketing Cost (TMC)} \dots\dots\dots (1)$$

Where:

MM = Marketing Margin (₦) of 120 kg bag of groundnut haulm

R = Revenue (₦) from the sale of 120 kg bag of groundnut haulm

TMC = Total Cost of Marketing (₦) 120 kg bag of groundnut haulm

Where TMC is specified as:

$$TMC = C_1 + C_2 + C_3 + C_4 + C_5 + C_6 \dots\dots\dots (2)$$

Where:

C<sub>1</sub> = Purchase price (₦) of 120 kg bag of groundnut haulm

C<sub>2</sub> = Cost (₦) of transportation of 120kg bag of groundnut haulm

C<sub>3</sub> = Cost (₦) of loading and off-loading 120kg bag of groundnut haulm

C<sub>4</sub> = Cost (₦) of storing 120kg bag of groundnut haulm

C<sub>5</sub> = Tax (₦) paid for selling 120kg bag of groundnut haulm

C<sub>6</sub> = Cost (₦) of bagging 120kg bag of groundnut haulm

### Marketing Efficiency

Marketing efficiency is the maximization of out-input ratio of the resources used in marketing (Olukosi & Erhabor, 2020). The marketing efficiency of groundnut haulm marketing is specified as:

$$ME = \frac{\text{Value added by marketing 120kg bag of groundnut haulm}}{\text{Total cost (₦) of marketing 120kg bag of groundnut haulm}} \times 100 \dots\dots\dots (3)$$

Where:

ME = Marketing Efficiency of marketing 120kg bag of groundnut haulm

Value added by marketing = Selling Price – Purchase Price

Decision Rule: The decision rule is that when ME>100, it implies positive returns to business while when ME<100, it implies negative returns to business.

### Return on Investment (ROI)

Return on investment (ROI) is a profitability metric used to evaluate how well an investment has performed. ROI which measures the gain/loss from an investment in relation to the initial investment could be specified as:

$$ROI = \frac{R - TMC}{TMC} \times 100 \dots\dots\dots (4)$$

Where:

ROI = Return on investment (₦) in marketing 120kg bag of groundnut haulm

R = Revenue (₦) from marketing 120kg bag of groundnut haulm

TMC = Total marketing cost (₦) of 120kg bag of groundnut haulm

## RESULTS AND DISCUSSION OF FINDINGS

### Socio-economic Characteristics of Groundnut Haulm Marketers in the Study Area

It is important to identify and describe the socio-economic characteristics of marketers as they assist in getting a clearer understanding of their behaviour as well provide a hint of what could influence their marketing decisions. Set in Table 2 are the socio-economic characteristics of the groundnut marketers in the study area.

The results in Table 2 show that 100% of the marketers are males meaning that groundnut haulm marketing in the study area is male dominated. This is expected because most marketing activities in the study area are male dominated because of the culture and perception of the people that regard marketing activities as being too strenuous for women who are expected to stay at home and take care of the family (Ahmed et al, 2021). The results also revealed that the marketers had a mean age of 54.9 years, meaning that they are relatively in their active years and are capable of taking marketing risks than much older marketers. The marital status of the marketers shows that while 88.7% of them were married, only 11.3% were single. Similarly, the marketers had an average household size of 18, indicating a relatively large household.

Table 2: Socio-economic Characteristics of Groundnut Haulm Marketers in the Study Area

