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ANALYSIS OF COSTS AND RETURN OF DATE PALM FRUITS (*Phoenix Dactylifera* Linn) MARKETING AMONG RETAILER TRADERS IN KADUNA METROPOLIS, KADUNA STATE, NIGERIA

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Abstract: Date palm trees (*Phoenix Dactylifera* Linn) are an economic crop which fruits are used for food, medicine and income in the arid and semi arid zone of Nigeria. The study was undertaken to analyse the costs and return of date palm fruits marketing among retailer traders in Kaduna metropolis, Kaduna. Two-stage sampling technique was employed which led to random selection of 80 respondents. Structure questionnaires were administered to the respondents and data collected were analysed with descriptive statistics, cost and return, and regression analysis. The results showed that all the respondents are male, 21-30 years of age, married with household size of 6-10 family members and had Qur'anic education. The result further showed that marketing of date fruits was profitable with net marketing income of ₦ 8,400 per respondent per month and return on investment of ₦ 0.11. Variables such as years of marketing experience, quantity of date palm purchased and revenue were significant at ($P < 0.01$) percent probability level. Also purchase cost and quantity of date palm sold were significant at ($P < 0.05$) percent while transportation cost and household size were significant at ($P < 0.10$) percent. The major constraints of date fruits marketing are inadequate capital, pest infestation, inadequate storage facilities and insecurity.

The study recommends that unemployed teeming population especially youths should be encouraged to go into the business of date palm fruits marketing to earn a living.

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Key words: Date fruits, retailer, marketing, net marketing income, youth

INTRODUCTION

Date palm (*Phoenix Dactylifera* Linn) is one of the oldest cultivated crop in the desert and semi-desert areas of the world. It is grown principally within longitude 15°N and 30°N which extends from North-West Africa and Asia. In many countries, its growth is highly valued and regarded as a national heritage and a multi-purpose tree crop. It is a crop that is tolerant to harsh environmental desert conditions and poor soil and is seen as an important subsistence crop in many of the desert areas of the world. The Arabia Gulf and North Africa are the main producers of dates in the world. In 2006, the total date palm production in the world was about 7 million tons and was produced by top 10 countries such as Egypt, Saudi Arabia, Iran, United Arab Emirates, Pakistan, Algeria, Sudan, Oman, Libya, and Tunisia [1].

Nigeria is not listed among the date producers at the global scene which may be due to lack of facts and figures on the Nigeria date palm production sector. However, date palm production can be included in the Agricultural Transformation Agenda (ATA) programme of the Federal Government of Nigeria to ensure food availability, food security and to combat desertification [2]. In Nigeria, dates are largely cultivated in the northern regions of the country specifically over latitude 10°N of the equator [3]. This part includes Jigawa, Kano, and Katsina states. According to [4], dates can also be grown in Nasarawa, Niger, Plateau and Benue states which forms the lesser parts of derived savannah areas. [5] opined that in the early 17th century, date palm was introduced into Nigeria by Arab traders from North Africa through trans- Sahara trade. He further stated that its (date palm) cultivation and marketing is still at subsistence level. There are thousands of different types of date palm cultivars that are grown, depending on their water and sugar contents at full maturity, these includes those with soft, semi-dry, and dry fruits [1].

The choice of cultivating Date palm by the farmers could be due to its high profit, nutritional composition, environmental advantages and its tolerance to poor soil conditions [6]. Its cultivation improves the economic status of the famers and a good alternative to improve the food security and nutrition of the people [7]. Also, it was reported by [8] that the tree of Date palm has several uses and economic benefits in improving the ecology of the deserts. The tree is highly valued and has significance in the traditional of the Islamic world. The consumption of date palm is more in the northern part of Nigeria and with increase in population of this area, the demand for it is expected to rise in the nearest future. The tree apart from provision of date fruits for food also supply other products which have been used extensively by the inhabitants of the rural and urban areas

The Date palm tree is usually tall at maturity and produces a sweet fruit called dates. The fruits are small in size, around 1½ inches (3.87 cm) in length and normally oval in shaped. The colour of the fruit may be medium to dark brown and possibly with reddish hue. The skin has a bright appearance and is very thick and wrinkled. Date palm tree is multipurpose in nature; it gives nutrients for energy, protection and refuge by providing construction materials such as leaves and timber products for shelter.

