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## Marketing Extension Services' Needs of Root and Tuber Crop Farmers in Abia State, Nigeria

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### ARTICLE INFO

### ABSTRACT

#### Key Words

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Tuber crops,  
Capacity building,  
Farm input systems

The study assessed the agricultural marketing extension services' needs of root and tuber crop farmers in Abia State, Nigeria. It described the socio-economic characteristics of root and tuber crop farmers and identified the marketing extension services' needs of root and tuber crop farmers in the state; it ascertained the marketing measures through which farmers' needs can be met. It employed public opinion survey using a structured questionnaire as instrument for data collection. It used a multistage sampling technique to select a sample of three hundred and eighty-seven (387) farmers. Descriptive analysis was adopted in analyzing the data collected. The findings showed that farmers were constantly in need of updated marketing extension services which include cooperatives ( $\bar{x} = 2.49$ ), credit ( $\bar{x} = 2.47$ ), information ( $\bar{x} = 2.77$ ), market linkage ( $\bar{x} = 2.91$ ), storage ( $\bar{x} = 2.97$ ), processing ( $\bar{x} = 2.86$ ), transportation ( $\bar{x} = 2.63$ ), programme to expand consumption ( $\bar{x} = 2.68$ ) and grading and standardization services ( $\bar{x} = 2.67$ ). Therefore, for extension workers to really assist farmers in this regard, it is important to assess from the farmer's perspective the areas in which assistance is needed for root and tuber produce marketing. This is because programmes and services can be effective only when they meet real needs. It was recommended that organizations and agencies providing marketing extension services (ADPs, Research institutes, Universities, NGOs etc) should do so in accordance with farmers' needs. Governments should develop, support and promote training in marketing skills and services for farmers in the study area.

## Introduction

The primary focus of agricultural extension currently is shifting from increasing production to enhancing rural incomes and livelihoods through marketing extension and responding to farmers' demand (Food and Agricultural Organization, 2010). Marketing extension redirects agricultural extension and advisory services from a limited focus on increasing production to improving farm management, market access and agribusiness. It also implies new roles for extension services that move beyond technology dissemination to facilitation of innovation, knowledge brokerage and promoting dialogue among stakeholders.

Agricultural marketing extension services are knowledge services which assist small- to medium-scale farmers and other actors in agricultural value chains to increase their access to markets and secure benefits from commercialization (Narayanan,

1991). They are series of activities that assist farmers gain better access to markets and reduce losses by making informed production decisions, prime of which is production according to market requirements, including products, specifications, varieties, time of planting, and profitability of selected crops (Neuchâtel Group, 1998). Marketing Extension services focuses on enhancement of knowledge, awareness and skills of different stakeholders of the sector on different aspects of marketing of agricultural produce. The farmer has to know what to produce as per the demand, where to sell, when to sell, whom to sell his produce (National Institute of Agricultural Extension Management, 2008). It is the total effort of advising and supporting farmers to produce profitable market-oriented commodities and adopt appropriate technologies and practices, collecting and communicating market-related information,



identifying profitable markets and buyers, and linking of farmers to buyers, building marketing capacity of farmers, and facilitating organization of farmers to conduct collective marketing of their produce (Gebremedhin, Jemaneh, Hoekstra and Anandajayasekeram, 2012). Hence, it is incumbent on the extension functionaries to go beyond seed, soil and fertilizer and also disseminate knowledge on marketing aspects such as grading, standardization, packaging, labelling, storage, transportation, market intelligence, wholesaling, retailing and modern tools of marketing such as contract farming, terminal markets, futures markets etcetera, and as such, the marketing needs of farmers have to be known. Therefore this work was set out to ascertain the marketing needs of roots and tuber crop farmers across the agricultural value chain in Abia State, Nigeria.

