

Role of small-scale farmers in making agricultural market information systems relevant and sustainable in Bugiri district, Uganda

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Abstract

The study aimed at establishing the role of small-scale farmers in making agricultural market information systems relevant and sustainable in Bugiri district. This study employed a case study research design and adopted a qualitative research approach. Purposive sampling method was used to select respondents with in-depth information and knowledge relating to the topic under study. Data was collected using focus group discussions and unstructured interviews methods. Major findings reveal that market information is still largely focused on prices and does not give details about quality and quantities. Small-scale farmers' access to and utilization of market information is still limited but gradually improving. There is no systematic infrastructure for timely collection and dissemination of information in an appropriate medium to all stakeholders. The study concludes that value chain development is crucial for the success of market information systems and it is therefore imperative that information be provided on different areas along the chain. The study recommends establishment of village/parish information centres and display boards to inform small-scale farmers about up-to-date market information.

Keywords: Small-scale farmers, market information, sustainable, Bugiri, Uganda.

Introduction

For many developing countries, prioritizing improvement in the performance of the agricultural sector implies focusing on the predominant small-scale farmer. Hitesh (2010) defines a market information system as a set of procedures and methods designed to generate, analyze, disseminate and store anticipated market information on a regular basis (Binayee, 2005). The aim of a market information system is to provide information about prices and other information relevant in handling agricultural products hence responding better to market needs.



Notwithstanding diversity of contexts and data constraints, according to the International Fund for Agricultural Development and the United Nations Environment Programme, about 2.5 billion people are employed, partially or entirely, in 500 million small farms worldwide. With regard to geographic distribution of small farms (that is, less than 2 hectares), data from the Food and Agriculture Organization of the United Nations (FAO) covering the 2001–2004 period suggest that about 87 per cent of these are in the Asia and Pacific region, 8 per cent are in Africa, 4 per cent are in Europe and less than 1 per cent are in Latin America. There are, for example, about 45 million small farms in Africa, many of which consist of subsistence farmers that rely entirely or partially on family labour, which is comprised mainly of women.

Smallholders supply about 70 per cent of Africa's total food requirements and provide around 80 per cent of the food consumed in both Asia and sub-Saharan Africa. Furthermore, smallholders in several developing countries produce the bulk of these countries' main agricultural exports. For example, in Ghana cocoa production is dominated by thousands of smallholder producers cultivating less than 2 hectares per farm (Ali-Olubandwa, 2019). Owing largely to its smallholders, Ghana produces an estimated 20 per cent of the world's cocoa, making the country the second largest producer in the world, with cocoa exports accounting for about 40 per cent of its foreign exchange earnings and for 8–12 per cent of its gross domestic product

The emergence of agricultural market information systems is a vital element that is sure to inform farmers about market conditions, prices, and buyers and empower them by making transactions more equal and fairer (Kintu, 2011). In many Sub-Saharan African countries including Uganda, it is common that nearby villages or markets have significantly different farm gate, wholesale or retail market prices for the same quantity and quality of agricultural produce (Kizito, Donovan & Staatz, 2012).

The inability of market information service providers to localize market information systems to meet the needs of the small-scale farmers appears to render it irrelevant and impractical to farmers. The current top-down approach to market information systems' management is similar to the 1980s' Uganda government-run market information service where information provided was of some use to planning institutions but of little use to farmers (Ferris & Robbins, 2004). Agricultural market information systems face criticisms for failing to continuously provide value adding information, reach out to grassroots communities, deliver the information timely in the remote locations, and provide more analytical and accurate information in a way that the target groups understand (Binayee, 2005).