Variable	Frequency	Percentage (%)	Mean
<b>Gender</b>			
Male	97	100	
Female	-----	00	
<b>Total</b>	<b>97</b>	<b>100</b>	
<b>Age Interval</b>			
20-29	12	12.4	
30-39	14	14.4	
40-49	25	25.8	
50-59	20	20.6	<b>54.9</b>
60-69	16	16.5	
70-79	10	10.3	
<b>Total</b>	<b>97</b>	<b>100</b>	
<b>Marital Status</b>			
Single	11	11.3	
Married	86	88.7	
<b>Total</b>	<b>97</b>	<b>100</b>	
<b>Household Size</b>			
1-10	28	28.9	
11-20	42	43.3	
21-30	14	14.4	<b>18</b>
31 & above	13	13.4	
<b>Total</b>	<b>97</b>	<b>100</b>	
<b>Educational Level</b>			
Qur'anic	60	61.9	
Primary	20	20.6	
Secondary	17	17.5	
Tertiary	---	-----	
<b>Total</b>	<b>97</b>	<b>100</b>	
<b>Marketing Experience</b>			
1-10	24	24.7	
11-20	44	45.4	
21-30	14	14.4	<b>26.2</b>
31 & above	15	15.5	
<b>Total</b>	<b>97</b>	<b>100</b>	
<b>Membership of Cooperative</b>			
Yes	58	59.8	
No	39	40.2	
<b>Total</b>	<b>97</b>	<b>100</b>	

Source: Field Survey, 2023

This is because many of them are polygamous. Being married and with large family size are indications of maturity and great responsibility which can influence the marketing decisions of the marketers. These findings are similar to those of Bello et al. (2019), who reported that groundnut marketers in Katagum Local Government of Bauchi State, Nigeria were in their active years and majority of them (71.7%) were married with relatively large family size.

The educational level of the marketers revealed that 60% of them had Qu'ranic education, 20% had primary education while only 17% had secondary

education. This implies that they have one form of education or the other which can assist them in their managerial capabilities and adoption of marketing innovations (Nwanosike, 2012; Heiman et al., 2020). Similarly, the results indicate that the marketers had an average marketing experience of 26.2 years while 59.8% of them belonged to one form of cooperative society or the other. This means they have the needed experience and membership of association that can greatly assist them in their marketing decisions and access to credit that can boost their marketing activities.

### Profitability Analysis of Groundnut Haulm Marketing in the Study Area

Table 3: Profitability Analysis of Marketing 120kg Bag of Groundnut Haulm in the Study Area

Variable	Naira (₦)	% TMC	Naira (₦)	% TMC
	Peak Period (Dry Season)(March – June)		Off-peak Period (Rainy Season)(July-October)	
<b>Marketing Cost</b>				
Purchase Price	3,500	76.09	2,600	73.24
Transportation	500	10.87	400	11.27
Loading	50	1.09	50	1.41
Off-loading	50	1.09	50	1.41
Storage	200	4.35	200	5.63
Bagging	200	4.35	200	5.63
Tax	100	2.16	50	1.41
<b>Total Marketing Cost (TMC)</b>	<b>4,600</b>	<b>100</b>	<b>3,550</b>	<b>100</b>
Total Revenue (TR)	7,200		5,500	
<b>Gross Margin</b>	<b>2,600</b>		<b>1,950</b>	
Marketing	156.52%		154.93%	
Efficiency (ME)				
Return on Investment (ROI)	56.5		54.9	

Table 3 shows the profitability analysis of marketing 120kg bag of groundnut haulms in the study area both during the peak season (March to June) and off-peak season (July to October). The result revealed that during the peak season, the average purchase price of 120kg bag of groundnut haulm was ₦3,500 while the other marketing costs incurred amounted to ₦1,100 thereby giving a total marketing cost (TMC) of ₦4,600. When this is subtracted from the average total revenue (TR) of ₦7,200 it gives a profitable gross marketing margin of ₦2,600 per 120kg bag of groundnut haulm. Similarly, the marketing efficiency (ME) during the peak season was 156.52% while the return on investment (ROI) was 56.5, meaning that groundnut haulm marketing is efficient in this season, and every naira invested gives a return of ₦56.5.

The results during the off-peak season show that the average purchase price of 120kg bag of groundnut haulm was ₦2,600, while the other marketing costs incurred amounted to ₦950, giving a total marketing cost (TMC) of ₦3,550. When this is subtracted from the total revenue of ₦5,500, it gives a profitable gross

marketing margin of ₦1,950 per 120kg bag of groundnut haulm. Also, the marketing efficiency during this season was 154.93% while the ROI was 54.9, implying that every naira invested in groundnut haulm marketing during this season in the study area gives a return of ₦54.9.

