

# Information Accessibility for Sunflower Growers in Tanzania

Enock S. Ugulumu

Maastricht School of Management, Endepolsdomein 150, 6229 EP Maastricht, The Netherlands

E-mail: [ugulumuenock@gmail.com](mailto:ugulumuenock@gmail.com)

Eno L. Inanga

Maastricht School of Management, Endepolsdomein 150, 6229 EP Maastricht, The Netherlands

E-mail: [inanga@msm.nl](mailto:inanga@msm.nl)

## Abstract

The role of information for the effectual functioning of businesses is a central concern for many economists. According to Bello and Obinne (2012) as cited by Ozawa (1999) and Adefuye and Adedoyin (1993), the extent to which people progress in as far as agriculture is concerned largely depends on the availability and access to accurate and reliable information. According to one survey conducted on Marketing and market access for Tanzanian financial institutions which included both agricultural marketing cooperative societies (AMCOs) and savings and credit cooperatives (SACCOs), results clearly implicated that there were various inadequacies to many variables (URT, February 2012). Many stakeholders acknowledged to lacking adequate knowledge on marketing skills and market information dissemination. Rebekah (2005) argues that communication plays a major role in nearly every aspect of life. Effective communication does not only help people solve problems but also improve life. Communication experts have further argued that poor communication is at the root of many problems and that effective communication is one solution to these problems. She defines communication as the processes of understanding and sharing meaning. Communication is considered a process because it is an activity, exchange or a set of behaviors that occur over time, its components include people, the message, channel, feedback, encoding and decoding.

**Key words:** information flow, communication, agricultural value chain, sunflower, capability.

## 1. Introduction

Economic liberalization and globalization in many developing countries have lead to poverty reduction through increased agricultural productivity, production and sustainable growth (Humphrey, 2005). It is therefore no doubt that agriculture plays a significant role in economies of developing countries like Tanzania as it provides market opportunities for stakeholders. In business marketing intelligence, the cornerstone of a creative and effective marketing strategy is effective information (Hutt & Speh, 1992). Information in the economics perspective encompasses customers, competitors, and the general business environment gathered continuously and organized to support decision making (Bello and Obinne, 2012). Information seeking behavior includes: the strategies people adopt for making discoveries, their expectations, attitudes, and anxieties, promotion of relationships as they live and work with other information users. Information seekers should begin with discovering obstacles that deter progress thereby creating an information gap or vacuum.

Studies undertaken by Murugan and Balasubramani (2011) and Ayubu *et al* (2012) establish that information seeking is a human process that requires adaptive and reflective control over both afferent and efferent actions of the information seeker.

## 2. Literature Review

Bello and Obinne (2012) in Ozawa (1999) cited Adefuye and Adedoyin (1993) who opined that the extent to which people progress in their agricultural activities largely depends on the availability and access to accurate and reliable information. They also cited Obinne (1993) who asserted that the major setback in agricultural production in Nigeria was not the lack of recommended practices required for economic growth and rural transformation but that disseminating the recommended information to end users was a major challenge. Kamba (2009) laments that the provision of information services in Africa is largely isolated and access to various information services continue to pose even greater challenges. He further holds the view that the Kenyan principal victims of these developments have been the rural people who lack basic means of literacy as a result of being too young, too old, too poor or too ill because of economic and information poverty. He cites Chester, & Neelameghan, (2006) who noted that rural communities in Africa constitute a larger percentage of the population whose information and developmental needs are not adequately met and consequently been unable to productively participate in the development process thus impeding their enjoyment of the benefits thereof. He further agrees with (Bell, 1986; Boon, 1992; Camble 1994; Sturges and Neill, 1998) who similarly argue that the lack of information has negatively impacted on the development process.