Majority of the agricultural market information service providers use a top-down approach to market information systems' management which focuses on urban markets and seems to pay little or no attention to sub-county, county and district markets to which many small-scale farmers have access. Worst of all, there have been no initiatives at all taken by the government and other stakeholders to address this problem. Many previous studies (e.g. Balirwa & Waholi (2019); Sebatta, Mugisha, Katungi, Kashaaru, & Kyomugisha, 2014; Kiyimba, 2011) have been conducted on the role of small-scale farmers in availing agricultural market information systems but its relevancy to the sustainability has not been fully explored. This study therefore attempts to close the gap between the role the role of small-scale farmers in making agricultural market information systems relevant and sustainable.

Bugiri district is located in the south eastern part of Uganda. It lies between longitude 33010' east, 3400 East and latitudes 00 6' north and 1012 North. The district is bordered by: Tororo to

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the northeast, Iganga to the west, Namutumba to the North West, Mayuge to the southwest and Busia to the south east. The district also extends to the Uganda/Kenya border in the south east and in the waters of Uganda/ Tanzania border in the South (Bugiri District Local Government, 2004).

Objectives of the study

The study was guided by the following specific objectives:

1. To identify the agricultural market information needs of small-scale farmers in Bugiri district.
2. To establish factors associated with access to and utilization of agricultural market information among small-scale farmers in Bugiri district.
3. To examine challenges faced by small-scale farmers in Bugiri district

Literature review

Agricultural market information needs in developing countries

Enhancing the ability of small-scale farmers to access market opportunities and diversify their links with markets is one of the development challenges facing both governments and NGOs (Njuki, Kaaria, Sanginga, Kaganzi & Magombo, 2000). In developing countries, according to FAO (1997) market information initiatives are often part of broader interventions and part of the agricultural marketing and agribusiness development strategy that many governments are actively engaged in (FAO, 2011). It's commonly understood that long transaction chains, lack of transparency, lack of standards, and insufficient access to markets for products has perpetuated low incomes in predominantly agrarian economies (Magesa, Michael & Ko, 2020).

Early attempts at market information provision in developing countries involved government bodies collecting price information and arranging for its dissemination via newspapers and radio stations. The information provided was often not very accurate and usually reached farmers too late to be of practical use. Governments often attempted to cover far too many locations and many services either collapsed after initial donor assistance came to an end or managed to struggle along with little impact. Furthermore, it was soon recognized that it was not enough just to supply market information to farmers. They needed assistance in understanding how to use that information (FAO, 2011). However, donor organizations such as Food and Agriculture Organisation (FAO), International Institute of Communication and Development (IICD), Department of International Development (DFID), United States Agency for International Development (USAID) and the Bill and Melinda Gates Foundation, remain committed to improving the efficiencies within the supply chain through greater information provision (Slamet, Nakayasu & Ichikawa, 2017).

Factors associated with access to and utilization of agricultural market information among small-scale farmers



The recent surge of mobile phones usage in developing countries has provided an opportunity for innovative projects to leverage this new distribution channel to get critical market data into the hands of farmers and traders, taking advantage of the SMS capacity of phones. Using the so-called "push" method recipients of information are identified on a database and automatically receive messages of relevance to them. Alternatively, the "pull" method enables farmers and traders to interrogate the database of the market information system. A farmer can send an SMS with the product and location he is interested in (e.g., cassava; Bugiri) and receive an immediate reply.

One particular issue concerns the need to bridge the so-called "digital divide" between those people with the ability to access and use technologies effectively and those without. The challenge remains to tackle such difficulties and to resolve them. Silva and Figueroa (2002) discussed how to promote the improved use of ICTs in the context of a specific country, namely Chile. They drew from institutional theory, particularly adaptations of the theory relevant to the information system's field (Slamet, Nakayasu & Ichikawa, 2017) to develop a framework for understanding the role of specific institutional players. These players include private sector companies but also government authorities and other agencies such as trade industry associations and educational bodies. Silva and Figueroa also drew on the critical development theorist Escobar (1995) to discuss the meaning of the term development, placing greater emphasis on local realities such as indigenous sources of knowledge, power structures and local discourses of progress. The authors suggest ways in which their institutional framework can be applied in the formulation and evaluation of national ICT policies.

