

Access to and Use of Agricultural Information by Small Scale Women Farmers In Support of Efforts to Attain Food Security in Vihiga County, Kenya

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Abstract

Small scale women farmers in Vihiga County are subsistence farmers, who toil to grow maize, beans and traditional vegetables, for their family consumption. But due to the unpredictable weather patterns and inadequate information on modern farming practices, their farming efforts are not assisting towards achieving food security. This study investigated how women farmers in Vihiga County access and use information in their endeavours to attain food security. Specifically, the study sought to establish the farming activities of the small scale women farmers, ascertain their information needs and information seeking habits in enhancing food security, establish information sources, channels, and technologies used by women to access information; identify the challenges women farmers experience while seeking information, and suggest ways for improvement. The study utilized both qualitative and quantitative research approaches where data was collected using semi structured face – to – face interviews supplemented by document analysis. A sample of 150 women of age ranging from 15 - 70 years was interviewed. Data was analyzed qualitatively through descriptions and discussions, and presented through tables. Findings showed that food insecurity is a serious problem among the poor households especially among older women, larger households, members with low education levels, and the unemployed. It was established that women farmers constantly perceived information needs related to their daily activities of farming. The study findings show that these information needs are often not adequately satisfied by the existing information systems and services due to inadequate communication and information infrastructure, low literacy levels, lack of suitable information services, and lack of technical competencies. Based on the findings, the study recommends the improvement of the existing information services, systems, and channels of communication. This initiative is set to empower women farmers in ensuring food security and sustainability while promoting alternative income generating opportunities to make decisions that could have significant impact on poverty alleviation

Keywords: Information, women, food security, small scale farmers, agricultural information, poverty, Kenya.

INTRODUCTION

Kenya has remained stagnant in its efforts to make quality food accessible to the majority of its citizens due to poor infrastructure, corruption, and inadequate agricultural policies that have led to high food prices and an increase in food insecurity in the country (World Food Programme (2014). It is an agricultural – based economy which earns the country 32 percent of the total revenue yet a quarter of the Kenyan population suffers from food insecurity. The country today faces a major challenge with regard to food security as a result of changes in rural land utilization coupled with population pressure. According to a report by (World Food Programme (2014), 25 percent of the national population of over 42 million people remains chronically food insecure. Policies like the agricultural sector Development Strategy and the vision 2030 have never been well implemented (Government of Kenya, 2001). Since rain fed agriculture is unsustainable, it must be replaced by alternative mechanisms driven by technology, water harvesting, drip irrigation, prudent management of

water resources Vihiga County is one of the counties in Western Region of Kenya. According to Government of Kenya Second Report on Poverty (1999), about 62 % of the Vihiga County's population live in absolute poverty and about 60% of the population is food poor.

The County is experiencing pressure on social services and infrastructure. The percentage of the population living below the poverty line has increased. In addition to the problem of increasing inaccessibility to social services, unemployment and underemployment remain contributors to distress in the study area. Vihiga County envisages glaring short and medium term challenges for sustainable economic growth, a high population growth, poverty, HIV/Aids, gender inequality and disaster management (Government of Kenya, 2001). Vihiga County has poor information infrastructure. There are very few information centers in the county. The Vihiga County Information and Documentation Centre (DIDC), which should play, an important role

in collection and storage of information is not well stocked and is rarely open. The Vihiga Municipal Council which is expected to host a library does not have one and the Kenya National Library Services branch library is very far; the nearest being at Kakamega and Kisumu, hence out of reach for most people. Odini (2005) states that information systems in the country are so much under-utilized owing to various factors such as poor infrastructure, among others. Although information is recognized as an important resource in development, the extent to which information is accessed and used by rural women farmers in their daily farming activities to curb food insecurity is not clearly demonstrated (Mchombu, 2006). This study therefore will endeavor to investigate access to and use of agricultural information by small scale women farmers, in support of efforts to attain food security with a view of making suggestions for improvement.

