

Radio for farming? An analysis of regional Radio programs and Agricultural Productivity in Kenya

Sheila Razona Murumba, BA, MA
School of Journalism and Mass Communication
University of Nairobi

Hezron Mogambi, PhD
School of Journalism and Mass Communication
University of Nairobi

Abstract

The main aim of this research study is to assess the impact of regional radio farming programs on agricultural productivity in Kimilili Sub-County. The study's objectives are to establish whether the people of Kimilili Sub-County use West FM as a source of information and to assess the impact of West FM's farming programs on agricultural productivity in Kimilili Sub-County. A mixed methods approach was used in this study as it involved collection of both qualitative and quantitative data. The target population of the study was 23,707 of the total population of Kimilili Sub-County. The study adopted purposive sampling techniques to identify the respondents of the study. Data was analysed both qualitatively and quantitatively. The descriptive statistical tools SPSS were used to present the data. The study found that due to access to information from media outlets like West FM radio station; farmers have managed to improve their yields over time. Through the findings and data analysis, it was evident that the program is popular in the constituency. It has influenced farming activities and that through implementation of the new ideas farmers in the region have been economically empowered. The farmers said that they had learnt a lot of new farming ideas that enabled them venture into different farming methods. These methods include; - mixed farming, crop rotation, livestock keeping, and fertilizers to use and also how to market and distribute their products.

Background of the Study

Radio is the most popular mass medium in Kenya (Odhiambo, 2002) and broadcasts in different languages. It offers a forum where different voices can be heard (Scanell, 1996). Girard (2001) states that the radio is still the most important medium in Africa. This is in view of its low literacy levels, does not face distribution challenges like newspapers and the cost of television, which is quite high therefore making it affordable to only a few households. Regional radio is any radio station that broadcasts in a specific geographical area and set up to serve a particular locality. The station may broadcast either in a country's national languages or the local language depending with the target audience. In Kenya, the two recognized national languages are English and Kiswahili. It may in most cases be may be community in nature whereby it is set up and managed by the community often not on a profit basis or it orients a commercial station often relying on advertising revenue and entertainment. In both cases a local station will cover a smaller geographic area and will invariably broadcast on FM. Regional radio preceded community radio and was known as the voice of the peasants as groups of farmers or villagers met in each other's homes to listen to radio discussions that touched on their issues or problems. Kumar (2004) identified radio as an avenue for participatory communication as a tool relevant in both economic and social development.

According to Moemeka (1994), the media especially radio can only reach people and areas otherwise inaccessible but also serve as a direct instrument of education. Radio is an agent of change where new practices cumulating to community development, an outcome of change attitude, beliefs and skills. Kenya was monopolized by the state owned corporation Voice of Kenya. The station was mostly the government's mouthpiece. There has been an enormous evolution of the media industry in the fifteen years where more stations have come into existence as a result of cross media ownership and are free from interference by the government.

Barlow (1988) purports that local stations work to strengthen their communities by practicing cultural production of radio programming which is used as a tool for popular education, social justice and socio-economic development which promotes community dialogue and presents audio evidence in support of movement for progressive social and economic change. Studies have shown that local stations more so community are a medium for the local people or a community to bring out hidden issues, educate them on different issues relating on development both politically and socio-economically.

West FM radio station, which is a regional station in Bungoma County in Western Kenya, broadcasts in both Kiswahili and Bukusu languages. Its content includes; news bulletin, agricultural programs, health programs, interactive talk shows and entertainment. The station is under West Media Limited and owned by three partners namely; Ambassador Dr. George Masafu, Dr. Philip Muyoti and Mr. Cyprian Wekesa. The station is popular especially with the rural populace since it offers an access to entertainment and information on various issues. Though there are other stations that offer broadcasts in Bukusu language, West FM stands out as it also broadcasts in Kiswahili so as to cater for the audience that is not proficient in Bukusu language. The audience is also given a chance to call in, so as to express views and opinions in an interactive manner. Agriculture is a fundamental instrument for sustainable development, enhanced food security and poverty reduction in developing countries. Kenya vision 2030 does identify Agriculture as one of the six key economic sectors expected to drive the economy to a projected 10% growth annually over the next two decades (Mary Nzomo, 2014). This therefore means that agriculture is essential for the achievement of vision 2030 goal which will be realized partly by modern agriculture that is innovative and commercially oriented.