Challenges faced by small-scale farmers

It must be noted that the European Commission (2012) observed that small-scale farmers' accessibility to market information is limited by factors such as; untimely delivery of the information, collection of the market information is from limited location within country, inappropriate media used for disseminating the market information, market information is still largely focused on prices and does not give details about quality and quantities needed. Price information should be accompanied with more information that supports the users in making informed decisions before production and trading while market information dissemination is limited to a few areas or regions.

Delivery of the information to target group is crucial (timeliness) otherwise the information may be stale by the time the beneficiary receives it. The absence of a systematic structure that ensures proper gathering of information, appropriate avenues of dissemination of information in the district hampers timely and accurate dissemination of information among farmers. Lack of a proper and systematic structure that allows easy access to information does cause delays or sometimes total lack of information in the area. Seeing that market information could not be looked at in isolation, numerous challenges involved in the agricultural chain of crop production were identified and included the following; continued use of rudimentary tools in farming that give low yields, lack of capital to purchase appropriate inputs, existence of rampant fake input dealers, changing weather patterns, illiteracy among small-scale farmers, low uptake of information on best farming methods, the middle men, and issues relating to gender and cultural challenges.

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Methodology

The study adopted the qualitative research approach. According to Kothari (2005), this approach is concerned with subjective assessment of attitudes, opinions and behavior. Pickard (2007) adds that the qualitative research approach combines the individual research participant, the researcher as a research instrument and appropriate data collection techniques in a collaborative process of producing meaning from data and using that meaning to develop theory. The study employed a qualitative approach because it is very suitable in getting detailed views, experiences and behaviors of small-scale farmers actively involved in market information collection, analysis and dissemination, especially on matters of access, utilization of agriculture market information services and the players involved. A case study research design was adopted.

The study concentrated on Bugiri district which is located in Eastern Uganda, about 178km from Kampala. It is estimated that the mid-year population of Bugiri at 406,800 and the majority of people in Bugiri district are subsistence farmers who grow maize, cassava, potatoes, coffee, matooke and sorghum (Uganda Bureau of Statistics, 2011). This district was chosen because it is among the few districts where farmers have been empowered and are actively participating in agricultural market information system processes. The population of the study comprised of 184 small-scale farmers from Nankoma sub-county- Bugiri district- composed mainly of women and the youth but with a small percentage of men (Bugiri District Local Government, 2004). Purposive sampling method was used to select respondents with in-depth information and knowledge relating to the topic under study. This was chosen because it focused on selecting information rich-cases for study in-depth. These rich cases in this particular study were the small-scale farmers in Bugiri district whose capacity has been built in different areas including market information system process. For the different stratas of farmer groups, the researcher subdivided the respondents in strata of men, women and general, thereby employing stratified sampling. What was done here is sub-dividing the groups then randomly selecting the final subjects (groups) that were involved in this research.

Data for this study was collected through focus group discussions and key informant interviews. The test-retest method was carried out among a few selected farmers and research assistants with the latter being done during the training of research assistants. Tools were cleaned and essential corrections made to fine tune them before actual data collection. Data collection entailed using both primary and secondary data as follows. A total of 8 focus group discussions were conducted among women, men and additionally 2 mixed groups to glean adequate and unbiased data for the study. Each focus group comprised of 6 participants and lasted for 45 minutes. Nine other interviews were conducted within the district among district, NGO officials. Results from these interviews and focus group discussions formed the core of the primary data. The collected data was then analyzed and presented.