Yankson, Alex and Stephen (2016) indicated that millions of smallholder farmers in developing countries such as Nigeria face incredible challenges marketing their farm produce. He identified lack of market information, collusion among middlemen, and thus price determination, and lack of transportation facilities as the main challenges facing smallholders in many developing regions. There are comparatively few publications that have addressed marketing extension services with respect to marketing extension services' needs of farmers in the area. This neglect in research has caused a wide gap in knowledge as regards to the actual marketing needs of root and tuber crop farmers in Nigeria. Therefore, this study sought to fill these gaps in knowledge by having a broad objective of assessing the marketing extension services' needs of farmers in Abia State

Marketing extension service needs of farmers have been identified to include knowledge and use of market information, access to high-value reliable markets, reduction in transactional costs, improvement in quality of products, storage facilities, agricultural extension services, financial support among others (Antwi and Seahlodi, 2011). Others include adequate property rights (Matungul et al., 2002), adequate and accessible market infrastructure, adequate access to finance, improved socio-economic status of the farmer, access to decent roads, electricity, and good communication networks (Senyolo Chaminuka, Makhura, and Belete, 2009), information regarding prices, adequate local markets, and good bargaining power, (Xaba and Masuku, 2012).

Similarly, Ogunleye (2010) identified various areas where farmers need assistance to include assistance in linking various market channels, produce and product market prices, assistance on market location for produce and products. This implies that root and tuber crop farmers are in great need of assistance regarding marketing strategy to improve their enterprise, reduce post-harvest losses by timely disposal of their products and thereby boost their income. Furthermore, he identified links to credit sources as another market service needed by farmers.

Yankson, Alex and Stephen (2016) and Shitu, Sakia, Meti, and Maraddi (2015) noted that in Nigeria, agriculture has been characterized with high input cost, lack of access to quality information especially information about markets, lack of labour as a result of rural urban migration, lack of infrastructure facility, large number of market functionaries, lack of grading and standardizing, lack of good storage facilities, lack of market intelligence among others which resulted in high marketing cost.

The majority of the rural producers need to expand their understanding of markets and economic opportunities if they are to achieve more market success. According to Ogunleye and Oladeji (2007), majority of farmers in southeast zones have low performance in their marketing activities. This probably justifies Awoyinka (2009) who opined that most important problem that needs urgent attention is guaranteed market so that there can be sustainable cassava production for domestic and industrial use and export market. Marketing extension services can play an important role in helping their clients to overcome know-how constraints, and thus are an essential component of the wider range of services that are needed if the new dynamics of agricultural markets are to contribute to poverty alleviation.

## 2. Materials and methods

This study was conducted in Abia State. Abia State was created in 1991 and is in the humid forest Agro-ecological zone of Nigeria. It has a population of 2,833,999 made up of 1,454,195 males and 1,599,806 females. The State has a population density of 578 persons per square kilometre (National Population Commission, 2007). The population is predominantly rural (62.25%) with only 37.75% urban population (NPC, 2006). Abia State lies within longitude 70 23'E and 80 2'E, and latitude 40 47'N and 60 12'N. The State is situated East of Imo State with which it shares common boundaries on its western areas. On the North and

North East, Anambra, Enugu and Ebonyi States bound it. Cross River and Akwa-Ibom States bound it on the East and South East while it shares its Southern borders with Rivers State where the Imo River demarcates the two States. The population of the study comprised of all roots and tuber crop farm families in Abia State.

A combination of cluster sampling, random sampling, and purposive sampling were used to select the respondents. Abia State is divided into three agricultural zones, namely Aba, Ohafia and Umuahia agricultural zones. These three agricultural zones formed the three clusters selected for this study. In each of the clusters, two Local Government Areas (L.G.As) were randomly selected and two communities were randomly selected from each of the L.G.As. The total number of registered farm families in the twelve (12) selected communities was 12075. This figure therefore represents the sample frame. The sample size for each zone was determined by a mathematical formula given by Miller and Brewer (2003) as:

$$n = \frac{N}{1+N(\alpha)^2} \dots\dots\dots (3.1)$$

Where: N is the sample frame for the twelve communities,

n is the sample size and

α is the margin of error (fixed at 5%).

$$n = 12075 / (1 + 12075 \cdot (0.05)^2) = 387 \text{ farm households}$$

A simple proportion formula was then used to calculate the number of farmers who were interviewed in each selected local government.

The sample size for each community area was randomly selected from the sampling frame of that community as shown in Table 1. This gave a total of 387 farm families. One farmer was purposively selected from each of the farm families, (these were farmers that have root and tuber crops as their major farm enterprise) and this gave 387 respondents.