STATEMENT OF THE PROBLEM

Even though rural women have farming information needs and require varied information sources to make decision in their day to day farming activities, these needs are usually not met with the existing information sources. This could be attributed to lack of farming and processing technologies, information delivery which is not integrated with other development programs to address the numerous related problems that face women farmers in the case study area. Despite the agricultural technologies that have been generated through research in Kenya and Africa, the impact of such technologies is yet to be felt in most households owing to inefficiency in communicating and sharing agricultural knowledge. There is a gap between agricultural development and available technologies for sustainable development. This means there is poor transfer of information and knowledge to women farmers and other agricultural stakeholders by information providers, research, and agricultural innovation centers to satisfy women information needs. posing a serious threat to the livelihoods of many people in the study area. This has limited agricultural development efforts in fighting food insecurity.

Although the government resources are directed towards the improvement of agricultural information, the provision of information and access to agricultural information by small scale women farmers in rural communities is neglected. This situation hinders increased agricultural produce and food security in the study area. It seems as if women farmers get uncoordinated, fragmented, duplicated and overlapping information which are not effective in their farming activities and poverty reduction strategies. Food may be available but women lack information on where to find it, how it is distributed and so on. Even if such information was documented there are no proper information system and services

where information can be accessed by women farmers because they don't appreciate the power of information in improving their farming methods. Today, a wide range of information sources on new innovative farming practices is available to farmers in other parts of the world. However, there is little evidence that increased availability of information sources is being effectively used by rural women in the study area. The situation in Kenya is aggravated by slow adoption of modern information and communication technologies and the shortage of information and communication management professionals. Besides, agriculture, as a subject, is not taken seriously in primary and secondary schools. The agricultural core curriculum is poorly designed and most students do not have access to learning aids that can enable them learn about new agricultural technologies.

Although new ICTs have emerged, rural women need to know the services ICTs can provide, where they can be found, and how they work in farming practices. To make it worse, rural women are illiterate and lack skills to access information. The ICTs available do not address the needs of the rural poor and are scarce at the case study to satisfy women's information needs. In addition, gender-specific constraints affecting access and use of ICTs for socio-economic participation among rural women is also a challenge. Small-holder women farmers are the drivers of the counties agriculture and need support, however they lack knowledge on indigenous farming, marketing skills and effective ways of exploiting the available information resources which can enhance food security. The above problems indicate that women are not accessing and being provided with adequate, timely, and the right information to use in curbing food security due to various challenges including those related to information literacy skills, policies, poverty, gender, among others. These problems have impacted negatively on food security and a viable livelihood. As a result, women's participation in socio-economic development and poverty alleviation has continued to be undermined. In view of the above, this study investigated the use and access to information by small scale women farmers with a view of suggesting relevant strategies for improvement in achieving food security in Vihiga County.

AIM OF THE STUDY

This study investigated the access to and use of agricultural information by small scale women farmers, in support of efforts to attain food security with a view of making suggestions for improvement.

OBJECTIVES OF THE STUDY

The specific objectives of the study were to:

- establish the farming activities of small scale women farmers in attaining food security and poverty reduction in Vihiga County
- Ascertain the information needs and seeking habits of women farmers in enhancing food security
- Identify information sources, channels, and technologies used to access and provide information services to women in their fight against food insecurity.
- Establish how women farmers use information in enhancing food security
- Examine the challenges experienced by women farmers while using information
- Propose appropriate strategies with a view of improving access to and use of information by rural women farmers in attaining food security.

LITERATURE REVIEW

Information is regarded as a crucial resource and an important commodity for development, is a basic necessity and brings success in everyday life including farming activities. Mchombu (2006) asserts that every person needs information for decision making. Information can be shared among farming stakeholders, enhances productivity and bring about agricultural development. According to Manda (2002), information is an important resource for women farmers which could bring productivity and impact on the effectiveness of an organization including farming community. Women farmers need information which can contribute to improvement in the right decision making, planning, and sustained growth in agricultural productivity and market economy, hence food security.