Study results

Agricultural market information needs of small-scale farmers in Bugiri district

Findings reveal that commodity prices, market requirements, information and communication technologies, best farming practices, agricultural financing and information on agricultural in-put



are some of market information needs of farmers in Bugiri district. Others include post-harvest handling and collective marketing. Responses from focus group discussions and those from Non-Governmental organizations expressed a great need for a strong market information system that can or will provide valuable services to them (farmers) on all commodities produced. As it is now, Bugiri Local Government does not have such a system that provides important commodity information on agricultural commodities to small-scale farmers. Creating a wide variety of market information services in the district was even emphasized by key informants at the district headquarters. This study principally established that market information needs start at planning level as farmers prepare fields for planting and sowing and throughout the production chain. The explanation for this according to officials from InfoTrade is that farmers are being advised to first carry out appropriate market research before production so that whatever is produced attracts ready market, contrary to just farming without prior knowledge on what is beneficial and profitable. About market requirements, one female respondent from Namakoko parish noted during a focus group discussion in Nankoma sub-county that:

Almost every family in our village used to plant sweet potatoes every season. Although it was majorly for home consumption, surplus was always taken to the market for selling. Upon reaching the market it would be flooded with sweet potatoes of every color and size. Now the trend is changing as farmers are seeking to know what is on demand and what fetches more money before embarking on cultivation.

This essentially vindicates the fact that farmers need market information.

Factors associated with access to and utilization of agricultural market information among small-scale farmers in Bugiri district

Findings reveal that untimely delivery of the market information, collection of the market information is from limited locations within the country, inappropriate media used for disseminating the market information and market information being largely focused on prices and does not give details about quality and quantities needed are the factors associated with access and utilization of agricultural market information among small scale farmers in Bugiri district.

About inappropriate media, one responded female noted in an interview that:

We hear the information is released on TV and radio stations but we don't have time and access to TV. For me, I even don't have a TV and even the time the news is read on the radio, I am normally busy with daily work.

Delivery of the information to target group is crucial (timeliness) otherwise the information may be stale by the time the beneficiary receives it. The absence of a systematic structure that ensures proper gathering of information, appropriate avenues of dissemination of information in the District hampers timely and accurate dissemination of information among farmers. Lack of a proper and systematic structure that allows easy access to information does cause delays or sometimes total lack of information in the area. This confirms Kintu's (2012) observation that despite the effort in the development of channels for dissemination, it is clear that farmers have a

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higher preference for word of mouth as a source of information thus making agricultural extension a good source of information followed by radio.

Furthermore, information sharing plays an important role in the lives and activities of these small-scale farmers. During a focus group discussion in Nankoma Parish, one of the farmers said that:

I used to sale my goats at fifty thousand shillings (Ugx 50.000) but now before I sale I call my colleagues who advise me on the market price. Since I started doing this, I sell each goat between One hundred and twenty thousand shillings (Ugx 120.000) to one hundred and fifty thousand shillings (Ugx 150.000).

Such views were echoed by other farmers dealing in crop farming. Creation of market opportunities that increases farmers choices on who to sale to and at how much is definitely taking root in Bugiri.

Regarding the need to access to profitable markets, the study findings reveal that insufficient access to profitable markets has without contention continued to chain small-scale farmers to the lowest rank of economic levels. Any new option that creates avenue to change market practices is more than welcome. One key informant from Nankoma Area Cooperative Enterprise (ACE) observed that:

Commercialization of agriculture has been, to the ears of these farmers, a radio rhetoric; a song for politicians and far from achievable. But talking of agricultural market information, people are beginning to think production volumes, market quality requirements, how to set prices on products and consequently a choice on who to sale to. In the past it was not like this. Middle men would come from across in Kenya and others from major towns such as Mbale and Kampala and prey on our farmers, because they were the price determinants and almost the only clients. That is not so now for small-scale farmers have options.

When the government of the Republic of Uganda rolled out Poverty Eradication Action Plan (PEAP) in 1997, the plan was to benefit all farmers in the country, 18 years down the road, farmers in this part of the country have not seen the benefits. The District Agricultural Officer (DAO) attributed the farmer's assertion to laziness and ignorance. The NGO officials observed that the biggest problem is under staffing at the District, one of them said:

Originally the Agricultural Extension Officers employed by government had a very big geographical coverage. It was possible to find one officer working in a Sub County that is equivalent to a District now. The subsequent ones under NAADS have issues with work ethics and not properly trained to work with local communities. That is why commercialization of agriculture has not taken root in this part of the world.