This study employed public opinion survey. According to (Osuala, 2005) survey methods rely on the techniques of sampling a large number of subjects by interviewing and or the use of questionnaire. The adoption of this method was necessary because the study collected and analyzed data from a true representation of the entire population. The target population was root and tuber

crop farmers in Abia State, Nigeria.

**Table 1. Sample selection plan**

Zones	L.G.As	Communities	Sampling Frame	Sample Size
Aba	Osisioma	1.Urata umueze	540	17
		2.Amasato umungasi	1260	40
	Obingwa	1. Umuohia	421	14
		2.Umuobasiukwu	502	16
Ohafia	Bende	1.Amankwo-umueze	520	17
		2.Eluoma-amuda	418	13
	Ohafia	1.Amuodu-obia	1865	60
		2. Etti-ama-ijeukwu	2005	64
Umuahia zone	Isialangwa south	1.Mbutu-ukwu	1140	37
		2. Ikaa-umuikaa	601	19
	Umuahia south	1.Umuopara	911	29
		2. Ezeleke umuekwele	1893	61
<b>Total</b>			<b>12,075</b>	<b>387</b>
Returned Questionnaire				<b>380</b>

Simple descriptive statistics was used to describe the socio economic characteristics of root and tuber crop farmers in Abia State. Frequency count, percentages and mean were used to assess the marketing extension services’ needs of root and tuber crop farmers. The mean was obtained using a three point likert-type scale. The three point likert scale was given as agree (3), undecided (2) and disagree (1). The benchmark was gives as 2 (3+2+1/3 = 2). This means that any score that is less than 2 was rejected and regarded as “not a need” while score greater than or equal to 2 was accepted and regarded as “a need”.

### 3. Results and discussion

#### 3.1 Socio-economic Characteristics of Respondents

This section mainly discusses some of the basic characteristics of the respondents. The characteristics are age, gender, marital status, level of education, years of experience, major crop produce, and farm size.

The result on age showed that majority 47% (178) of the farmers were within the age bracket of 31 -45 years old. This was closely followed by the age bracket of 46-55 which represents 41.5% (158). Farmers that were in the minority were the age bracket of above 55years which represent 11.5% (44). This indicates that about 88.4 percent of the farmers were in their most economically active age bracket (31-55) years. This falls within the economically productive proportion of the population as defined by (FAO, 1973). The implication is that majority of the farmers in study area were young farmers and are within their active age. This could be because young farmers are more energetic and eager to explore/experiment with new



extension/ farming technologies. The result is consistent with the findings of (Ibeagwa., Nnamerenwa., and Anorue, 2012) who succinctly observed that individuals within the active age brackets have more innovative ability and capacity to do manual work than individuals in their inactive age. However, there is a wide spread of farmers among all the age groups, implying that root and tuber crop farming was embraced by all age groups.

About 53% (201) of the farmers' respondents were male while female farmers represent 47% (179) of the sampled population. This implies that there were more male than female in the production of root and tuber crops in the area. This was supported by (Agom ID, Ohen BS, Itam KO, and Inyang NN, 2012) in their study on gender roles in cassava production in Cross River State in Nigeria, due to cultural setting of the area which allows males to have easy access to land especially, where a majority of them are the heads of households. However, this contradicts the assertion of (Mafimisebe TE, 2007) that lends credence to the assertion that most African farmers are women and that cassava is mainly described as women's crop, while yam is described as men's crop but this research shows that men are also involved in the cultivation of cassava. This study concluded that roots and tubers are grown by both sexes in the study area, with the numbers of males being slightly higher than the number of females. This may be due to the rudimentary tools and heavy labour involved in the clearing, tilling of the soil, harvesting and processing of the crops.

The result showed that 82% (312) which constituted the majority of the farmers were married while 18% (68) of them were single. This implies that married farmers dominated the study. Marriage predisposes an individual to become responsible since they must cater for their family needs. This finding is consistent with (Afolabi JA, 2010) who in his study observed that marriage make most individuals to be responsible and to be more committed to any Job that will help them to cater for the need of their family members.