According to [9], the fruits serve as prominent staple, nutritious food and source of energy and economic value for many years.

The fruit contains 77% carbohydrate (mostly invert sugar e.g. glucose and fructose) that can readily be absorbed into the body without passing through digestion which the ordinary sugar undergoes. Date fruits contain fat (0.4%), protein (4%), pectin (2%), and fibre (9%). According to [10], date fruits are rich in vitamin A, B1 (thiamine), B2 (riboflavin) and B7 (niacin). It also contains aluminium, cadmium, chloride, sulphur and oleic acid in different amount [11]. Date may be thought to be an ideal food that provides required nutrient for the body and has a lot of potential health benefits. [6] reported that date fruits can be eaten as food and as well as delicacy. The diets of many people may be improved where dates are eaten as food rather than when eaten as delicacy. Date palm has a lots of nutritional value, highly yielding and longer life span therefore is been called a tree of life [12].

The variation in the number of date palm tree, production and consumption of date palm from one region to another and from nation to nation is due to the existing conditions in the environment of the region and nation. For instance, the Nigerian date palm production is at subsistence level with famers having few trees stands on their farms and two or more stands in their homestead. Date palm production is projected at about 21,700 metric tonnes in Nigeria [5]. The total area put into date palm production in Nigeria is not more than 1,446.8 ha [13]. The estimated consumption of date is put at 89,850 metric tonnes [14], this shows that Nigeria can produce only 24% of its consumed date palm, the remaining 76% of date consumed in Nigeria are imported from the neighbouring countries like Chad and Niger, [15].

Dates is a highly value confectionery which are traditionally marketed all over the world either fresh or dried and as dates products such as date drinks, they remain a subsistence crop that are very important in most of the desert areas [16]. The sales of date fruits is more pronounced in the northern part of Nigeria especially in Kaduna State. It is often seen in the study area being displayed by itinerant and sedentary hawkers who engage in the business and offer all manner of services to attract their customers. Though despite the fact that dates is marketed in the study area many years ago, information on its retail trade for income generation is scanty thus necessitated the need to conduct research on cost and return of date palm fruits marketing among retailer traders in Kaduna metropolis, Kaduna state. The objectives of the study are: (i) describe the socio-economic characteristics of date marketers (ii) evaluate costs, return and profitability of the business (iii) determine factors affecting the net profit of the marketers and (iv) describe constraints faced by the marketers in date palm marketing.

The study hypothesized that there is no significant difference between the net marketing profit of the respondents and factors that are affecting it.

MATERIAL AND METHODS

Study Area

The study was conducted in Kaduna metropolis, in the north central geopolitical zone of Nigeria. Kaduna state lies between latitude $10^{\circ} 37^1$ N and longitude $7^{\circ} 17^{\circ}$ E and its coordinates is $10^{\circ} 20^{\circ}$ N and $70^{\circ} 45^{\circ}$ E (Wikipedia).

According to 2006 census figure, Kaduna state has a population of about 6,066,512 people. After Lagos and Kano, Kaduna state constitutes the third largest in the federation of Nigeria [17].

It has a total land area of about 46,053 square kilometre and the density is about 131.7 square Kilometre (341.2 square metre) (Wikipedia). The metropolis of Kaduna is made up of two Local Government Areas: Kaduna North and Kaduna South, and parts of Chikun and Igabi LGA. It is located about 100km north of the country's Federal Capital, Abuja. The capital of Kaduna State is Kaduna; it is the commercial and industrial centre of Nigeria. Many factories such as textile, beverages, furniture, etc are found within the metropolis. It serves as trade midpoint for cotton, livestock, durra sorghum, corn, shea nuts, ginger and the surrounding agricultural areas because of the rail and road facilities. The climate is characterized with wet and dry seasons and resembles that of Northern Guinea Savanna. The annual rainfall is between 700mm-1000mm and last between April to October while dry season last for 5 to 7 months and it start from October to March. The major ethnic groups and inhabitant of the city are the Hausas, Gwaris, Katafs, Gbagijs, Bajju, Nimzom, Koro and Jaba. Others include the Fulanis, Tiv, Idoma, Yoruba and Ibos.