The results generally revealed that groundnut haulm marketing is profitable and very efficient in the study area. However, comparatively, the results indicate that groundnut haulm marketing is more profitable and efficient during the peak season than during the off-season. This is because during the peak season which falls within the dry season, fresh pastures are scarce which compels farmers to rely more on supplementary feeding, depending mostly on dry groundnut haulm for feeding their animals. The situation increases demand for groundnut haulm during this season which pushes up prices and thus enhancing greater profitability of the commodity during this period. The marketing efficiency of 156.52% during the peak season and 154.93% during the off-peak season indicate high efficiency, meaning that marketing resources are well

deployed and utilized in the marketing of groundnut haulm both during the peak season and off-peak season in the study area (Shu'aib, 2014). These findings are consistent with those of Ahmed et al. (2021) who studied groundnut haulm marketing in selected states of Northern Nigeria and reported that marketing the product was profitable across the states they studied. According to them, during the peak season, the average market price per kg of groundnut haulm ranged between ₦40 and ₦59 across the states while it was between ₦30 and ₦40 during the off-peak season.

### Marketing Channel of Groundnut Haulm

Marketing channel is simply the path of commodity from its raw form to the finished product as it moves from the producer to the final consumer (Olukosi et.al.,2022). In other words, it is the sequence of intermediaries or middlemen and the marketers through which a good passes from the producer to consumers. The marketing channel of groundnut haulm in the study area is shown in Figure 1.

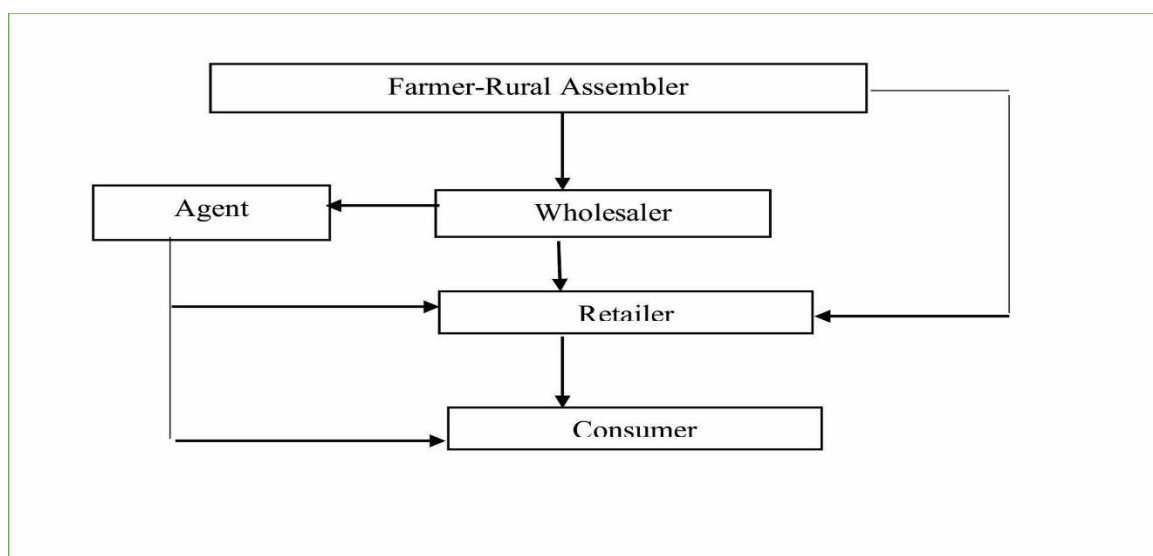


Fig. 1: Marketing Channel for Groundnut Haulm in Selected Markets, Kano State ,Nigeria