Most people in Kenya live in rural areas and are engaged in subsistence Agriculture as their principle livelihood, (Economic Review of Agriculture, 2012). The 2009 Kenya Population Census report indicates that 80% of the Kenyan population is currently engaged in agriculture and relies on it for sustainability. While agriculture is a vital pillar for sustainable development and poverty reduction in Kenya, it continues to face challenges and emerging constraints at the global, regional and national levels that require urgent and special attention, (GOK, 2008). Kimilili Ward is situated in Bungoma County in Western Kenya. It is bordered by Mount Elgon constituency to the North, Bokoli Location (Webuye) to the South, Sirisia constituency to the West, Saboti Division of Trans Nzoia District, and Tongaren constituency to the East. It covers an area of 42.10km with a population of 36,267. Agriculture is the major economic activity in the Constituency with 70% depending directly or indirectly on farming. Farmers plant food crops like, beans, sorghum, maize, bananas, sweet potatoes, cassava, groundnuts, vegetables, fruits, coffee, tobacco and also rear animals like cattle, sheep, goats and rabbits. (Broesch, T 2004) Climate in Kimilili Constituency favors agriculture as temperature ranges between 15 degrees and with upper maximum of 30 degrees centigrade and average rainfall of 1500mm per annum (Mary Nzomo, 2014). According to Muyanga et al., (2005) food security situation and especially maize production and distribution as Kenya's staple food has of late been declining. Wokabi (2000) purports that there have been no adequate interventions to develop maize crop value chain with at production, processing and distribution. Many farmers sell their produce more so maize immediately after harvesting them and end up purchasing them later when they run out of stock. Agriculture, apart from providing food security to the population, is also a source of livelihood to most of the population in the constituency.

Statement of the Problem

While agriculture is a vital pillar for sustainable development and poverty reduction in Kenya, it continues to face challenges especially at the regional or rural areas. Production is compromised due to volatile markets, low adaptation of improved technologies, limited access to markets and lack of knowledge among farmers. Adoption of pesticides, fertilizers and improved seeds and practices are only recently gaining momentum. Many farmers sell their produce more so maize immediately after harvesting them and end up purchasing them later when they run out of stock. Despite the fact that each Ward in Kimilili Sub-County has agricultural extension officers, it is imperative to note that they cannot reach everyone and may not have suitable forums to speak to the masses and to hold participatory discussions where the farmers can share their ideas and discuss their concerns. Even with the emergence of new technology like mobile phones, it is still not easily to reach out to all the farmers, as some of them do not own phones. The challenge therefore facing farmers and the government in achieving the goal centrally lies in communication as a denominator to cause change. This therefore demands a communication approach that targets and also involves the targeted community.

One such approach is regional radio. It is upon this background that this study sought to establish whether there is a relationship between regional radio listenership and agricultural productivity. In this study we assessed West FM radio farming programs and agricultural productivity in Kimilili Sub-County and whether the medium is effective in communicating to the farmers on issues of agricultural development.

Justification of the Study

This study will evaluate the impact of radio on agricultural productivity. Based on the findings, I will be able to establish whether regional radio stations have an impact on development in this case of agricultural productivity. I will also come up with recommendations on the same. The recommendations will help the West FM radio station in establishing whether the developmental programs on farming like 'Kilimo' Ajira are achieving their objective of having a positive impact on agricultural productivity in Kimilili Sub-County. The government in this case the Ministry of Agriculture Bungoma County will be able to understand whether use of regional radio for communication especially to farmers is effective. This study will also assist other radio stations to adopt developmental programs as they will realize that they are more beneficial and educational unlike the traditional formats that often fuel conflict with no educational value at the end of the day. Non-governmental organizations will also get a chance to sell their development agendas especially on farming to a larger population. This will lead to sufficiency in terms of outreach to the Kenyan population and extension to other parts of the continent and world as a whole as the station can be streamed online. Lastly, other researchers who have an interest in this field will find this document useful and can use it as a secondary source for their data.

The role of Radio in national development

Many development-oriented communicators have pointed that radio is the medium that can reach a wide audience even in the poorest rural settings (Okigbo, 1995). Accessibility to radio among the rural poor in terms of financing is affordable, making the medium a source of information for many people (Buckley et al, 2008; Hatzold et al., 2014). Radio is a popular medium to rural residents; most of who have limited access to other media forms such as newspapers and the television (Mogambi, 2011). Moemeka (1994) asserts that the effectiveness of radio depends on how it is used and for what purpose and not so much on intrinsic qualities. Since radio has a wider reach and therefore can reach more people than other media, this factor makes it the most powerful medium of communication and change in the society. In communication for development Round table report (UNCDR), 2010), radio still remains the most widely available and affordable mass medium for disadvantaged groups in the rural areas as it is often the only one available. It reaches a large number of isolated populations over a wider geographical area. It is further indicated in the report that in some rural areas it is the only source of information about the weather, market prices and agricultural innovations. It is also an inexpensive medium that uses a simple technology and is therefore more suitable for the less educated living in communities and societies more characterized by oral and folk traditions.