Data Collection Method

Primary data were collected from the date palm retail traders using structure questionnaire.

Techniques of Sampling

The sampling unit for the inquiry were the date palm retail traders. Two-stage sampling techniques were used in selecting respondents for this research. In stage one (1), four markets in each Local Government that made up of Kaduna Metropolis were purposive selected. The selection was focused on the presence of high concentration of marketers and high volume of date palm fruits traded. The markets are: Kasuwan Barci market Kaduna south LGA, Abubakar Gumi market in Kaduna north LGA, Rigassa market in Igabi LGA and Sabo market in Chikun LGA. Equal number of 20 marketers was selected at random in each market to make sample size of 80 marketers used. Copies of well designed questionnaire were administered to gather data on the objectives of the study.

Data Analysis

The data gathered were analysed using descriptive statistics such as tables, frequency distributions and percentages. Cost and return assessment was used to estimate the cost acquired and revenue generated by the traders. Multiple regression analysis was used to establish the factors affecting the net marketing profit of the marketers and also to postulate the hypothesis. The cost and return model is given below:

$$TMC=AVC+AFC..... (1)$$

Where:

TMC = Total Marketing Cost (₦),

AVC = Average Variable Cost of Marketing (₦),

AFC = Average Fixed Cost of Marketing (₦)

The fixed inputs (assets) of marketing such as tables, mudu (measure), tray and wheelbarrow were depreciated with straight line method.

$$D = \frac{Oc - Sv}{N} \dots\dots\dots (2)$$

Where:

D= Annual depreciation,

Oc= Original cost of fixed assets (₦),

Sv= Salvage or Scrap value (₦)

The annual depreciation of fixed assets was brought down to month for each fixed asset to have the actual cost of the asset per month

The Gross Income (G. I) of marketing was obtained with the below model

$$G. I = \sum_{n=i}^F Q_{DPF} * P_{DPF} \dots\dots\dots (3)$$

Where $\sum$ = Summation sign,

$n=i$ D

Q_{DPF} = Quantity of date palm fruits sold per month in “Mudu”

P_{DPF} = Average price of date palm fruits per “mudu” (₦), F = Fresh date palm fruits,

D = Dried date palm fruits. The total gross income of fresh and dried date palm fruits

$$\text{was obtained with: } TGI = G.I_{FDP} + G.I_{DDP} \dots\dots\dots (4)$$

Where:

$G.I_{FDP}$ = Gross income from fresh date palm fruits sold (₦),

$G.I_{DDP}$ = Gross income from dried date palm fruits sold (₦)

The Net Marketing Income (NMI) was calculated with:

$$TGI - TMC \dots\dots\dots (5)$$

Return per Capital Invested (RPCI)

This is defined as net marketing income (NMI) divided by total marketing cost

$$(TMC). \text{RPCI} = \frac{NMI}{TMC} \dots\dots\dots (6)$$

This reveals the sum of cash returns to the marketer for each naira devoted in the sales of Date palm business.

Regression Analysis

The factors affecting the net profit of the marketers were determined by regression analysis. Three functional forms namely; Linear, Semi log and Double log functions were used.

The functional form better than all others was carefully chosen based on coefficient of multiple determinations R^2 - value, F- statistics, t- values, a-priori expectation and the total number of significant variables.

The general form of the model is presented as follows:

$$Y=f(X_1, X_2, X_3, X_4, X_5, X_6 \dots X_{13} + \mu_i) \dots \dots \dots (7)$$

Explicit functions of the general model are:

$$\text{Linear Function: } Y=\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X_5+\beta_6X_6\dots+\beta_{13}X_{13}+\mu_i\dots\dots (8)$$

Semi-Log Function:

$$Y=\beta_0+\beta_1\log X_1+\beta_2\log X_2+\beta_3\log X_3+\beta_4\log X_4+\beta_5\log X_5+\beta_6\log X_6\dots+\beta_{13}\log X_{13}+\mu_i\dots\dots (9)$$