A farmer attending a focus group discussion in Masita parish was in support of the above statement revealing that:



It is unfortunate one of us passed on (a woman died while cultivating in her garden) it is the determination and the assurance that us women have seen in agriculture. We used to toil without benefit but now we toil with hope that after cultivation we will get money from the sale of our produce. Go around our villages and you will find an increase in the number of women's groups and all of us are engaged in farming. We do our negotiations our self with no or limited interference from the men. Informed agriculture is benefiting us and we cannot look behind.

Another factor found was the need to commercialize agriculture and influence agro-product supply chains. Farmers talked about best practices that allow easy weeding and harvesting yet giving more yields; and better market opportunities, a clear depiction that subsistence farming is slowly but surely losing grip on the farmers in the area. Responses from the field show increased excitement about trainings brought in by the different Non-Governmental Organization (NGO). One of the farmers said:

Traders from the city come to us for maize, for millet and ground nuts, when a farmer works hard, he/she can get all the money that he/she wants, so thinking commercial in agriculture is the way to go. Response from focus group discussions attest to this voice.

The District Commercial Officer summed this up by saying, "this drive will help small-scale farmers move from subsistence to commercial farming so that they can feed their families and their communities while earning more money".

Challenges faced by small-scale farmers in Bugiri district when participating in agricultural market information system processes

Farmers interviewed in the study revealed that having many sources of market information makes authenticating the information difficult. There is no systematic flow of credible information that farmers can truly trust. One of the farmers revealed that;

On the same day, a fellow farmer can tell you that a sack of maize grain is sold at Ugx 120,000 at the District market; information on the same market notice board says Ugx 140,000; the trader you call offers Ugx 100,000; the radio says Ugx 150,000 and the mobile SMS says Ugx 120,000. Whose price do you take? How can I know who is telling me the truth without travelling around? This is a challenge. We sometimes sell our produce only to realize later that we were offered a very low price.

Inability to read or write is a common African song and Bugiri is no exceptional. The farmers are hard working from what has been observed during the course of this study, but the uptake of what is required of them or applying the knowledge they have received is minimal. One key informant revealed that there was a long-standing case between a farmer and a client, where the farmer was asked to organize 1tonne of some produce and she delivered 1kilogram. Such embarrassing occurrences are common but most annoyingly in agricultural practices which hinder the drive to full realization to demand and/or utilize agricultural market information services.

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In the face of language barrier, many of the farmers interviewed have limited themselves to collecting information from sources that provide it in a language they understand (such as traders, District Agricultural Officers, radio etc). As one male farmer who participated in the focus group discussion put it:

..this is neither enough nor always reliable. We need to widen our sources of information if we are to make informed marketing decisions. There is need for market information service providers to translate such information into local languages for the benefit of people like me. I can learn how to use my phone to access market information but only if it is in my local language.

Some key informants revealed that although demand for agricultural products in the district has increased over the years, the district does not have enough volumes to satisfy that demand. With low volumes of produce small-scale farmers' interest in market information processes or services is frustrated.

In Bugiri district, farmers who participated in this study revealed that they no longer know or predict precisely like they did in the past the exact months of the rainy season. Seasons according to them are now determined by radio announcements not by months making it hard to purchase inputs and prepare gardens. Key informants echoed the important link between correct weather information and small-scale farmers' participation in agricultural market information system processes. Their views are included below:

The changing weather conditions are dampening farmers' willingness to participate in market information system processes in that, the more farmers are uncertain of the future in terms of when to produce, the less likely they are to go looking for information about the markets. People are motivated to actively and effectively participate in market information collection, analysis and dissemination if they are assured of gainful benefits at the end of the day. The current changes in weather conditions are a de-motivator rather than a motivator. I have seen farmers dutifully use their market information to make informed marketing decisions only to be disappointed with late/early rains, floods or drought that reduces their yields and makes them unable to meet the market demands. This then makes them wonder about the essence of market information especially that related to weather predictions.