Larger proportions of the sampled farmers had secondary education this represents 53%, (202) of the sampled population, a good proportion of the farmers had tertiary education which represents 41% (156) percent while a few proportion of the farmers had primary education which represents 6% (22) of the sampled population only. This means that most of the farmers are literate since they have had

one form of formal education or the other. The high proportion of literate people among the farming population implies that majority of them are in a better position to be aware of, understand and utilise updated information about agricultural marketing required for good farm accounting, record keeping and post-harvest control.

Education is considered to be a very important factor influencing innovation and adoption of new technologies (Abang, Ekpeni, , and Usani, 2001). It can be concluded that most of the farmers and all the extension workers for the study were literate which suggests that the respondents are better positioned to take advantage of new techniques/technologies and marketing extension services that could lead to reduced post-harvest losses of root and tuber crops.

Table 2 showed that larger proportions of farmers in the study area had 11-20 years of farming experience; this was represented by 52% (199) of the farming population. This implies that the respondents have several years of experience in their respective fields and may be considered quite experienced and therefore are expected to obtain higher technical efficiency.

Years of experience are important factor for a successful extension services and farming business. It affects the income of farmers and farmers' response rate to marketing extension services and their ability to control farm losses.

Table 2 show that larger proportion of the farmers 70% (268) had farm sizes of at most five (5) hectares. This was followed by 24% (90) of the farmers with farm sizes of at most one (1) hectare. The least proportion of the respondents 6% (22) had farm sizes of at most ten (10) hectares. The implies that farmers in the study area had only little land to cultivate their root and tuber crops which could be because of the geographical location of their domain and this means that access to land is limited in the study area.

**Table 2: Socioeconomic characteristics of root and tuber crop farmers in the study area**

Socio-economic characteristics	Frequency	Percentage
<b>Age of respondents</b>		
<b>Below 30</b>	-	-
31-45	178	47
46-55	158	41.5
56-65	44	11.5
<b>Total</b>	<b>380</b>	<b>100.0</b>
<b>Gender</b>		
Female	179	47
Male	201	53
<b>Total</b>	<b>380</b>	<b>100.0</b>
<b>Marital status</b>		
Married	312	82
Single	68	18
Widowed	-	-
<b>Total</b>	<b>380</b>	<b>100.0</b>
<b>Educational level</b>		
Primary	22	6
Senior secondary school	202	53
Tertiary	156	41
<b>Total</b>	<b>380</b>	<b>100.0</b>
<b>Years of Experience</b>		
1-10	113	30
11-20	199	52
21-30	46	12
31-40	22	6
<b>Total</b>	<b>380</b>	<b>100.0</b>
<b>Farm size</b>		
<1	90	24
1 -5	268	70
6-10	22	6
<b>Total</b>	<b>380</b>	<b>100.0</b>

Source: Field Survey, 2017

### 3.2 Marketing Extension Services' Needs of Root and Tuber Crop Farmers in Abia State

The mean score assessment of the marketing extension services' needs of root and tuber crop farmers in the study area was presented in Table 2

The result showed that cooperative needs of farmers included, farmers' cooperative ( $\bar{x} = 2.64$ ), farmer-marketer's co-operatives ( $\bar{x} = 2.35$ ), farmers-extension agent cooperatives ( $\bar{x} = 2.58$ ). This implies that farmers are in need of constant contact with the extension agents. The result also implies that there are limited farmers' cooperatives in the area. This

could be part of the reasons why farmers sale their products at different price even when the price is not favourable. (Akridge Barnard, and Downey, 2010) suggested that the set of decisions agribusiness cooperatives make as part of the strategic marketing planning process may be among the most fundamental choices facing agribusiness firms. Decisions about what markets to pursue and what position to take in these markets are part of these decisions.