Double Log Function:

$$\log Y=\beta_0+\beta_1\log X_1+\beta_2\log X_2+\beta_3\log X_3+\beta_4\log X_4+\beta_5\log X_5+\beta_6\log X_6\dots+\beta_{13}\log X_{13}+\mu_i\dots (10)$$

Where,

X_1 = Age (years); X_2 = Marital status; X_3 = Household size (Actual number);

X_4 = Educational level (Actual years); X_5 = Marketing experience (years), (years);

X_6 = Quantity of date palm purchase ("Mudu");

X_7 = Quantity of date palm sold ("Mudu"); X_8 = Revenue (₦); X_9 = Purchase cost (₦);

X_{10} = Storage cost (₦); X_{11} = Transportation cost (₦); X_{12} = Packaging cost (₦) and

X_{13} = Marketing charges (₦), β_0 = Constant term,

β_1 to β_{13} = Regression coefficient or parameters,

X_1 to X_{13} = Independent or explanatory variables,

μ_i = Error term or Random error,

Y = Net marketing profit from the sales of date palm (₦)

RESULTS AND DISCUSSION

Socio- Economic Characteristics of the Marketers

The marketer's socio- economic characteristics on Table 1 revealed that 100% of the marketers of date palm are males. This implies that the business required physical efforts and agility to run. This agreed with the findings of [18] that the marketing of date palm is male dominated.

The age of the respondents varied from 10-40 years, 50% of the marketers are within age range of 21-30 years while 36.25% falls within 31-40 years.

Only 13.75% are within 10-20 years. This means that the larger percentages (86.25%) of the marketers are between the active age range of 21-40 years. This showed that most of the respondents are within the active and economically productive age range (15-64) stipulated by [19].

The marital status of the marketers showed that 81.25% are married and 18.75% single. This corroborates the findings of [18], [20] which stated that the majority (93.65% and 96.30%) of date palm traders are married. The family size of a household is an important variable; it may provide support and serves as source of labour in marketing.

The household size revealed that the majority (51.25%) had 6-10 family members. This agreed with [21] which stated that an average family size in Nigeria is about 6-7 persons per household. But, [22] opined that the average household size in the savannah zone of Nigeria was 10. Other respondents such as 37.50% and 11.25% had 11-15 and 1-5 family members respectively.

In terms of educational levels, 42.50% had Qur'anic education, 26.25% and 18.75% had secondary and primary education while only 12.50% did not have formal education. This showed that formal education is important for the marketers of date palm fruits to succeed.

The years of experience of the marketers has a great influence in marketing agricultural products. It plays great role in managerial ability and decision making process. The years of experience in date palm marketing in this study indicated that 56.25% had between 6-10 years of experience, 32.50% and 11.05% had 1-5 and 11-15 years of experience respectively. This showed that greater than half of the marketers had 6-10 years of experience.

The access to credit showed that 97.50% of the marketers do not have opportunity of credit facilities; only 2.50% had right to credit. Non-accessibility to credit facilities will affect the capital base of the business, the level and volume of business activities.

Table 1. Socio- economic characteristics of the respondents

Variable	Frequency	Percentage
Gender		
Male	80	100
Female	-	-
Age		
10-20	11	13.75
21-30	40	50.00
31-40	29	36.2
Marital status		
Single	15	18.75
Married	65	81.25
Household size		
1-5	9	11.25
6-10	41	51.25
11-15	30	37.50
Educational level		
Qur'anic	34	42.50
Primary	15	18.75
Secondary	21	26.25
Non-Formal education	10	12.50
Years of experience		
1-5	26	32.50
6-10	45	56.25
11-15	9	11.05
Access to credit facilities		
No	78	97.50
Yes	2	2.50

Source: Computed from Field Survey Data, 2022.