Odini (2005) asserts that identifying information needs is the first step towards satisfying information needs and that information seeking process involves a number of steps before identifying information sources and needed information. There is need therefore to bring knowledge to rural people including women of which most of them are small – scale farmers. He asserts that information systems in Kenya were developed without consultation of rural people, thus women lack their awareness and use. As a result they have inappropriate collection and services that does not address their information needs. Lwoge and Stilwell (2011) observe that most information services in Africa including Kenya are focused on urban areas, neglecting the rural areas where the majority live. This limits the opportunities for rural people such as women to productively participate in socio – economic development. According to Alemna (2000), rural farmers have specific needs and vary according to specific factors at hand. Information seeking behaviour of farmers is complex and requires the use of both communication and information seeking modes. Access to

information is fundamental to all aspects of agricultural development (Mchombu, (2006).

The World Bank (2006) studies indicate that women are involved in various agricultural activities such as homestead, agriculture, and other horticultural activities including livestock and poultry, crop production, and processing. A study conducted by Saito et al. (1994), further shows that women invest more hours in agriculture than men and contribute most of the labour required for the cultivation of food crops. The study asserts that women have a major role to play in food storage as they make decisions on how, where and when to store grains, as well as processing food for the family consumption. Therefore, the success of women's activities to improve the diet of the rural poor will largely depend on the training that women receive

RESEARCH METHODOLOGY

The methodology chosen for the research was mainly interpretive, qualitative approach supplemented by the use of quantitative, positivist in - depth case study. The qualitative technique was used to answer questions about the nature with the purpose of understanding women's information needs, the sources they use for accessing information in their farming practices and what women think and feel about food security and poverty. This enabled the researcher to gain insight into information seeking behaviours of women and describe their attitude towards use of information in achieving food security. The researcher was able to understand the situation of women and the problem under study from their own perspective perception, and experience of the real world in which women farmers use and access information. The quantitative approach was used to answer questions and the relationships among measured variables with the purpose of explaining and controlling phenomenon as observed by Creswell (2009).

The study involved rural women aged 15 – 70 in Vihiga County in Western Kenya. Women were targeted because they play a very important role in socio – economic development and if they can access and use adequate information, they could perform their daily agricultural activities effectively through sustainable economic growth, to reduce poverty through sustained income, promote food security, and contribute effectively towards minimization of food insecurity. The study used stratified random sampling to select 150 women farmers from the study area and a systematic random sampling to select women to interview. Purposive sampling was used to select the informants who included extension offices, officials from the ministry of agriculture, county leaders, and development partners because of their role in disseminating information to farmers.

Data was collected through semi structured interviewing, and supplemented by reviewing of relevant document. A quantitative approach through the use of a questionnaire was employed to collect data from key informants, while qualitative data was collected through interviews and observation. Quantitative data was analyzed using the Statistical Package for social sciences (SPSS) version 11. Qualitative data collected through semi structured interviews was analyzed using content analysis methodology which grouped data with similar messages together, coded it. Through which various interpretations relating to use and access to information by women farmers in their setting was analyzed, the gaps were identified which resulted to themes and used to propose strategies to rural women in using and accessing information in attaining food security and its implication in poverty alleviation. Data was presented in the form of charts, graphs, and tables, which gave a condensed picture of the data and was used to explain causal relationships, to permit generalization, and to enable prediction about use and access to information by small scale women, while qualitative data established a holistic understanding of the same phenomenon under study.

LIMITATIONS OF THE STUDY

A number of difficulties were experienced during the data collection process. Although it was required and advisable that interviewees (rural women) be well prepared before the questioning process, many of them did not prepare for the interview. In some instances, women were not willing to volunteer information for fear that such data could be used against them, while others solicited for favours before they could give any information. It was not possible to cover all the information seeking channels used by women in rural areas as these would have been too many to be considered in one single study. Particular attention was paid to women aged 15 – 70 years in Vihiga County.