Radio and development impacts in Africa

Radio as a medium has had several successes in development. In Ghana, a study by Al-Hassan et al (2013) to assess the role of radio Simli towards the improvement of the livelihood of people. It was found that the station did indeed improve people's awareness creation by addressing community problems ranging from agriculture to rural development and local governance. A research study done for a mobilization campaign for Kagadi- Kabaale community in radio Uganda in 1994, had villagers report that although they had access to national radio, most of them felt cut off from the basic information they needed, even information that was available within their region. According to Mbindyo, (1985) development is a result of complex interaction of many factors, which cannot be achieved without mass mobilization of the rural communities. These sentiments were echoed during a regional workshop on the development on rural press in Africa held in 1987, which stressed that rural broadcasting should reflect the rural people in such a way that they should be able to identify themselves with the paper or the station.

Use of Radio to communicate agricultural information

In 1980, before rural radio became a common phenomenon, McAnany (1980,) complained that a two way communication system often missing entirely in rural areas, could keep field personnel in touch with the organizers. Every activity considered vital to rural development is information dependent in some way. In the third world, the agent are in short supply and can only reach a fraction of the farmers, yet there may be other ways like mass media of disseminating the same message to the farmers.

A better mix of material and information sources would yield better results. If radio became available to the rural people, it could make it easy to communicate with them and have them participate in development. Since radio has become more accessible in Africa, radio should now play a bigger role in communicating to the masses (McAnany, E.1980.) Since radio has become available to most citizens of Africa, probably McAnany's desire for an informed audience in Africa has become true. Chapman.(2003) concurs by noting that rural radio can be used to improve the sharing of agricultural information by remote rural farming communities. Participatory communication techniques can support agricultural extension efforts especially using local languages and rural radio to communicate with farmers directly. (Chapman, R.2003:10) Arpita (2011) argues that since regional radio is confined to a small geographical area, it serves a community, which uses common resources for livelihood. Such a community has common development issues and concerns, which are relatively localized, although connected to national and regional development goals therefore community radio connects the hard-to-reach rural audiences and serves a specific purpose of community radio that national or international mass media cannot deal with. (Arpita, S. 2011) From the above arguments, it is clear that radio if well used, can play an essential role in reaching the small-scale farmers with vital information that can transform their lives and their economic activities in a positive manner.

Fisher 1990 explains that early development communication theorists believed that mere exposure to radio messages was enough to cause social change that would lead to development. This belief led to the launch of many development projects. In the earlier farm forum programs, messages were primarily sent "down" from the government agricultural department or the extension agent to the rural people. Very limited feedback was expected from the farmers: the messages were often too complex, technical and descriptive to be understood. It was difficult for the farmers to understand the message and this discouraged them from adapting it. These early schemes clearly revealed the limitations of "top down" government campaigns designed to foster development. For radio to be more effective in communicating, it has to adopt a two way communication whereby the recipients are also allowed to air their views and ask for clarification. (Fisher 1990) This argument posits a need for the program producers to be careful with the formation of the programs so as to make sure that they are easy to understand and that during dissemination, they provide for adequate feedback from the audience.

Contribution of Radio to agricultural productivity in Kenya

In 1989, Ms. Mary Ngechu a radio lecturer from the University of Nairobi's college of education and external studies (CEES), came up with the idea of developing agricultural programs on radio in order to reach small scale farmers in Kenya who had been excluded from service within the traditional extension system. She requested IDRC to fund this project. It was agreed that she do a feasibility study to see how useful radio is in information dissemination before funding. The results of the study were informative (Ngechu, 1991). The findings showed that radio was the most widely used information resource in the areas of rural Kenya where she studied. This therefore proved that radio, as a medium is reliable in terms of communication for development. The respondents said that they previously relied on word of mouth from neighbors regarding different agricultural techniques. Of the 216 interviewees in the sample, none had ever had an extension officer visit his/her farm. They also said that it would be important that an agricultural extension officer or expert be present when listening to the agricultural programs so that in case of clarifications and queries, he would be able to offer responses as call-ins were difficult at the time due to lack of mobile handsets.

Myers M, (2008) Important to note from this study is that beyond the interviewee's enthusiasm for a two-way communication with the radio, was the fact that female members in the households had far less access to and little if any control of the radio medium (Ngechu, 1992). Because women constitute by far the greatest percentage of the practicing smallholder farmers in Kenya (more than 70% according to Ngechu's research) and since they are effectively excluded from obtaining information from the male-dominated extension system by the cultural practices of the tribal system, women's current problem of access to information resources is acute. On the strength of the information gathered in the feasibility study, the IDRC has now funded a major pilot study of the use of radio listening groups to improve farmer adoption of development information. The intent of this study to determine whether radio can be democratized in Kenya the same way it has been in Zimbabwe. Creating a dialogue between the radio producers and listeners will make it easier for the producers to schedule their programs according to the likes of their audience. It is therefore important to note that a two-way communication between an audience and the radio station can lead to achievement of goals of different agendas more so on issues of development like agriculture.