Cost and return analysis of date palm fruits marketing

Table 2 showed the costs incurred and return generated from the sales of date palm. The total cost of marketing was ₦ 73,382.75, this comprises of total variable cost (₦72,625.67) and total fixed cost (₦ 757.08). Total purchase cost constituted the highest percentage of the variable cost, accounting for 95.49%. This is followed by rent cost (1.72%), transportation cost (1.52%) packaging cost (0.71%) and storage cost (0.41%), while market charges (0.13%) formed the least percentage of the variable cost. In terms of the fixed cost, wheel barrow accounted for the highest percentage of fixed cost (35.22%). Others fixed cost such as cost of tables, mudu and tray were represented by different percentages 27.52%, 24.22% and 13.04% respectively. Looking at the total cost, total variable cost gave the highest percentage of the total cost, forming 98.97% while total fixed cost contributed only 1.03%.

The average quantity of fresh and dried date palm purchased and sold by the respondents was 50 and 33.13 mudu. The average cost price (fresh and dried) was ₦ 725 and ₦ 906.67 while the average selling prices were ₦ 925.80 and ₦ 1,022.22 respectively. The gross incomes obtained from sales of fresh and dried date palm were ₦ 30,671.75 and ₦ 51,111.00, thus giving a total income of ₦ 81,782.75 per month per respondent. This showed that the marketing of date palm is highly profitable in the study area judging by the gross income. But the gross income is not a sustainable index of profitability because it does not take into account the variable cost and other fixed assets cost. Hence, the net marketing income of ₦ 8,400 per respondent per month was obtained by removing the total marketing cost from the total gross income. Also return on investment of ₦ 0.11 was realised, indicating that for every one naira invested in the business ₦ 0.11 is obtained as profit. This showed that the marketing of date palm was profitable in the study area. However, the net marketing profit obtained in this study was higher than the value obtained by [20] for retailer (₦ 336.57/kg) and wholesaler (₦ 329.58/kg) during the peak period of marketing date palm, but lower than the value (₦ 217797.57) per annum which translate to ₦ 18,149.80 per month) obtained by [18]. This could be due to differences in the units of sales, inflation, location, marketing strategies, inefficient in marketing, technical know- how and period of the business which is characterized by peak and off- peak period.

Table 2. Cost and Return of Date Palm Fruits Marketing

Variables	Quantity (Mudu)	Unit price (₦)	Gross income (₦)	Cost (₦)	% VC	% TMC
Dried date palm	50	1,022.22	51,111.00			
Fresh date palm	33.13	925.80	30,671.75			
A. Total Gross Income			81,782.75			
B. Variable cost						
Dried date palm	50	906.67		45,333.50		
Fresh date palm	33.13	725		24,019.25		
Total purchase cost				69,352.75	95.49	94.51
Rent cost				1,250	1.72	1.71
Transportation cost				1,106.25	1.52	1.51
Packaging cost				516.67	0.71	0.70

Contin. Table 2.

Market charges				100	0.13	0.14
Storage cost				300	0.41	0.41
C. Total Variable cost(TVC)				72,625.67		98.97
D. Fixed cost					% FC	
Wheel barrow				266.67	35.22	0.36
Tray				98.75	13.04	0.13
Mudu				183.33	24.22	0.25
Table				208.33	27.52	0.28
E. Total Fixed Cost				757.08	100	1.03
F. Total Marketing Cost (TMC)= C +E				73,382.75		100
Net Marketing Income (NMI)			8,400			
Return per Capital Invested (RPCI)			0.114			

Source: Computed from Field Survey Data, 2022.

Factors affecting the net profit of the marketers

The result of regression analysis which postulates the relationship between the Net Marketing Income (NMI) and set of explanatory variables affecting the NMI is presented on Table 3. The functional form that was selected to discuss the relationships was linear function. The table revealed that age, marital status, household size, educational level, years of marketing experience, quantity purchased, quantity sold and revenue were positively related to the net marketing profit. This means that increase in the value of coefficient of respective variables will bring about one unit increase in the profit. On the other hand, variables such as purchased cost, storage cost, transportation cost and packaging cost, and marketing charges were negatively connected to the net marketing profit, indicating that as the coefficient value of any these variable increases, it will result to a unit decrease in the net marketing profit of the respondent. This agree with [18] which found transportation cost, storage cost and packaging cost to be negatively related to net income obtained from the sales of date palm.