On credit needs of the farmers, respondents need assistance in linking them with credit sources ( $\bar{x} = 2.59$ ), credit for purchase of equipment ( $\bar{x} = 2.00$ ), credit to finance processing ( $\bar{x} = 2.59$ ), credit to finance transportation ( $\bar{x} = 2.36$ ), credit to repair farm equipment ( $\bar{x} = 2.36$ ), credit to purchase storage facilities ( $\bar{x} = 2.71$ ) and credit to purchase pesticides and insecticides ( $\bar{x} = 2.70$ ). This implies that there is inadequate credit and or limited loan available to farmers in the study area. This may also be part of the reasons why farmers cannot increase their scale of production. When there is limited access to credit facilities, farmers may not be able to process and store their produce. This implies that root and tuber crop farmers are in great need of assistance regarding credit facilities to improve their enterprise, reduce post-harvest losses by timely disposal of their products and thereby boost their income. This finding agrees with the findings of (Ogunleye, Thomas, and Oyebade, 2010), who identified links to credit sources as another market service needed by farmers.

The result showed that the information need of the farmers included information on produce and product market prices ( $\bar{x} = 2.71$ ), information on available market and new market locations ( $\bar{x} = 3.00$ ), information on the varieties needed and by whom ( $\bar{x} = 2.76$ ), information on the advantages of selling beyond farm gate ( $\bar{x} = 2.59$ ), procedure for maximizing profit ( $\bar{x} = 2.94$ ), and information on exporting procedure ( $\bar{x} = 2.76$ ). This implies that farmers need to equip themselves with basic marketing information before they even go into production. They will need to know what to produce and for whom, for which market, the needed variety and the amount the buyers are willing to offer. The result also implies that farmers need information on available markets and new market locations.

The market linkage needs of the farmers in the study area included linking farmers to those that can buy their produce ( $\bar{x} = 2.88$ ) and linking farmers to markets where they can sell their produce ( $\bar{x} =$



2.88). The implication is that most farmers produce at proxy with no market or buyer at heart. This could result to producing unwanted product or producing less of a needed product or much of it. It was observed that providing improved agricultural market information helps to link farmers to markets, a process that improves their welfare, and moves them to more efficient market outcomes. A value chain approach to control of post-harvest losses of root and tubers looks at how market opportunities can be developed and linked with producers (Woodhill, Heemskerck, Bezabih. and Eyasu, 2011).

On the storage needs of farmers in the study area, farmers need assistance on how to protect their root and tuber crops from pest and disease and the storage methods for farm produce and products with mean scores of 2.94 and 3.00 respectively. This implies that losses of root and tubers in the area can be attributed to inadequate knowledge on pest and disease control and also limited storage skill. The result is consistent with the assertions of (Okoedo-Okojie, and Okwuokenye, 2016) that marketing constraints faced by the root and tuber farmers include perishability due to poor storage, inadequate capital, and transportation.

Farmers also averred that they are in need of processing services. The processing needs of the farmers in the study area include training on processing to new products ( $\bar{x} = 3.00$ ), training on processing to meet export standard ( $\bar{x} = 2.94$ ), acquisition and use of modern equipment ( $\bar{x} = 2.77$ ), and training on skill for operating modern equipment ( $\bar{x} = 2.83$ ). This implies that farmers may always sale at farm gates which retards their income from their farm produce. It means that if processing services are provided, farmers can process and store their produce and reduce post-harvest losses.

The study revealed that the farmers' transportation needs included good road network ( $\bar{x} = 2.83$ ), means of transportation from farm to market ( $\bar{x} = 2.54$ ), means of transportation from village to town ( $\bar{x} = 2.59$ ), group transportation for cost reduction ( $\bar{x} = 2.25$ ), means of transportation from farm to processing sites ( $\bar{x} = 2.71$ ), and means of transportation from processing site to market with mean scores of ( $\bar{x} = 2.88$ ). Transportation according to (Adekanye. 1988) is a major problem plaguing the marketing of agricultural products. He further noted that this will raise marketing cost and reduce profit margin.

The farmers also need programme to expand the consumption of their produce/products. The study revealed that the farmers needs such consumption

expansion programmes as packaging of products ( $\bar{x} = 2.83$ ), packaging skills ( $\bar{x} = 2.83$ ), packaging material ( $\bar{x} = 2.70$ ), packaging designs ( $\bar{x} = 2.53$ ), packaging information ( $\bar{x} = 2.77$ ), packaging innovation ( $\bar{x} = 2.59$ ), and promotion of products ( $\bar{x} = 2.77$ ). This probably justifies (Awoyinka, 2009) who opined that most important problem that needs urgent attention is guaranteed market so that there can be sustainable cassava production for domestic and industrial use and export market.