The marketing channel of groundnut haulms starts with the groundnut farmer who can also act as a rural assembler assembling haulms from other farmers. He sells directly to the wholesalers or even to the retailers in villages or village markets. There is also, the agent who can act on commission or as a broker between the farmer and the wholesaler. He can equally sell directly to the retailer and the consumer. Then, there is the retailer who buys from the wholesaler and agent and sells directly to the consumer. Therefore, the marketing channel of groundnut haulm in the study area is decentralized since wholesalers and retailers can purchase directly from the farmer. Also, since the marketing channel is not complicated, it means the transaction costs involved in the marketing of groundnut haulm in the study area will be limited as shown in the profitability analysis (Olukosi et.al, 2022).

### Constraints Associated with Groundnut Haulms Marketing in the Study Area

Table 4: Constraints Faced by Groundnut Haulm Marketers in the Study Area

Constraint	Frequency	Percentage	Ranking
Inadequate Storage Facilities	61	62.9	1 <sup>st</sup>
High Cost of Transportation	56	57.7	2 <sup>nd</sup>
Price Instability Due to Seasonality	51	52.6	3 <sup>rd</sup>
Lack of Standardized Measures	45	46.4	4 <sup>th</sup>

NB: Multiple responses were taken

Source: Field Survey, 2023

Table 4 presents the constraints associated with groundnut haulm marketing in the study area. The constraints identified by the marketers were inadequate storage facilities, high cost of transportation, price instability due to seasonality and lack of standardized measures for selling groundnut haulm. Inadequate storage facilities accounted for 62.9% of the constraints, high cost of transportation 57.7%, price instability 52.6% while lack of standardized measures accounted for 46.4% of the constraints. One of the authors had to weigh several bundles of the haulm in the markets in order to get the average weight of 120kg used in the study. These findings are consistent with those of Ahmed et al. (2021) who reported that inadequate storage facilities, seasonality and high transport cost were major problems encountered by marketers of groundnut haulm in selected states of Northern Nigeria. Similarly, Nwanosike (2012), reported high cost of transportation as a major problem associated with groundnut trade in Rafi Local Government Area of Niger State, Nigeria.

## CONCLUSION AND RECOMMENDATIONS

The study revealed that groundnut haulm marketing in the study area is male dominated due to cultural factors while the marketers had a mean age of 54.9 years, implying that they are in their energetic and active years to fully engage in groundnut haulm marketing. They also had an average household size of 18 which is large, average marketing experience of 26.2 years and one form of education or the other. These are veritable characteristics which can assist the marketers in the adoption of innovations that could facilitate their efficient marketing of groundnut haulm.

The profitability analysis showed that groundnut haulm marketing is generally profitable and efficient in the study area. However, comparatively, marketing of the haulms is more profitable and efficient during the peak season (March to June) with a gross margin of ₦2,600 and efficiency of 156.52% per 120kg bag of groundnut haulm than during the off-season (July to October) with a gross margin of ₦1,950 and efficiency of 154.93% per 120kg bag of groundnut haulm. The return on investment also showed a similar trend of ₦56.5 and ₦54.9 for both the peak season and off-season, respectively. Based on all these findings, it could be concluded that groundnut haulm marketing in the study area is profitable and efficient and can therefore, be a veritable tool for poverty alleviation. The marketing channel of the commodity is decentralized since wholesalers and retailers can purchase directly from the farmer, showing limited transaction costs. The major constraints to groundnut marketing in the study area include inadequate storage facilities, high cost of transportation, seasonality of the commodity and lack of standardized measures.

Based on the above conclusions, it is recommended that groundnut haulm marketing should be encouraged in the study area since it is profitable and efficient. However, it is recommended that the government should provide better basic market infrastructure such as adequate storage facilities, standardized measures and cheap and efficient means of transportation that can enhance the efficient and more profitable marketing of groundnut haulms and other commodities in the study area. Also, about 40.2% of the marketers who do not belong to co-operative societies should be encouraged to do so as to enable them have access to credit facilities to expand their business.

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