Years of marketing experience, quantity of date palm purchased and revenue were significant at ($P < 0.01$) percent probability level. Also quantity of date palm sold and purchase cost were significant at ($P < 0.05$) percent while household size of the marketers and transportation cost were significant at ($P < 0.10$) percent. [18] found transportation cost, storage cost and packaging cost to significantly affect the net income of date palm at ($P < 0.01$) percent level of probability.

The R^2 value of 0.7635 indicated that 76.35% of the difference in the net income is explicated by the variables contained within the model while the remaining 23.65% was ascribed to random error. The F- value of 2.71 reveals the entire model is statistically significant at ($P < 0.01$) meaning that all the variables considered in the model has influence on the net income of the marketers. With this result the null hypothesis which stated that there is no significant difference between the net marketing profit of the respondents and factors that are affecting it is rejected and the alternative hypothesis accepted.

Table 3. Result of Regression Analysis

Variable	Coefficient	t-values	P>/t/
Constant	3.658871	12.98	0.000
X1 = Age of respondents	0.0342326	0.43	0.669
X2 = Marital status	0.0003999	0.44	0.660
X3 = Household size	0.00294253	1.73*	0.090
X4 = Educational level	0.0044935	0.52	0.603
X5 = Years of marketing experience	0.0034793	1.80***	0.006
X6 = Quantity purchase	0.092071	2.70***	0.004
X7 = Quantity sold	0.00240723	2.50**	0.016
X8 = Revenue	0.0176334	2.73***	0.009
X9 = Purchase cost	-0.0000218	-2.29**	0.027
X10 = Storage cost	-0.0001052	-0.10	0.920
X11 = Transportation cost	-0.0001337	-1.79*	0.086
X12 = Packaging cost	-0.0022363	-0.08	0.940
X13 = Marketing charges	-0.0090068	-0.71	0.483
X14 = Rent cost	-0.0007755	-0.65	0.519
F- Statistic	2.71		
R ²	0.7635		
Adjusted R	0.6322		

Source: Computed from Field Survey Data, 2022.

*** Significant at 0.01 ** Significant at 0.05 *Significant at 0.10

Constraints faced by the respondents in date palm marketing

The problems faced by the marketers in date palm marketing are presented on Table 4. Inadequate capital had the highest percentage of 100% and was ranked first in the list of the constraints. Inadequate capital will limit the ability of the respondents to expand the business. This perhaps may be the reason most of the respondents bought small quantity of date palm for sale. [23] opined that marketers of date palm has low tendency to save and had little or nothing to trade for profit. Generally, marketers are faced with inadequate capital as a major constraint to expand their business and are usually ranked first among the constraints [24].

Another constraint which influences the quality and quantity of date palm during storage is pest invasion; this accounted for 85% of the constraint and was ranked second. This concurs with the statement of [25] which said that pest and disease are major problem confronting marketers of cocoa in Oyo state, Nigeria.

Problem of inadequate storage facilities was ranked 3rd and had 63.75%. Insecurity, price fluctuation and seasonality of date palm were other constraints that formed 58.75%, 33%, 32.50% and were ranked 4th, 5th and 6th respectively. Insecurity keeps marketers in perpetual fear and does not allow them to go to farms and rural places to buy date palm for sale. Price fluctuation occurs when there is a variation in demand and supply of date palm. Prices of date palm normally rises during the Moslem fasting (*Ramadan*) and festive period, most especially December time when wedding ceremonies are more [26]. According to [27], the major problem confronting marketers is price fluctuation followed by inadequate market information, spoilage and low quality product.

Problem of high transportation cost and bad road network formed 27.50% and 20%, and ranked 7th and 8th respectively, [28] opined that delay in transportation is detrimental to date palm marketing because it causes date palm fruits to be contaminated with disease spots, shallow crinkling, loose taste, and aroma. High cost of transportation is the major problem faced by the marketers as propounded by [29], [30]. On the other hand, [31] opined that high taxes during transportation lead to high cost of transportation. According to [32], the agricultural outputs and productivity is impacted by road infrastructure. [33] stated that improving road networks is a step towards enhancing production and marketing generally; this will generate more income and increase the standard of living of farmers and marketers. They further stated that transportation of agricultural inputs and outputs from one place to the other is very important and a key factor in agricultural development and the only means by which farm produce can be moved from the farm to the different consumers.