ETHICAL CONSIDERATIONS

Possible ethical issues were dealt with. For example, the researcher weighed the sensitivity of the topic in designing the interview schedule and determined what was permissible. The researcher adhered to the principle of informed consent whereby the respondents were informed about the purpose and nature of the study, the conditions under which data would be published, how the anonymity of individual respondents would be preserved, and how the confidentiality of the final dataset will be safeguarded so that they would make informed judgment as to whether they want to participate or not. The respondent's privacy and confidentiality was maintained throughout the study.

FINDINGS AND DISCUSSION

Agricultural Activities of Small – Scale Women Farmers

Small scale women farmers were drawn from throughout Vihiga County. The majority were engaged in a wide range of agricultural activities. Their work involved cultivation of small pieces of land. This included weeding, planting of subsistence crops (maize, beans, bananas, vegetables) as well as cash crops such as coffee and tea. As soon as the crops were ready, small- scale farmers were engaged in harvesting, transporting, threshing/winnowing, cleaning, bundling, processing, and storage of crops for family use and searching for markets for the farm produce. Women were also involved in keeping livestock and poultry. In some households, women made decisions on where to plant crops and the adoption of new varieties of seeds, while in other households, farm decisions were found to be taken mostly by their husbands. The study showed that although women are major actors in development activities in the study area, they nevertheless, live in poor conditions characterized by ignorance and diseases that posed persistent threat to food survival and poverty reduction. This was due to inadequate use and access to timely information in their daily farming activities. CTA (2002) supports this study that inadequate use and access to information by rural people including women contribute to their poor status in economic development. This impacted negatively on food security

Kind of Information Needed By Women Small Scale Farmers

Majority, 80% women farmers needed relevant and adequate information on agricultural inputs, marketing, selection of varieties of seeds, high yield crops, pest control, fertilizer application to improve on their daily activities and to be able to perform these activities well, especially solving problems and making appropriate decisions to increase yields in their bid to fight food insecurity. The above analysis shows that rural women farmers needed information on improved methods of farming. This underscores the need for identification of women's farming information needs which could assist the information specialists to provide relevant and up to date information to small- scale women farmers. This would empower the women to make informed decisions in improving their farming activities and improve their productivity and socio – economic status, thus attain food security and alleviate poverty.

Information Seeking Habits of Rural Small Scale Women Farmers

From the table below, women sought information by asking friends, neighbours, talking to relatives, and discussions with those whom they thought had the needed and right information. Others listened to radio, while some women telephone using mobile

phones for needed information. The study showed that information seeking was influenced by the activity and problem at hand, that is, if women wanted to know how to apply pesticides they went looking for information from whoever they thought had the right information. They selected appropriate information channels in order to satisfy information needs arising from their day-to-day activities. These processes were influenced by various factors that included variables such as level of education, marital status, socio - economic status, and poverty level, accessibility of the source and the degree of experience that rural women had with the source

Table 1: Kind of information needed by women small scale farmers (n=15)

Kind of information need	Respondents (F)	Percentage %
Agricultural inputs	120	80
Improved variety of seeds	103	67
Access to credit	100	67
Marketing	97	65
Weed control	87	58
Cultivation techniques,	87	58
Harvesting techniques	86	57
Animal husbandry	80	53
Home economics	78	52
Crop management	72	48
Farm management	72	48
Soil conservation	66	44
Farm mechanization	64	42
Land ownership	59	39

***Multiple Responses**

Table 2: Information Seeking Habits (n= 150)

Seeking behaviour	Respondents	Percentage
Asking people such as friends, neighbours and relatives	93	62
Listening and talking	87	58
Discussions with those who have information	80	53
Listening to radio	77	51
Watching TV	30	20
Use of mobile phones	23	15
Consulting extension officers	7	4
Browsing internet	3	2
Sending e-mail	1	0.6

***Multiple Responses**

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degree of experience that rural women had with the source. This supports a study by Alemna and Skouby (2000), that there is need to repackage information to meet the information needs of rural people in Africa and that oral transmission should take the form of group discussions.