According to one survey conducted on Marketing and market access for Tanzanian financial institutions, which included both agricultural marketing cooperative societies (AMCOs) and savings and credit cooperatives

(SACCOs), results clearly implicated that there were various inadequacies to many variables (URT, February 2012). Majority of stakeholders acknowledged to lacking adequate knowledge on marketing skills and market information dissemination. The availability of information in areas such as fertilizer prices, modern farming, and credit facilities was rated at 40.3%, 16.4% and 6% respectively. Another establishment as regards marketing was that there were no organizations that provided marketing services to the schemes or villages surveyed. The availability of these organizations would greatly enhance farmers' access to markets if marketing groups were formed.

### **2.1 Agricultural Information flow in Developing Countries**

Rees, D *et al* (2000) advanced the problems of information flow in agricultural research and extension network to address the effectiveness of the networks serving farmers. Kamba (2009) citing Neelameghan (2006) and Camara (1990) writes that in most cases planners, developers and government officials in Kenya did not yet acknowledge the role of information as a basic resource. The main problem perceived by Kenyan farmers and Community Based Organizations (CBOs) on information flow was inadequate human resources, both in terms of numbers and knowledge or skills from the Kenya Government and Non Governmental Organizations (NGOs) extension services. They noted demotivating factors to include: – poor attendance of meetings, ignoring information, dishonest leaders, use of the same farms for demonstrations, inadequate means for farmer exchange visits and mismanagement of groups. Other factors included: lack of commitment and interest, inadequate Agricultural knowledge & information systems in Kenya.

Agricultural extension services in developing countries is currently being provided to facilitate problem solving for small scale farmers such as the creation of links to markets and other players in the agricultural value chain; the extension services further provide access to information, skills, and technologies. Literature extends further to suggest that information flow is easily transferable and context-independent while knowledge is a process of contextualizing information through awareness to make it situation based (Glendenning, Babu and Asenso-Okyere, 2010).

### **2.2 Communication**

Rebekah (2005) argues that communication plays a major role in nearly every aspect of life. Effective communication not only aids problem solving but also improves life. Communication experts have argued that poor communication is at the root of many problems and that effective communication is one solution to these problems. She defines communication as the processes of understanding and sharing meaning. Communication is considered a process because it is an activity, an exchange or a set of behaviors that occur over time. It involves components of communication such as people, the message, channel, feedback, encoding and decoding. Bello and Obinne (2012) in Adeniji(1977) and Idowu(1994) acknowledge that although a body of knowledge drawn from research and indigenous technical data is so immense, its impact on the course of human development lags behind this enormous knowledge. It is argued for instance that in agriculture, systems that constitute the sector are stratified into highly formal technological generation system (researchers), relatively well educated technology dissemination system (extensionists) and a mass of technology utilizing system (farmers) who have limited or no formal education. They conclude by writing that the implication of this stratification is that messages, production recommendations, field problems, and innovation transfer from one system to another, as well as within the system have not been effective in achieving expected development in agriculture. It is thus recommended that communication therefore needs to be conceptualized as a process of information flow through which ideas are transferred from a source to a receiver with the intent to change recipient skills.

### **2.3 Effective Communication**

Small scale farmers from rural areas are the basis for economic development in developing countries such as Tanzania and information is an essential ingredient in any development process. Farmers should have access to any kind of information which will increase their capability, productivity, efficiency and knowledge levels.

In a study conducted by Sturges and Chimseu (1996) in Malawi to examine the chain of communication between providers of information (chief government ministries and agencies) and the ordinary citizens in the rural communities also the intended users of this information. Findings revealed that information providing agencies which serve rural areas are essentially geared up for a one-way or top-down flow of information. Not only does this mean that they have limited capacity to respond to expressed demand for information, but also that their messages lose effect from lack of timeliness, insufficient selectivity and targeting.

They further discovered that the provision of information and farmers' use of it is significantly influenced by a number of key factors including the following:

1. Human capacity which is basically the capacity of extension personnel to engage and obtain feedback from farmers is one among the many factors, others in this category also included the search for global and local information to be shared with farmers all influencing how farmers use information provided. Human capacity can also refer to both the quality and quantity of extension personnel. Their ability to acquire and develop new information and knowledge and to contextualize it for farmers in the

operational area affects the use and impact of this knowledge on farmer productivity and income. Additionally, supporting farmers to process and integrate information from many different sources was also deemed imperative.