Table 4. Result of Regression Analysis

Constraints	*Frequency	Percentage	Rank
Inadequate capital	80	100.00	1 st
Seasonality	26	32.50	6 th
Inadequate storage facilities	51	63.75	3 rd
Pest infestation	68	85.00	2 nd
Insecurity	47	58.75	4 th
High transportation cost	22	27.50	7 th
Price fluctuation	33	33.00	5 th
Bad road network	16	20	8 th

Source: Computed from Field Survey Data, 2022.

*Multiple responses

CONCLUSIONS

The results of the findings concluded that male (100%) dominated the marketing of date palm fruits; they were married with highest age range of 21-30 years and household size of 6-10. They had qur'anic education, meaning that western education has little or no effect on the business, and experience of 6-10 years but do not have access to credit facilities. The cost and return analysis of date palm fruits marketing was profitable with net marketing income of ₦ 8,400 and return on investment of ₦ 0.11 per respondent per month. The major factors affecting the net marketing profit of the marketers are purchase cost, transportation cost, years of marketing experience, quantity of date palm purchased, revenue, quantity of date palm sold and household size of the marketers. It can also be concluded that the major constraints to date palm fruits marketing are inadequate capital, pest infestation, inadequate storage facilities, insecurity and price fluctuation.

RECOMMENDATIONS

The study recommends that:

1. The unemployed teeming population especially youths should be encouraged to go into the business of date palm fruits marketing to earn a living.
2. The marketers should come and pool their resources together to form cooperative society where they will be able to obtain loan at low interest rate to expand their business
3. Credit facilities should be provided to the markets through commercial banks and other lending institutions at lower interest rate, this will help the marketers to improve their capital and expand their business
4. Research institute should research and come up with storage facilities that will eliminate pest infestation of date palm fruits in the store. This will help minimises losses in the storage and improve the quantity and quality of date palm fruits available for marketing

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ANALIZA TROŠKOVA I DOBITI OD PLODOVA URME (*Phoenix Dactylifera* Linn) KOD TRGOVINE NA MALO U METROPOLI KADUNA, DRŽAVA KADUNA, NIGERIJA

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Apstrakt: Stabla palme (*Phoenix dactylifera* Linn) i plod urme, su ekonomska kultura voća koje se koriste za hranu, lekove i prihod u sušnoj i polusušnoj zoni Nigerije. Studija je urađena da se analiziraju troškovi i marketing plodova voća-palme (urme) između trgovaca na malo u glavnom gradu Kaduna, država Kaduna, Nigerija. Primijenjena je dvostepena tehnika uzorkovanja koja je dovela do slučajnog odabira 80 ispitanika. Ispitanicima su dostavljeni strukturni upitnici, a prikupljeni podaci analizirani su deskriptivnom statistikom troškova i dobiti i regresionom analizom.

Rezultati su pokazali da su svi ispitanici muškog pola, starosti 21-30 godina, oženjeni sa domaćinstvom od 6 do 10 članova porodice, koji imaju obrazovanje zasnovano na Kuranu.

Rezultat je dalje pokazao da je marketing voća (urme) bio profitabilan sa netto marketinškim prihodom od ₦8,400 po uzorku mesečno i povratom ulaganja od ₦0,11. Varijable kao što su godine marketinškog iskustva, količina kupljenih plodova palme (urme) i prihod, bile su značajne na nivou verovatnoće ($P < 0,01$).

Takođe, nabavna cena i količina prodane urme bili su značajni u % na nivou ($P < 0,05$), dok su troškovi transporta i veličina domaćinstva bili značajni u % na nivou ($P < 0,10$). Glavna ograničenja marketinga ovog voća (urme) su neadekvatan kapital, najezda štetočina, neadekvatni prostori za skladištenje i nesigurnost prodaje.

Studija preporučuje da ne zaposlenu populaciju koja nema mnogo raspoloživih poslova, posebno omladinu, treba ohrabriti da se bavi marketingom plodova palmi (urme), kako bi zaradili sredstva za život.

Ključne reči: Urme, prodavac, marketing, neto marketinški prihod, mladi

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