A study conducted in Siaya County by Anduvate (2014) on the role of Sauti FM community radio on rural development, found out that rural communities in Kenya have been relegated to the periphery of the regular mainstream socio-economic and political development discourses. The study did establish that their voices remained muted and their core political and socio-economic concerns have been largely excluded from the core resource planning and allocation processes. Radio offered a platform for solving this situation as it was widely regarded as ideal media for development communication. In this vein Sauti FM was identified to be a major contributor to the promotion of local culture, education, health and agricultural issues, etc. in Kenya. In a study conducted by Ochichi (2014) on the assessment of local radio in the context of rural development in Kenya, it was established that local radio in Kenya had made a moderate contribution in rural development and facilitated the process of development information. A study by Mogambi (2016) on students in Kenya and their preferred radio station shows that students prefer radio stations which gives and provides infotainment as a key pillar in broadcast. News was also preferred.

Therefore, development news and features should cover issues that are relevant to the social and economic changes and includes topics on agriculture, health, sports family planning and education. Each of which, deals directly or indirectly with human problem, success, sorrow, joy, or similar human factors. His study on the rural press in Kenya shows that it doesn't adequately cater for all its audiences, and that some audiences would prefer more materials, while others prefer certain items to others. In addition, the study showed that this press gave top priority to agriculture, local news, social issues education among others, but strangely enough, other development oriented issues such as health and community projects had a low rating. Kimutai (2011) noted that in Kenya, radio broadcasts are still the preferred media. A study commissioned by the Kenya Audience Research Foundation (KARF, 2011), and conducted by Synovate, reported that radio listening leads in media consumption or utilization. The mobile phone, television, newspapers, and the Internet follow it respectively. The study carried out on a population sample of 8504 showed that 93% of the sample had listened to a radio program in the last seven days. Furthermore, about 54% of Kenyans are listening to more than one radio station. The average time spent listening to radio programs per day is six hours. This multi-channel trend is attributed to the growth and development of FM radio stations in Kenya that offer different genres of content that range from music to talk shows etc.

Changes and Developments in the Radio sector in Kenya

There has been a notable increase in number of radio stations in Kenya since 2000. The new political dispensation after the Moi era was a key factor in the rise of independent media in Kenya since 2002 (BBC WST 2008). Abdi and Deane (2008) attribute the media boom in Kenya also to a dynamic economy with one of the most dynamic economic advertising markets on the continent and a population that consumes news and information voraciously. According to the Communications Authority of Kenya there are currently about 132 radio stations on air. Local language radio stations have also significantly grown after the licensing of the first one Kameme FM in 2000. Currently there are 47 local language stations on air in Kenya (Communications Authority of Kenya, 2016). These stations include; Ramogi FM (Luo), Inooro FM (Kikuyu), Coro FM (Kikuyu), Kass (Kalenjin), Mulembe (Luhya) among others. Eleven are run by Royal Media Services (RMS), a privately owned media group; Kenya Broadcasting Corporation (KBC), a public broadcaster, runs five stations nationally and other seven regionally. The stations are especially popular in rural areas with the majority of listeners being over 30 years.

Radio listenership in Kenya

In Kenya, agenda 21, article 37 in Kenya's constitution emphasizes education for all needs to be assured as a crucial factor associated with policy development. The mass media especially the radio is seen as the most cost effective way of providing information to a population including the marginalized sections. The media has an important role in acting as a watchdog, encouraging people to make changes towards sustainability and influencing public opinion. Maloba (2013) argues that the media including the radio in an information society has a role of informing the general public of policies, current affairs and national development especially if such issues affected them directly. For the farmer, it should provide information about latest innovation and most effective farming methods. It also has to give the public the ability to make their voice heard. The media is seen as a vital two-way tool, providing information from the top to the masses at the grass roots and allowing their views, ideas and opinions to filter back to policy makers. (Maloba, B.2013)

Ngechu and Peter (2002) carried out a longitudinal study to identify factors that influence farmer adoption of agricultural, and health knowledge and skills. Participants were organized in three categories: women only, men only and mixed groups of men and women. They listened to radio programs in their separate groups. The idea of radio listening groups (RLGS) is not new. It had been practiced in Canada and Britain during 1920s. They discovered that radio message which was useful to the farmer was adopted and implemented. (Ngechu, M.E & Peter, W.O 2002)

Maloba (2013) carried out a research on sustainable development through communication. He used Mulembe FM as his research radio station. The main objective of his study was to find out whether Mulembe FM broadcasts offer any programs on environmental sustainability development and if they do, if the programs have any impact on the audience in promoting practices that would ensure a sustainable environment for the future generation. The data generated from this study demonstrated the potential of radio broadcasting as a high efficiency / low cost means to meet development. (Maloba, B .2013:173)

Maloba's (2013) findings demonstrated the power of radio and proved that radio programs have power and ability to transform communities. If through radio programs on Mulembe FM, messages on environment sustainability reached the targeted audience and led to positive change, we can therefore expect radio agricultural programs on the same radio station to strongly influence farmers' decisions. Mogambi (2011) shows that radio has power of socio-economic transformation on communities through programming designed for social change especially in rural and agricultural communities.