2. Content which includes the reliability, relevance, usability, and timeliness of information is also critical. Beyond the provision of information on the main cereal crops and technologies, efforts are needed to augment the content to include market intelligence, policy insights, farmers' experience, and off-farm enterprise information, as well as the integration of information to create links with supporting services and inputs.
3. The process through which information is shared can determine the effectiveness of the information and its use. Setting priorities for information needs in consultation with users, adding value to the information collected, learning from how information is used by farmers, and changing the dissemination strategy by stratifying and targeting users will influence the success of the extension approach.
4. Technology is another crucial aspect where its increasing use can improve the nature and speed of information sharing. Effective and sustainable use of technology depends on the appropriateness of the technology for the user and the content shared via this technology.

Stefano *et al* (2005) in their literature concerning forms and delivery of agricultural information in South Africa examined various aspects that included: verbal means, printed literature and electronic communication technologies. They noted advantages and limitations to these various forms of information exchange and the verbal forms were identified as most favored by rural communities in South Africa, this preference was attributed to the fact that it is traditional and requires low level of literacy. Nevertheless, shortcomings of verbal communication are that people can't recall exactly what was said in a given situation, and the content of such verbal exchanges is restricted to those present.

Other forms of information delivery such as radio, tape recorders and videos from electronic Medias were used successfully in rural areas. Unfortunately, resourcefully farmers limited rarely had access to computers or sufficient telecommunication infrastructure, and lack of computer literacy may prevent full access to electronic text.

Kaaya (1999) examined the vast store of information technology regarding agriculture that has been globally built. The aim of this information technology is to support increased agricultural production in developing countries and Tanzania in particular. The flow of information to and from and within the agricultural sector is said to be a crucial prerequisite for effective agricultural development. He concludes by supporting the idea of investing in information technology to facilitate effective flow of information to all actors in sectoral value chains if development was to be realized in least developed economies. He views information flow in agriculture as very crucial because it addresses:

1. the critical role of agriculture in economic and social development
2. the need to increase yields
3. the need to improve quality
4. the need to avoid costly mistakes

#### 2.4 Information flow as the Relationship between a Receiver and Various sources

Information flow is the quantity of information appropriate to a given topic that a receiver obtains from a particular source (Mundy, 1992). Information flows is a characteristic of the relationship between a receiver and various sources as implied in figure 1 below.

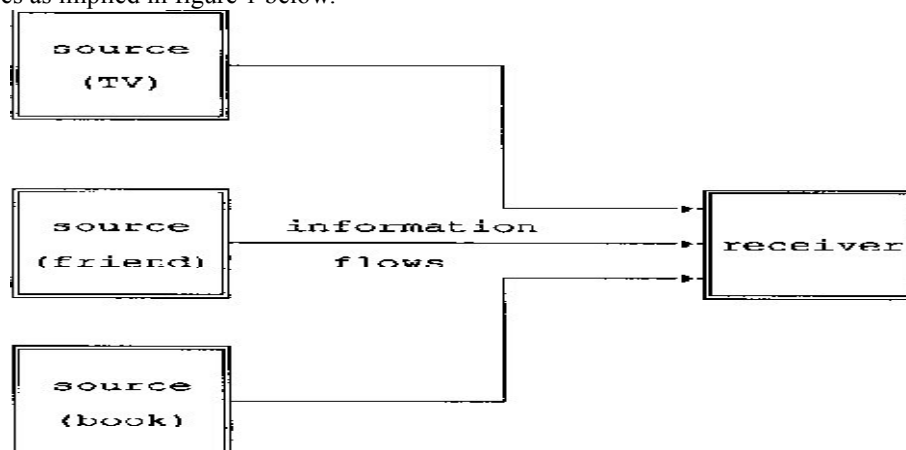


Figure 1: The Information flows  
Source: Mundy (1992)

The transfer of market information from one actor/point to another point/actor is essential for decision making. In India for instance, market information via mobile phones has helped to improve the economic performance of small producers (Jensen, 2006). Similarly in Kenya, the Kenyan Agricultural Commodity Exchange Ltd (KACE) has been providing a full market information system and marketplace through information centers, SMS and voice recordings via a toll-free number. Results from the study show significant usage of the systems to match both local supply and demand, learn current market prices and further provide leverage with brokers and traders [KACE, 2007].