One of the biggest reasons why agricultural market information systems are needed in this region is to save small-scale farmers from the craftiness of middle men. They lie about prices, mislead farmers and prey on them for survival. The farm gate prices they offer farmers cannot meet their even half of the farmer's production costs. Problem is that some of the farmers surrender price setting on products to middle men who are perceived to be knowledgeable about markets. In the end the farmer who toiled more gets little from the produce and the middlemen gain more.

Farmers that were interviewed revealed that even if they were organised in groups and had marketing committees, it was a challenge for them to travel from one market to another gathering information on commodity prices, market demands and the general market environment. A farmer attending a focus group discussion in Masita parish revealed that;

Travelling from one sub-county, village or district market to another is costly and time consuming. We sometimes fund marketing committee members to do this but it is not



done as often as we would have wanted because of the costs involved. It even becomes more challenging when the time for distributing market information comes. With many members, especially women lacking personal mobile phones, our main way of getting information to them is during the weekly group meetings. It means that they have to travel long distances to access the information. If a member does not come for the group meeting, then they are likely to miss out on getting the information.....

In Bugiri district, there are numerous customs because of the many tribes in the area. The society is deeply patrilineal stressing strong dominance of men over women. Women are seen heavily participating in the hard work of cultivation, weeding, harvesting and others, but marketing is a man's job. There were a number of voices especially from women and their voices included the following:

What husbands do here is that, they let women do all the donkey work during the production process, at the time of marketing they have to create unbearable situations so you run away. They will not allow you to go around collecting information about the different markets or use it to sell your produce. They just sale your produce, squander the money and only talk nicely to you at the beginning of another season.

Most of the land given to us for cultivation does not belong to us but to the men. Even when we hire our own land, after selling the produce, the man will ask where you put the money

Even when you partner with the man to do farming as a business, it is rare that he, as the person who mainly does market research, will let you know fully the market situation. When he takes produce for sale, he will sale at a higher price of say Ugx 650 per kilogram of maize but when he returns, he will only declare having sold Ugx 350 per kilogram of maize.

This is our way of life; you cannot easily change it because if you bring a big head, the man will bring another woman. So, you have to bear with some of these difficulties

It is worse for women from certain religions, such as Moslem Tabliqs who do not allow their women to join women's groups or go for any kind of training. There is also a new cult in the area called Njili-Nkalu(dry Gospel). These too do not allow their people to participate in any other thing but Church

Responses from focus group discussions indicate that some of the reasons why poverty has stuck in some households is because of such religious beliefs. An official from one of the NGO's noted that some of their (NGO's) and government programs are not received because of such challenges. These facts were confirmed by key informants as one of them from Nankoma ACE disclosed that,

There is a percentage of women who are now emancipated through trainings. They work in progressive farmer groups; buy their own land, participate in marketing activities such as market information collection, analysis and dissemination and are a good example of

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what happens when we let women get out of the kitchen”. The researcher however observed that these types of women are very few with most of them still under the influence and regulation of men.

Discussion of the findings

Regarding agricultural market information needs of small-scale farmers in Bugiri district, having farmers attest to the benefits of market information in the agricultural sector give meaning and justification to this study but more so, a perfect challenge to other farmers in Bugiri and Uganda in general to heed the call to agricultural market information. Some of the key informants who participated in this study especially officials from the District and those from Agrinet, Infotrade and Nankoma ACE reveal that a number of households have been encouraged by the different agricultural players in the District to grow both for home consumption and for market to be able to increase household incomes. This finding contests Agbarevo's (2013) observation when evaluating the success of extension effects. This study reveals that the different extension service providers in Bugiri have done well in sensitizing farmers about commercialization of agriculture. In so doing, market information of agricultural produce automatically comes up-front.