Community participation in broadcast

Two tenets of radio are representation and participation. Unlike the mainstream radio stations, regional radio should ensure that the content produced is specifically tailored to meet the needs of the specific community that they are targeting. According to Macdonald (1984) communication for rural development should be participatory whereby the rural people need to be involved in their programming. Gummicio (2001) empowerment means affirming the dignity and value of one's own identity and re-evaluating the local culture. It also means re-signifying the cultural institutions around one so that one's own cultural capital is given greater recognition and is seen as more valuable. Communication is a concept that intends to draw attention on the issue of power approach more prone to be on the side of the people such as participation. Jallof (2012) postulates that use of local language at times promotes empowerment and participation of community members in the production of programs. This therefore means that the power of words is central to maintain and strengthen other kinds of domination and power. Empowerment communication intends to be a step towards a development that gives control over their own lives to the very people who have traditionally been made passive or partially active, recipients of those efforts by those in charge of development policies. While still within the boundaries of the current paradigm empowerment communication also advocates its demolition basing it on the genuine application of demographic ideals which should owe pay more attention to the universal human rights regardless of other factors e.g. nationality, socio-economic status etc.

Subba et al (2007) points out an area of major concern 'elite capture' of station ownership and programming decision making and a journalist rather than community driven orientation that adversely affects community representation in relation to content and whose voices are heard resulting in competition among broadcasters. Competition among broadcasters has a negative impact on programming with an increased volume of syndicated content that lacks contextual relevance to the community or target audience. This is a clear indication that the content is not representative of what the audience wants to hear.

Utilization of Radio Messages

Okwu, Kuku and Aba (2007) in a study that did investigate use of radio as a medium for agricultural information delivery to farmers in Benue State in Nigeria. The study found a high level of listenership to the programs. The study found that 66% of the respondents listened to the agricultural programs aired on Radio Benue and 42% of the listeners indicated that they listened to the radio because of the content aired. They indicated that the programs were relevant to their agricultural informational needs and that is why they listened to the programs. This therefore means that most people listen to radio programs because of the content that the stations are offering. The Kenya Agricultural Research Institute (2009) newsletter, suggested that Farmer Voice Radio Audience does a survey in 2009 to examine radio listening habits, radio accessibility, and listenership preferences of small farmers in Kenya.

The findings of the research showed that 98% of farmers have access to a radio message from various audio technologies. The study also found two key factors that contribute to radio listenership. They were language of communication and content. Farmers prefer listening to relevant, interesting and diverse programs in their mother tongue. Programs with the highest listenership include the news, sports, and politics. Farmers also listen to agricultural programs, but they feel that these programs are often centred more on farm inputs than their needs and preferences (Kenya Agricultural Research Institute, 2009).

Agenda setting theory

Dr. Max McCombs and Dr. Donald Shaw developed the Agenda setting theory in a study on the 1968 presidential elections. In the 1968 Chapel Hill study, Shaw and McCombs demonstrated a connection between what 100 residents of Chapel Hill in North Carolina thought was the most important election issue and what the local and national news media reported was the most important. (McCombs, Shaw, 1972). By comparing the prominence of issues in news with the public's perceptions of the most important election issue. From this McCombs and Shaw were able to determine the degree to which media determines public opinion. The two criticisms underlying most of the research under the agenda setting theory are; -the media does not reflect reality they instead shape and filter it and media concentration on a few issues and subjects does lead the public to consider those issues to be more important than others.

Agenda setting theory helps us understand the pervasive role of the media. It is applicable in this study as radio is a strong medium of communication that easily influences people's decisions and choices and also does structure public debates. It matters what a radio station especially one broadcasting to a specific locality brings to the fore for the community to think about. In light of the aforementioned, radio stations should be able to bring out pertinent issues to the light and the way forward in addressing challenges facing farmers/ audience. This also means that the more salient news issue is in terms of frequency and prominence of coverage, the audience will regard it as important. This theory is relevant to this study as radio can be used to highlight issues relating to the farmers and also offer solutions. The radio station can involve the community on key areas and expose them to the issues. Griffin (2006) postulates more frequency and prominence of the news media exposes the public to the issues and the more instances the issues become accessible in the audience memories. This therefore means that placement and repetition of developmental programs in this case on farming will be functionally important and empowering to the community more so farmers.