Finally, the farmers have grading and standardization needs. These needs specifically included standard measurement ( $\bar{x} = 2.89$ ), how to use the weighing machine ( $\bar{x} = 2.70$ ), price gaging skill for standardized product ( $\bar{x} = 2.41$ ), and product weight labelling skills ( $\bar{x} = 2.65$ ). This implies that root and tuber crop farmers are in great need of assistance regarding grading and standardization to improve their enterprise, reduce post-harvest losses by timely disposal of their products and thereby boost their income.

The respondents have pooled mean ratings above the mean cut off point of 2.00 in all the categories of marketing extension services' needs of root and tuber crop farmers in the study area. The pooled mean rating of mean response of the farmers was 2.67. This indicates that such marketing extension services as cooperative, credit, information, market linkage, storage, processing, transportation, programmes to expand consumption and grading and standardization were the various areas of needs of the farmers in the study area. Hence, it is safe to assert that marketing extension needs of Nigerian smallholder farmers revolve around the resolution of problems cooperative, credit, information, market linkage, storage, processing, transportation, programmes to expand consumption and grading and standardization problems.

The finding of the study is consistent with the assertions of (Rockefeller Foundation, 2015) that the root causes of food loss in developing countries are interlinked and complex, but the primary drivers include: lack of marketing extension services to build skills in handling, packaging, and storage; insufficient postharvest storage facilities or on-farm storage technologies; and poor market access. The farmer has to be empowered to avail himself of the different modes of price discovery mechanism to his advantage (NIAEM 2008). The finding of the study is also in line with (Yankson , Alex, and Stephen 2016) and (Shitu GA. Sakia, Meti and Maraddi, 2015) who noted that in Nigeria, Agriculture has been characterized with high input cost, lack of access to quality information especially information

**Table 3: Marketing extension services' needs of root and tuber crop farmers in the study area**

S/N	Marketing Needs of Farmers	A	UN	DA	$\bar{x}$	SD
<b>Co-operatives needs of farmers</b>						
1	Farmers' co-operatives	290	44	46	2.64	1.22
2	Farmers-marketers co-operatives	224	66	90	2.35	0.85
3	Farmers-extension agent co-operatives	289	22	69	2.58	1.23
<b>Sub-Total</b>					<b>2.49</b>	
<b>Credit needs of farmers</b>						
4	Link with credit sources	247	111	22	2.59	0.98
5	Credit for purchase of equipment	113	155	112	2.00	0.33
6	To finance processing	247	110	23	2.59	0.98
7	To finance transportation	180	155	45	2.36	0.65
8	To repair farm equipment	202	111	67	2.36	0.73
9	To purchase storage facilities	313	22	45	2.71	1.36
10	To purchase pesticides and insecticides	289	68	23	2.70	1.21
<b>Sub-Total</b>					<b>2.47</b>	
<b>Information needs of farmers</b>						
11	Produce and product market prices	291	67	22	2.71	1.22
12	Information on available market and new market locations	380	-	-	3.00	1.73
13	Information on the varieties needed and by whom	313	44	23	2.76	1.35
14	Advantage of selling beyond farm gate	269	67	44	2.59	1.10
15	Procedure for maximizing profit	358	22	-	2.94	1.60
16	Exporting procedure	268	89	23	2.64	1.09
<b>Sub-Total</b>					<b>2.77</b>	
<b>Market Linkage needs of farmers</b>						
17	linking farmers to those that can buy their produce	358	-	22	2.88	1.62
18	linking farmers to markets where they can sell their produce	358	22	-	2.94	1.60
<b>Sub-Total</b>					<b>2.91</b>	
<b>Storage needs of farmers</b>						
19	Protection from infestation of pest and disease	358	22	-	2.94	1.60
20	Storage method for farm produce and products	380	-	-	3.00	1.73
<b>Sub-Total</b>					<b>2.97</b>	
<b>Processing needs of farmers</b>						
21	Training on processing to new products	380	-	-	3.00	1.73
22	Training on processing to meet export standard	358	22	-	2.94	1.60
23	Modern processing equipment	314	44	22	2.77	1.35
24	Training on skill for operating modern equipment	336	22	22	2.83	1.48
<b>Sub-Total</b>					<b>2.86</b>	
<b>Transportation needs of farmers</b>						
25	Good road network	336	22	22	2.83	1.48
26	Means of transportation from farm to market	270	44	66	2.54	1.11
27	Means of transportation from village to town	292	22	66	2.59	1.25
28	Group transportation for cost reduction	204	66	110	2.25	0.75
29	Means of transportation from farm to processing site	314	22	44	2.71	1.36
30	Means of transportation from processing site to market	336	44	-	2.88	1.47
<b>Sub-Total</b>					<b>2.63</b>	
<b>Programme to expand consumption</b>						
31	Packaging of products	336	22	22	2.83	1.48
32	Packaging skills	336	22	22	2.83	1.48
33	Packaging material	290	67	23	2.70	1.21
34	Packaging designs	224	133	23	2.53	0.86
35	Packaging information	313	45	22	2.77	1.34
36	Packaging innovation	268	68	44	2.59	1.09
37	Promotion of products	291	89	-	2.77	1.21
<b>Sub-Total</b>					<b>2.68</b>	
<b>Grading and standardization</b>						
38	Standard measurement	337	43	-	2.89	1.48
39	How to use the weighing machine	311	23	46	2.70	1.35
40	Price gagging skill for standardized product	201	133	46	2.41	0.74
41	Product weight labelling skills	269	88	23	2.65	1.09
<b>Sub-Total</b>					<b>2.66</b>	
<b>Overall mean score</b>					<b>2.67</b>	<b>1.22</b>
<b>Number of respondents</b>					<b>380</b>	
<b>Decision cut-point</b>					<b>2.00</b>	