Information Sources, Channels, and Technologies Used To Access and Provide Information Services to Women

It was revealed that very few rural women use or access agricultural information using electronic media such as online remote databases, and Web based agricultural information sources. For example, if they wanted to know about new developments and techniques in farming, they sometimes went to the wrong people who did not have sufficient, useful, and reliable information and this limited their chances of productive agriculture and achieving food security. Mchombu (2006) observed that the biggest weakness of the agricultural sector in Africa including Kenya is poor transfer of information to farmers. As a result, farmers are unable to obtain useful and reliable information. Consequently, they found it difficult to adhere to agricultural practices which could enable them to be food secure and perform their socio – economic roles. Government of Kenya (2002) recommends the use of improved technology in farming activities to yield results in food production and food security.

As stated earlier, majority of women did not access external assistance or formal information systems and centres such as libraries. This could be attributed to the inaccessibility of formal channels. For example, some respondents did not seek information from libraries because they did not see libraries and information channels as potential providers of useful information. In fact, most rural women farmers were illiterate and did not know what libraries are, leave alone visiting the libraries to search for information related to their farming work. Women therefore did not see formal channels as useful potential providers of information. It does therefore appear that the methods women used to seek information were not effective to assist them access good information. In this regard, it can rightly be said that not all rural women's information needs were satisfied by the methods used to seek information. This finding is supported by studies carried out by Ikoja – Odongo (2002) who observed that women do not go very far to seek needed information.

According to the study findings, folk media particularly songs, dances and drama were often used on public holidays, weddings, and cultural festivals. During these ceremonies, activities laden with socio - economic messages were performed mainly to sensitize women and arouse their awareness about the importance of social-cultural and economic

development. From the foregoing, respondents were of the view that the utilization of popular traditional channels such as songs and folklore has been undermined. It was evident that respondents have access to information on various issues in society from churches, funerals, and self-help groups. A few respondents, however, reported having specifically received information through folk media or traditional institutions such as clans and councils of elders. Nonetheless, interviews and discussions with key informants from CBOs and other community leaders revealed that although various components of folk media and informal meetings did not have any legal backing in disseminating information to the women, the invaluable roles of clan meetings, circumcision, marriage ceremonies, and cultural festivals cannot be underrated even within the current dynamic socio - economic contexts.

Mutua – Kombo (1997) observes that small cultural groups are the basic units of social arrangement and play a significant role in facilitating information among rural women in Kenya. Although these approaches were neither holistic nor participatory in nature as the information sources do not promote dialogue, as they are still dominated by men, thereby limiting women from receiving adequate information in their endeavour to fight food insecurity. Nonetheless, the study shows that the little information women farmers accessed and used improved their farming methods and increased food security, increased access to agricultural inputs, farm implements, among others.

Challenges experienced by women farmers while using and accessing information

Table 5: Obstacles that Hinder Information Access and Use by Rural Women (n= 150)

Obstacles to information	Respondents	Percentage
Illiteracy and poverty	93	62
Ignorance of information source	93	62
Language barrier in accessing information	92	61
Time to look for information	90	60
Inadequate information	83	55
Inability and inaccessibility to get information	80	53
Negative attitude	80	53
Cultural beliefs	80	53
Non - availability and affordability	77	51
No sufficient information	77	51
People conceal information	73	49
Outdated information	70	47
Distance to information sources	70	47
Shy to access information	67	45
Do not attend meetings	67	45