Uses and gratification theory

Turner (2000) states that there are many reasons why audiences choose a particular media. Bulmer and Katz (1974) argued that different people use the same communication message to gratify different needs. This theory does provide a framework on the process by which media participants seek information selectively proportionate to their needs and interests. Radio has a direct, immediate and influential effect on media users (Katz, 1959). What people do with it is what matters and not what the mass media does to people. It therefore gives people the opportunity to use media to meet their needs. The theory is audience centered as the audience choose and have reasons for using certain media to gratify their needs. McQuail (1987) suggests people's needs influence what media they choose, how they use particular media and how it gratifies them. This theory therefore implies that that the media tries to compete with other information sources for viewer's gratification. (Katz, E., Blumler, J.G., & Gurevitch, M. 1974). The theory focuses more on the audience and not the message itself by asking 'what people do with media' rather than 'what media does to people' (Katz, 1959). It assumes that the audience takes an active role as opposed to passive in interpreting and integrating media in their own lives. This means that the audience is responsible for choosing a specific media to meet their needs. This theory is relevant to this study, as we will be determining whether the farmers in Kimilili Sub-County listen to radio and the reasons that informed their decision to listen to the stations that they do. Since radio has a way of influencing people's choices, we will identify whether the farmers are influenced by what they hear on radio especially when it comes to the choices they make on agriculture and whether those choices really do meet their objectives.

Methodology

Research design is a blueprint, or procedures for conducting the study in such a way that maximum control will be exercised over factors that could interfere with the validity of the research outcome. It is the researchers overall plan for obtaining answers to the research questions guiding the research (Polit and Hungler, 1998) This study used the mixed methods approach that involved collection of both quantitative and qualitative data.

Mugenda & Mugenda (2003) state that both methods complement each other in that qualitative method provides the in-depth explanations while the quantitative method provides hard data needed to meet required objectives. The mixed method balances both strengths and weaknesses of qualitative and quantitative research (Creswell, 2006).

Target population

A population is defined as a complete set of individuals, cases or objects with some common observable characteristics (Mugenda & Mugenda, 2003). In this study, the target was drawn from the farmers in Kimilili Sub-County, program managers from West FM Radio station and agricultural extension officers from the area. Kimilili Sub-County has a total of four wards namely; Kibingei, Maeni, Kimilili and Kamukuywa. I selected prominent farmers from the four Wards. According to the Ministry of Agriculture, Kimilili Sub-County has a total of four (4) Wards with a total of 23,700 registered small-scale farmers. Four extension workers were drawn from each ward and three program managers from West FM Radio station. Therefore the total target population was 23,707.

Sampling procedure and Sample size

The study adopted the purposive sampling technique. This technique is the most suitable because we focused on specific characteristics of a population that was of interest to us and therefore able to enable us answer the research questions. According to Engel and Schutt (2010) purposive sampling method is useful in surveys that target individuals who are knowledgeable about issues under investigation.

In this study we adopted the Yamane (1967) formula to determine the sample size.

Yamane formula, $n = N/[1+Ne^2]$

Where n=required respondents

N= Total population size

e = Level of significance

e= error limit

This formula determined the sample size for the 23,707 respondents with a significance level of 93%

Sample size (n) = $23707 / 1 + 23707 \cdot 0.07 = 202$ respondents

Sample size of 202 will include 4 agricultural extension workers to be drawn from each of the 4 wards and 3 program managers from West FM Radio stations.

Ward	Total Population (N)	% of the total population	Target population
Maeni	5900	25	50
Kibingei	6500	27	53
Kamukuywa	5300	23	47
Kimilili	5900	25	49
Total	23,707	100	199

Purposive sampling is suitable for this study as we chose our sample considering the following factors that enabled us to obtain the specific information required. They were to be residents of Kimilili Sub-County, people of adult age brackets, small scale farmers, and required to be listeners of the program: *ukulima ajira*. We purposed to use a total sample of two hundred and two (202) comprising of four extension workers three West FM program producers. This number is considered to be statistically significant considering the size of the total population of adults who meet the above description and live in Kimilili Sub-County

Research Instruments

In order to achieve high quality research conclusions, this study used a mix of research tools to collect primary data. We used questionnaires and interview guides. The study used both structured open and close-ended questionnaires to generate quantitative data. The questionnaires were designed to address specific objectives. They were administered purposively to individuals in the constituency who practice farming and listen to agricultural programs like Kilimo ajira on West FM Radio. The study also used interviews to collect data from key informants. For this study I adopted the semi-structured interviews and open-ended questions in order to maximize data collected and its accuracy.

An interview guide is an instrument of collecting information through a series of questions and observations. It is a one-on-one – dialogue with an indoor a number of individuals (Mugenda & Mugenda, 2003). The study used purposive sampling to target agricultural extension workers in the constituency and program managers at West FM Radio. Interviews were preferred as they allow the researcher to have dialogue with the informants, follow up on issues that may have risen and also probes where there is need to interrogate an issue.