Source: Field Survey, 2017.

Note: A = Agree; UN = Undecided; DA = Disagree;  $\bar{x}$  = mean score; SD = Standard deviation.





about markets, lack of labour as a result of rural urban migration, lack of infrastructure facility, large number of market functionaries, lack of grading and standardizing, lack of good storage facilities, lack of market intelligence among others which resulted in high marketing cost.

However, (Emad., and Abdulfatah, 2004) noted that production is not completed until products are at the point of purchase and are producing consumer satisfaction. Farmers and their needs are thus inevitably linked into finding solutions to marketing problems, as well as to production. Farmers has to be supported by marketing extension to help them to plant timing, quality, and quantity of products to reduce postharvest losses. It is essential to improve farm management and marketing skills of farmers continuously through extension and participation in training activities. Grouping producers according to their marketing needs for training, and advice is more feasible and achieves reduction in losses if sufficient understanding of management tasks can be obtained.

Therefore, for extension workers to really assist farmers in this regard, it is important to assess from the farmer's perspective in the areas in which assistance is needed for root and tuber produce marketing because programs or services can be effective only when they meet real needs and when the target population agrees that it has those needs so as to guaranty continuous adoption of extension practices for cassava production.

Table 3: Marketing extension services' needs of root and tuber crop farmers in the study area

#### 4. Conclusion

The study thus concludes that the respondents were literate people and are in a better position to be aware of, understand and utilise updated information about agricultural marketing required for good farm accounting, record keeping and post-harvest control. With regards to the marketing extension services' needs of root and tuber crop farmers, the study thus concludes that farmers have pressing need of Information on available market and new market locations, procedure for maximizing profit, linking farmers to those that can buy their produce, linking farmers to markets where they can sell their produce, protection from infestation of pest and disease, storage method for farm produce and products, training on processing to new products, training on processing to meet

export standard, good road network, means of transportation from processing site to market, packaging of products, packaging skills and standard measurement. Farmers need updated versions of these information on a continuous base. It is recommended that organizations providing marketing extension services (ADPs, Research institutes, Universities, NGOs etc) should do so in accordance to farmers' needs. This can be achieved by conducting farmers' need assessment before designing and embarking on the provision of marketing extension services.

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