Information flow in agricultural value chains according to the inter-stakeholder communication needs satisfied can be divided into three categories namely:

1. link-to-link (L2L):  
 Incorporating information flow required to coordinate the sale, movement, and distribution of produce along the value chain,
2. peer-to-peer (P2P):  
 Communications required to share knowledge and experiences between members of the same stakeholder group and the expert community serving that group and
3. end-to-end (E2E):  
 Communication between producers and consumers to facilitate exchange of non-economic values as external inputs to market pricing (e.g. certification) -(Parikh, Patel and Schwartzman; Citeserx.ist.psu.edu/viewdoc/download?doi=10.1.1.113.4811)

The matrix cells in figure 2 below represent specific pair wise communication links. L2L links are indicated in orange, P2P in green and E2E in white.

from \ to	Farmers	Intermediaries	Consumers	
Consumers	NONE	Market Information	Consumer Advocacy	Supported by government and NGOs
Intermediaries	Market Information	Market Information, Procurement & Traceability	Labeling & Marketing	
Farmers	Extension	Market Information, Procurement & Traceability	Inspection & Certification	Supported by government, NGOs and certifying agencies
	Supported by government, NGOs and universities			



E2E      P2P      L2L

Figure 2: Matrix cells pair wise communication links

**Source:** [Citeserx.ist.psu.edu/viewdoc/download?doi=10.1.1.113.4811](http://Citeserx.ist.psu.edu/viewdoc/download?doi=10.1.1.113.4811) downloaded 4.10.2013

Another study embarked on by the Agricultural Council of Tanzania (ACT) regarding poor communication on fertilizer information flow/delivery and its utilization in Songea and Kilombero districts of Tanzania established interesting findings. The study identified information asymmetry/gaps as stated below:

1. At farmer level, the essence of using information as a tool for business decision was not well articulated.
2. At provider level, information provided was scattered, incomplete and often outdated.
3. There were few financially strong stockists and wholesalers hence a weak link in the fertilizer supply chain.

The study therefore was of the conclusion that poor agronomy practices had led to reduced usage of fertilizers, a setback that significantly impacted on productivity (ACT, 2007)

### 3. Research Methodology

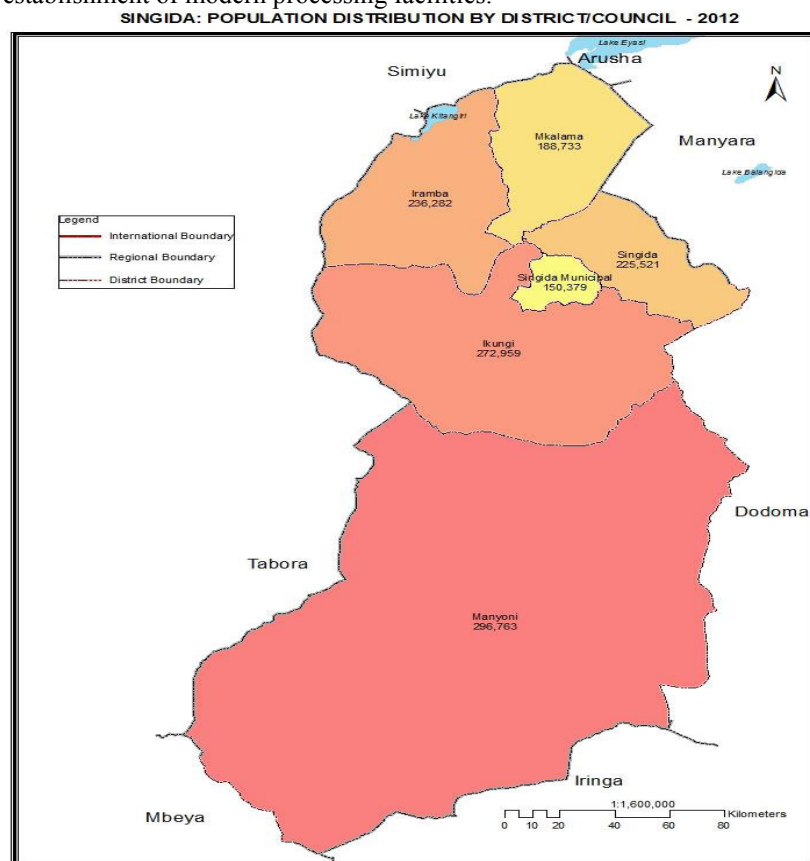
The study involved the generation and analysis of data from a sample of 12 Agricultural and Marketing Cooperative Societies (AMCOs) selected from the districts of Iramba, Manyoni, Singida Urban and Singida Rural in Singida region all in Tanzania. The districts are profoundly known and famous for sunflower production in the entire country. Sampling consisted of 229- sunflower growers and data generation criteria for this region and its districts considered the following:

1. Level of significance in terms of sunflower production
2. Organization and number of AMCOs groups as key principal players in the sunflower value

chain

### 3. Accessibility and cost of travel to various villages in the region

Agricultural and Marketing Cooperative Societies (AMCOs) in Tanzania were formed as a result of poor performance of the Cooperative sector in the late 1980s. Their main objective is to organize the supply inputs for agricultural crop production, purchase produce, process, market, distribute agricultural products and facilitate skills for the improvement of the commodity they produce. The sunflower sub sector has taken root in Tanzania because of its food value and low processing costs small scale processors incur; this is because in places like Singida, farmers are not obliged to use expensive inputs like chemical fertilizers. Production of the sunflower seed is predominantly exercised by small scale farmers who own between 1-3 acres. The current move in Singida region is to improve and modernize the sub sector by employing modern agronomical practices, field management, and establishment of modern processing facilities.



Source: URT (2013) 2012 Population and Housing census report

### 4. Operationalization of theoretical constructs

Using a psychometric scale, the researcher issued a questionnaire to investigate how small scale farmers perceived the role of information flow i.e. how strongly they agreed or disagreed as to whether access to market information from potential buyers through building business relationships and linkages was in progress. Variables investigated included: feedback from buyers on quality of sunflower produced, information on market development, benchmarks of sunflower produced with other competitors, and the use of information by farmers in production planning and marketing within the sunflower value chain.

### 5. Results

Table 1 below provides data assembled from a sample that was used in the study, demographic characteristics of respondents included gender, level of educational, sunflower farming practices, storage and grading. In an effort to complete validity and reliability analysis, two techniques were employed that were, data was validated by using factor analysis and reliability was measured by using Cronbach's alpha.

**Table 1:** Factor Analysis for Validation

STAGE 1			STAGE 2			STAGE 3			
KMO = 0.777***			KMO = 0.758***			KMO = 0.771***			
Cum % of variance 69.911			Cum % of variance = 61.607			Cum % of variance = 65.187			
Component			Component			Component			
	1	2	3		1	2		1	2
ACCESS		0.62		ACCESS	0.408	0.483	ACCESS	0.396	0.438
INFO	0.873			INFO	0.894		INFO	0.894	

Source: Researcher

Factor analysis for validation of variables considered in this study was completed in four steps that included:

1. Calculation of correlation matrix for all variables used in the study
2. Factor extraction
3. Rotation of all factors to create a more meaningful and understandable factor structure
4. Interpretation of results

According to Pallant (2013) two main issues are considered when determining the suitability of particular data for factor analysis and these include, sample size and the strengths of the relationships among variables. She cites Tabachnick and Fidell (2013) who suggest that sufficient sample size should range from 150 to above 300 cases. The second issue is the strength of the inter-correlations among the variables, two statistical measures has been suggested to assess the factorability of data and these include Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. For factor analysis to be considered appropriate, Bartlett's test of sphericity should be significant at  $p < .05$  and KMO index should range from 0 to 1, with 0.6 suggested as the minimum value.