Data Analysis

Data obtained through the questionnaires was sorted, edited, coded and analyzed through the Statistical Package for the Social Sciences (SPSS package) Version 23. Quantitative data was represented using tables while qualitative data was presented in narrative form.

Analysis

Age of the Respondents

The researcher sought to find out the characteristics of the respondents in terms of age.

The study found out cumulatively in the four wards that the age groups of 18-25 year had 15.3% representation, 26-33 years had 15.3% of the respondents, 34-41 years had 24.2% representation, 42-49% had 32.6% representation while 50 years and above had 12.6% representation. This is a clear indication that the age group of between 42-49% was more involved in farming activity because they are energetic and mature. This is a group whose major role is providing for the family as indicated in table 4.1.1

Table 4.3: Age of the Respondent

Wards		Age					Total
		18-25	26-33	34-41	42-49	50 and above	
Kimilili	Count	6	10	12	16	4	48
	% within Ward	12.5%	20.8%	25.1%	33.3%	8.3%	100.0%
	% within Age	20.6%	34.5%	26%	25.8%	16.7%	25.3%
	% of Total	3.2%	5.3%	6.3%	8.4%	2.1%	25.3%
Kamukuywa	Count	8	6	10	15	5	44
	% within Ward	18.2%	13.6%	22.7%	34.1%	11.4%	100.0%
	% within Age	27.6%	13.0%	21.7%	24.2%	20.8%	23.2%
	% of Total	4.2%	3.2%	5.3%	8.0%	2.6%	23.2%
Kibingei	Count	7	8	11	16	8	50
	% within Ward	14%	16%	22%	32%	16%	100.0%
	% within Age	24.1%	27.6%	24%	25.8%	33.3%	26.3%
	% of Total	3.7%	4.2%	5.7%	8.4%	4.2%	26.3%
Maeni	Count	8	5	13	15	7	48
	% within Ward	16.7%	10.4%	27%	31.3%	14.6%	100.0%
	% within Age	27.6%	17.2%	28.3%	24.2%	29.2%	25.3%
	% of Total	4.2%	2.6%	6.8%	7.9%	3.6%	25.3%
Total	Count	29	29	46	62	24	190
	% within constituency	15.3%	15.3%	24.2%	32.6%	12.6%	100.0%
	% within Age	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	15.3%	15.3%	24.2%	32.6%	12.6%	100.0%

Ward		Gender		Total
		Male	Female	
Kimilili	Count	37	11	48
	% within Ward	77.1%	22.9%	100.0%
	% within Gender	28.7%	18%	25.3%
	% of Total	19.5%	5.8%	25.3%
Kamukuywa	Count	30	14	44
	% within Ward	68.2%	31.8%	100.0%
	% within Gender	23.3%	23%	23.2%
	% of Total	15.7%	7.4%	23.2%
Kibingei	Count	30	20	50
	% within Ward	60%	40%	100.0%
	% within Gender	23.3%	32.8%	26.3%
	% of Total	15.7%	10.5%	26.3%
Maeni	Count	32	16	48
	% within Ward	66.7%	33.3%	100.0%
	% within Gender	24.8%	12.4%	25.3%
	% of Total	16.8%	8.4%	25.3%
Total	Count	129	61	190
	% within Ward	67.9%	32.1%	100.0%
	% within Gender	100.0%	100.0%	100.0%
	% of Total	67.9%	32.1%	100.0%

Gender of the Respondents

The study looked into which gender is more dominant in farming activities visa vie listening to radio station for farm technique and empowerment. The study found that in the four wards the male gender had 67.9% acceptance rate while the female gender had 32.1% acceptance rate. This show that the majority of those involved in farming activities are of the male gender as female gender are more involved with house chores. This is reflected in table 4.3 below.

Level of Education

The researcher was interested to find out the literacy level of farmers in the four wards in order to determine how well they implement the skills taught via the radio programs. The study found that 36.2 % had no formal education, 18.9 % had primary education, 24.2% had secondary education, 14.2% college education while 7.4% had university education. This shows that the majority of the respondents don't have formal education while a considerable number of the population was literate as shown in table 4.4 below.

Ward		Level of Education					Total
		No Formal Education	Primary	Secondary	College	University	
Kimilili	Count	20	8	11	6	3	48
	% within Ward	41.7%	16.7%	22.9%	12.5%	6.3%	100.0%
	% within Level of Education	30.8%	22.2%	23.9%	20.6%	21.4%	25.3%
	% of Total	10.5%	4.2%	5.7%	3.2%	1.6%	25.3%
Kamukuywa	Count	13	10	10	9	2	44
	% within Ward	29.5%	22.7%	22.7%	22.5%	4.5%	100.0%
	% within Level of Education	19.7%	28.1%	21.4%	37.5%	25.0%	23.2%
	% of Total	6.8%	5.3%	5.3%	4.7%	1.1%	23.2%
Kibingei	Count	15	10	13	7	5	50
	% within Ward	30%	20%	26%	14%	10%	100.0%
	% within Level of Education	23.1%	27.8%	28.3%	24.1%	35.7%	26.3%
	% of Total	7.9%	5.3%	6.8%	3.7%	2.6%	26.3%
Maeni	Count	17	8	12	7	4	48
	% within Ward	35.4%	16.7%	25%	14.6%	8.3%	100.0%
	% within Level of Education	26.2%	22.2%	26.1%	25.9%	28.6%	25.3%
	% of Total	8.9%	4.2%	6.3%	3.7%	2.1%	25.3%
Total	Count	65	36	46	27	14	190
	% within Constituency	36.2%	18.9%	24.2%	14.2%	7.4%	100.0%
	% within Level of Education	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	36.2%	18.9%	24.2%	14.2%	7.4%	100.0%