Multiple Responses

The study revealed that existing information sources and systems that provided rural women with information were constrained by a number of factors. These include: illiteracy, ignorance of information sources, language barrier, widespread poverty, lack of time to access information, and unreliable information, among others. Further investigations showed that the information providers such as extension workers, opinion leaders and others involved in information provision had low morale due to low salaries, lack of equipment and incentives. Extension services providers interviewed reported that they lacked the necessary resources to provide women with relevant, accurate, and timely information. The above factors made it difficult for them to operate effective extension programs involving extensive training. Similarly, the extension personnel asserted that they risked their lives when travelling to rural areas and dealing with some women whose husbands did not favour the idea of women being provided with information. Similar sentiments have been documented by Ikoja – Odongo (2002) that most rural information providers lack training in handling rural communities.

CONCLUSION

It is concluded that while there are benefits derived from information, data shows that small scale women farmers encountered a lot of problems in accessing and using information. In addition while women play an important role in rural areas, most of them lack resources such as information, technology, and knowledge to assist them to increase productivity in farming. As a consequence, majority of women are not empowered to achieve food security and alleviate poverty because they had no access to information on new farming methods that could enable them increase crop production and cater for their families in food security, thereby limiting chances of improving their status. Furthermore, rural women faced a lot of problems in the process of performing their activities due to lack of information. Women therefore underperformed. In addition, information sources women used did not enable them to get adequate and reliable information and access to information was hampered by various factors. There is need to impart knowledge and skills along with appropriate technology to inform women farmers on new farming practices to improve food production and security. Finally, women should be trained on agricultural best practices, operation, and water irrigation, among others, as a means to eliminating hunger and poverty.

RECOMMENDATIONS

Findings showed that women farmers in Vihiga County lack information on the best agricultural practices. It is recommended that information providers should be more proactive and regularly

strive to devise strategies for satisfying the information needs of women farmers more on demand and in anticipation through various formats. This can be a basis for setting up information systems which can satisfy information needs of women and lay appropriate strategies to deliver information in appropriate formats, languages which is crucial in productive farming. It is further recommended that information centers such as libraries should collect, store, and disseminate information on proper farming methods from relevant organizations and get involved in its distribution. This should be done in collaboration with other rural information providers and staffed by professionals who can do research, and educate women on issues such as improved farming methods.

It is highly recommended that rural radio be broadcasted at night when women have time to see and listen to farming programs. Mobile phone operators should reduce charges, as most rural people are poor. Trees, vegetables, keep bees, make energy stoves. Agricultural information providers should devise a means of strengthening face-to-face meetings such as demonstrations, study tours, home visits, and public meetings, among others. For example, a meeting should be organized on how to apply pesticides, plant quality seeds, disease control and. Such meetings should be organized in a convenient time for women to attend them. This can enhance women's capacity, and sensitize them on sustainable development and enable them practice new modern practices in farming to boost food security. They should be taught how to diversify by farming drought resistance and improved varieties of crops such as millet, sorghum, groundnuts, pigeon pea adopted for shorter rains, local vegetables, and carrying out agricultural enterprises that can generate cash within a short period.

The study recommends an annual study tour to other rural parts of rural Kenya which focuses on different aspects of women's work and current issues in agricultural practices in dealing with emerging issues in poverty alleviation, women students, activists, social workers, practitioners, women farmers, women should be included to expose women on issues on new farming methods to enhance food production. The study recommends that information providers should organize seminars and workshops so that women can acquire skills and information. Such seminars would be to inform women about new developments and changes taking place within the farming, climate change, environment, and so on. To be more effective, these seminars and workshops should be organized near the rural women's homes in a language they understand better. A comprehensive information and communication policy is necessary to harmonize and reconcile information provision to women in rural areas. Such a policy should take

cognizance of and address the different and changing information needs of rural women farmers in enhancing poverty alleviation and ensure that women are recognized as strong participants in making decisions in generating their food towards poverty alleviation.

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