Commenting on factor extraction, Pallant suggests a number underlying varieties of approaches the can be used to extract the number of underlying factors or dimensions. Some of the approaches include: Principal components, image factoring, maximum likelihood factoring and alpha factoring. The most commonly used approach is the Principal component analysis (PCA) and the decision concerning the number of factors to be retained can be based on Kaiser's/or eigenvalue criterion, scree test or parallel analysis. For the purpose of this study however, the approach applied was the PCA and the decision concerning the number of factors to retain was Kaiser's criterion of which eigenvalue of 1.0 or more are retained for further investigation.

Two constructs which are governance and upgrading were assumed to affect the income growth of sunflower farmers and hence poverty reduction. From each construct a number of propositions were made for respondents to rate in a Likert scale of 6. The propositions for governance were: access to the sunflower market (ACCESS), trust (TRUST), information flow along the sunflower value chain (INFO), distribution of gains from sunflower (DISTR), controllership in the sunflower value chain (CONTROL), and sunflower production planning and integration (PLANNING). Principal Component Factor Analysis (PCA) was carried out to check for validity. As shown in Table 1, initially the KMO and Bartlett's Test was 0.771 with a cumulative percentage of variance of 69.911 and the Chi-square was highly significant at 1% indicating that Factor Analysis can indeed be used for the given data set. However as regards governance, the proposition on ACCESS did not load well the same as the propositions for upgrading which distributed evenly in two different components. The process was repeated three more times with the exclusion of components ACCESS, COOP, and INPUTS from the equation. Finally, the KMO and Bartlett's Test was 0.758 with a cumulative percentage of variance of 70.843 still indicating that Factor Analysis can indeed be used.

## 6. Reliability Analysis

Reliability is defined as the ratio of true-variance to the total variance yielded by the measuring instrument. Reliability indicates stability and also the internal consistence of the test (Krishnaswamy, Sivakumar, & Mathirajan, 2009). The definition implies that reliability may well include aspects like stability, dependability, and predictability. An indicator of internal consistency is Cronbach's alpha coefficient of a scale above .70 and an optimal range for the inter-item correlation of .20 to .40 (Pallant, 2013).

**Table 2:** Cronach’s Alpha for reliability analysis

<b>GOVERNANCE</b>			
<b>STAGE 1</b> <b>Cronbach’s Alpha = 0.848</b>		<b>STAGE 2</b> <b>Cronbach’s Alpha = 0.865</b>	
	Cronbach's Alpha if Item Deleted		Cronbach's Alpha if Item Deleted
<b>ACCESS</b>	0.865	<b>TRUST</b>	.824
<b>INFOFLOW</b>	0.803	<b>DISTRIBUTN</b>	.861

Source: Researcher

Reliability analysis was carried out using Cronbach’s Alpha and as shown in Table 2, the Cronbach’s was 0.848, well above the cutoff point of 0.6. However with the exclusion of ACCESS, the Alpha would increase from 0.848 to 0.865 hence justifying its removal from the equation which ended up with Alpha of 0.865.

**Table 3:** Information flow along the sunflower value chain

	Totally disagree	Disagree	Neutral	Agree	Totally agree	Don’t know
I regularly receive feedback about the quality of my sunflower seeds from the buyer	81.7%	9.6%	0.9%	1.7%	0.4%	5.7%
I regularly receive feedback from the buyer about market development	83.8%	7.9%	1.7%	1.7%	0.9%	3.9%
I receive information on how my production compares with others (e.g quality, price etc)	84.7%	7.4%	0.9%	0.9%	1.7%	4.4%
The information received from my buyers is useful for planning and marketing sunflower	79.9	7.4%	0.4%	2.2%	4.8%	5.2%