Concerning factors associated with access to and utilization of agricultural market information among small-scale farmers in Bugiri district, this study objective sought to explore factors associated with access and utilization of agricultural market information among small-scale farmers in Bugiri district. It must be recalled that the European Commission (2012) observed that small-scale farmers' accessibility to market information is limited by factors such as; untimely delivery of the information, collection of the market information is from limited location within country, inappropriate media used for disseminating the market information, market information is still largely focused on prices and does not give details about quality and quantities needed. Price information should be accompanied with more information that supports the users in making informed decisions before production and trading while market information dissemination is limited to a few areas or regions. This piece of literature was found to be appropriate in guiding the researcher to establish facts on this objective. Albeit this study reveals that some of the assertion made above was true and the others untrue in Bugiri district.

Uganda has seen a surge in the number of radio stations registered (Slamet, Nakayasu, & Ichikawa, 2017). In Bugiri district alone, there are two (2) local radio stations and several others from other regions and the neighbouring Kenya. Like cell phones, many households (small-scale farmers) in the area have access to a radio and any form of communication according to them can reach them faster through this channel. Farmers that participated in this study show positive attitude towards use of radios as an appropriate communication tool to farmers.

Regarding the challenges faced by small-scale farmers in Bugiri district when participating in agricultural market information system processes, the challenges articulated in this section have a direct and or indirect effect on farmer's active participation in market information processes. It must quickly be understood as established in this study, that agricultural market information systems do not only involve or include information on prices and markets but a system of gathering, analysing and disseminating relevant information to farmers, traders, processors and all stakeholders involved in the agriculture sector.

Thus, the challenges faced by small-scale farmers documented in this study almost cover the entire agricultural chain. The challenges were raised by farmers during focus group discussions but confirmed by key informants during one-on-one interviews. These findings are in line with the European Commission (2012) which delineated numerous challenges affecting small-scale farmers to include; untimely delivery of the information, collection of the market information is from limited locations, inappropriate media used for disseminating the market information, market information is still largely focused on prices and does not give details about quality and quantities needed, market information dissemination is limited to a few areas or regions.

Conclusion

In conclusion therefore, the study concludes that value chain development is crucial for the success of market information systems and it is therefore imperative that information be provided on different areas along the chain. Small-scale farmers realise the benefits of market information and there is interest and willingness to participate in market information system processes. There is need to establish cohesion among stakeholders if relevant and sustainable market information systems are to be developed. As a matter of fact, small-scale farmers in Bugiri district need market information that covers not only commodity prices but other value chain related areas as well. Specifically, the agricultural market information needs of farmers include not only information about commodity prices but information on inputs, input dealership, market requirements, quality issues, communication technologies, agricultural financing, best farming practices and needs on post-harvest handling. However, small-scale farmers' access to and utilization of agricultural market information is still limited but improving. This calls for more capacity building for the farmers and sensitisation on the benefits of accessing and utilising market information. There is also need for cohesion among stakeholders involved in the agricultural sector. In a bid to develop a relevant and sustainable market information system, there is need to establish and maintain cohesion among all players in the agricultural sector. This cohesion will greatly contribute to improvement in small-scale farmers' access to and utilization of agricultural market information.

Recommendations

The major recommendation of the study is a model that will hasten flow of information, increase access to such information, harness key stakeholders, agricultural/market activities and create a sustainable system that will stand the test of time. The model proposes how farmers can be involved in market information collection, analysis and dissemination and an ideal governance structure of a market information system. Farmers can collect market information from external sources such as external markets, banks, development partners, government, farmer associations, traders and market information service providers. Once collected, this information can then be analyzed by the small-scale farmers or with the help of other stakeholders such as market information service providers. Analysis is followed by market information dissemination to various stakeholders through market information boards, radio, notice boards, word of mouth among others.

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