Source: Researcher

Data were generated from 12 agricultural marketing cooperatives societies in Singida Tanzania and these focused on; information flow along the sunflower value chain, feedback on the quality of sunflower from buyers, information concerning market development of sunflower, benchmarks about key parameters with competitors and finally the usefulness of feedback to production and marketing plans of sunflower. The findings were that 91.3 per cent of sunflower producers disagreed to have received feedback regarding the quality of sunflower produced from their buyers. In overall terms, the findings showed that about 91.7 percent, 92.1 percent, and 87.3 percent of the sampled population had disagreed to having been supplied any information about sunflower market development, benchmarks with other producers, and its usefulness for planning and marketing of sunflower respectively.

The distribution by district stood as follows: 73 respondents (31.9%) were selected from singida town, 92 (40.2%) were selected from Singida rural, 24 (10.5%) from Iramba and 40 (17.5%) from Manyoni. As regards gender composition, 70.7% were male while 29.3% were female. As regards marital status, 71.2% were single, 22.2% were married and 6.6% widowed. In terms of education level, 88.2% had basic level of education (primary education), 8.7% had acquired secondary education, 0.9% had acquired advanced level of secondary education, 0.4% had diplomas, 0.4% had degrees and 1.3% had no formal education. The distribution by age mainly constituted the energetic and functional groups between the ages of 21-50 years old (82.1%).

In terms of farming characteristics, 58.5% of all farmers on average cultivated fields of sunflower ranging from two to four acres. 15.3% cultivated fields of sunflower ranging from five to seven acres and 10.5% cultivated only one acre. As regards experience in sunflower production, 63.8% responded acknowledged to having experience in the sub sector while 36.2% had none

As regards the question of who sets the price for the harvested sunflower, 69% of responses indicated that prices were set by buyers and only 21.4% could negotiate set prices with buyers. As regards the selling points, 72.1% of respondents sold their harvested sunflower seeds at a farm gate while 27.1% sold at the AMCOs. Respondents were also asked to state their perceptions of the best and competent market in terms of price to which 87.8% of responses indicated that AMCOs offered competitive prices followed by farm gates at 8.7%. As far as buyers were concerned, respondents were asked to clearly indicate their prospective buyers and responses implied that agents of firms from outside Singida appeared to be the leading buyers. 63.8% of respondents sold their produce via agents, 14% sold via AMCOs, 19.2 sold to small processors around Singida and 2.2% sold to large scale processors. In this category, AMCOs were rated as best buyers as affirmed by 88.6% of respondents.

### 6.1 Access to feedback from Buyers

Empirically, access to feedback from buyers of agricultural produce can help farmers to benefit from existing markets if they are well engaged in some value-adding activities especially those related to quality parameters.

Detailed requirements that specify sunflower standards must be met by small scale farmers producing the oilseeds in the study area. However, a summary of empirical statistics (table 3 above) of respondents' opinions on whether they acquired feedback on regular basis from buyers/lead firms about the quality of sunflower showed informational power asymmetries. About 91.3 percent of respondents disagreed that they received regular feedback from buyers regarding quality of sunflower seeds they produced.

### **6.2 Information on Market development**

Establishment of agricultural market information system is very important in addressing food price volatility through more timely, accurate and transparent information on global food markets (<http://www.amis-outlook.org/>). According to the United Republic of Tanzania (URT) and the agricultural marketing policy in particular, the development of efficient, effective, flexible, accessible and equitable agricultural marketing system is a pre-requisite in fostering market oriented agriculture's contribution in income generation, jobs creation, foreign exchange generation, providing balance between rural and urban areas, supplying food at affordable prices and strengthening linkages with industry (URT, December 2008). Information on agricultural market development is critical in triggering major developments in domestic, regional and international agricultural commodity markets.

As far as receiving information related to sunflower market development was concerned, respondents seemed significantly unaware of the market needs. Almost all respondents (91.7 per cent) disagreed to having received information on market development. It is quite clear that information on market development for sunflower farmers in Tanzania is far from accessible, a challenge that will no doubt impact negatively on the linkage between farmers and other actors in sunflower value chain.

### **6.3 Market comparison information**

In order to make a significant difference in the lives of farmers, data from different regions or parts of Tanzania and the world need to be freely and openly disseminated. The availability of information regarding agricultural breakthroughs from other regions in Tanzania and the world over will aid in creating new farmers' business models which will in turn improve some areas believed to be lagging behind from a comparison perspective. This can only be achieved through acquiring information from other actors in the sunflower value chain. According to Sørensen (2012) information generation is not the right of the marketing function of a company, other actors or stakeholder may have excellent information regarding trends and customer preferences. For that matter, information on customers or competitors in the industry must be disseminated and effectively used for necessary improvement.

As far as receiving and comparing information about parameters such as process quality with other competitors or consumer needs about sunflower subsector was concerned, majority of respondents were ignorant of market information on prices, quality and other needs. Almost all respondents 92.1 percent disagreed to having received information that was helpful in making comparisons between their products and those of competitors or requirements by customers. As a matter of fact, there are weak linkages between farmers, policy makers and other sunflower value chain players in Tanzania. The reason behind this is that oilseeds are not grouped in either food security or an export category that leads to limited support for the commodities in terms of research and development, information generation and dissemination, extension services and development programmes. This creates a barrier with dire consequences to producers' economic growth.

### **6.4 Usefulness of Information on Production planning and Market development**

Product development remains an important part of any firm's competitive strategy. Lead firms always count on new product development to triumph over other competing firms. On the other hand, market development aims to widen customer base for the purpose of selling more products and ultimately increasing firm profit margins. There is great coloration between goods movement to market and the exchange of information. Information needs to be managed before a sale is made, while satisfying the sales order and during after-sales maintenance. In conclusion, responsiveness to customer demand and overall customer satisfaction cannot be achieved with mismanagement of both the goods movement and information flow throughout the supply chain (Singh, 1996). Findings regarding information flow on production planning and market development indicated that 87.3 percent disagreed to having received information helpful for planning production and marketing sunflower.

## **7. Conclusion and Recommendation**

In a nutshell, the study addressed information accessibility for sunflower growers in Tanzania. The aim of this study was to investigate small scale farmers' perceptions on accessibility of information flow i.e. how strongly they agreed or disagreed to having access to market information from potential buyers through building business relationships and linkages. Theoretically, buyers of agricultural produce can help farmers to benefit from existing markets if they are strategically engaged in specific value-adding activities. Based on the study's findings however, information flow from buyers was generally inaccessible. The study proved that there existed information asymmetry hence sunflower farmers perceived the lack of information flow as paramount in affecting proper decision making among them.



Despite her favorable climate and soils, the lack of information flow to facilitate production and trade in the sunflower sub sector has for decades left Tanzania no choice but to rely on imports from other countries. Farmers lack adequate information on sunflower agronomics and as a result, they are barred from acquiring the much needed feedback from the final consumer and other actors along the sunflower value chain.

Recommendations put across were based on findings from the survey. They suggest a wide range of strategies which Agricultural Marketing Cooperative Societies (AMCOs) can utilize to lobby and advocate for the much needed information flow necessary to facilitate improvement in production and trade of sunflower seeds to its small scale farmers.

Farmers lamented that buyers do not share feedback on a number of parameters such as sunflower standards or quality, quantity and time of delivery and based on these therefore, it was recommended that there was need to:

1. Improve communication between sunflower producers and other value chain actors such as consumers and further to facilitate exchange of information through strengthening institutional capacity
2. Increase access to different sunflower markets through initiatives such as marketing researches, marketing plans and sales tied to sharing of information.
3. Improve institutional capacity such as AMCOs on assessment of their competencies against sectoral best players. This is necessary in providing information on new insights and improved best practices about sunflower production and trade
4. Include and coordinate both the private and public sectors in the reform process of the edible oil sector to foster value addition that will significantly contribute to successful outcomes of the industry.

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