Table 4.5: Level of Education

Farm size

Since this study aimed at establish the impact of Ukulima Ajira program on small scale farmers in Kimilili Sub-County, the respondents were asked to approximate the size of their pieces of land The study found that the occupants of this four wards had varying farm sizes and the. 24.7% of the population had less than one acre of land, 29.5% had 2-6 acres of farm land, 23.7% had 7-11acres of farm land, 10.5% had 12-16 acres of farm land, 6.3% had 17-21% of the farm land while another 5.3% had more than 22 acres of farm land. This shows that the region's main economic activity is farming due to considerable pieces of land as shown in table 4.6 below. The findings also show that majority of the respondents are small-scale farmers as they own 2-6 acres of land.

			Farm Size					Total	
			Less than 1 Acre	2-6	7-11	12-16	17-21		More than 22
Ward	Kimilili	Count	11	14	15	4	2	2	48
		% within Ward	22.8%	29.2%	31.3%	8.3%	4.2%	4.2%	100.0%
		% within Farm Size	23.4%	25%	33.3%	20%	16.7%	20%	25.3%
		% of Total	5.8%	7.4%	7.9%	2.1%	1.1%	1.1%	25.3%
	Kamukuywa	Count	10	11	13	5	3	2	44
		% within Ward	22.7%	25%	29.5%	11.4%	6.8%	4.5%	100.0%
		% within FarmSize	21.3%	19.6%	28.9%	25%	25%	20%	23.2%
		% of Total	5.3%	5.8%	6.8%	2.6%	1.6%	1.1%	23.2%
	Kibingei	Count	13	14	10	6	4	3	50
		% within Ward	26%	28%	20%	12%	8%	6%	100.0%
		% within FarmSize	27.7%	25%	22.2%	30%	33.3%	30%	26.3%
		% of Total	6.8%	7.4%	5.2%	3.2%	2.1%	1.2%	26.3%
Maeni	Count	13	17	7	5	3	3	48	
	% within Ward	27%	35.4%	14.6%	10.4%	6.3%	6.3%	100.0%	
	% within FarmSize	27.7%	30.4%	15.6%	25%	25%	25%	25.3%	
	% of Total	6.8%	8.9%	3.7%	2.6%	1.6%	1.6%	25.3%	
Total	Count	47	56	45	20	12	10	190	
	% within Constituency	24.7%	29.5%	23.7%	10.5%	6.3%	5.3%	100.0%	
	% within FarmSize	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	24.7%	29.5%	23.7%	10.5%	6.3%	5.3%	100.0%	

Type of Farming

The respondents were asked to give information about the type of farming which they are involved in. The study found that 39.6 of the population in the four wards were involved in crop farming, 31.2% mixed farming and 29.2% in livestock rearing. The study shows that the main economic activity of the people in the four Wards is crop farming which is indicated in table 4.8 below.

Ward			Total			
			Crop Farming	Mixed Farming	Livestock	
Ward	Kimilili	Count	19	15	14	48
		% within Ward	39.6%	31.3%	29.2%	100.0%
		% within Type of Farming	26.6%	24.2%	29.2%	25.3%
		% of Total	8.9%	7.9%	7.4%	25.3%
	Kamukuywa	Count	13	18	11	44
		% within Ward	29.5%	40.9%	25%	100.0%
		% within Type of Farming	20.3%	29%	22.9%	23.2%
		% of Total	6.8%	9.5%	5.8%	23.2%
	Kibingei	Count	16	14	13	50
		% within Ward	32%	28%	26%	100.0%
		% within Type of Farming	25%	22.6%	27.1%	26.3%
		% of Total	8.4%	7.4%	6.8%	26.3%
Maeni	Count	18	15	10	48	
	% within Ward	37.5%	31.3%	20.8%	100.0%	
	% within Type of Farming	28%	24.2%	20.8%	25.3%	
	% of Total	9.5%	7.9%	5.3%	25.3%	
Total	Count	64	62	48	190	
	% within constituency	33.7%	32.6%	25.3%	100.0%	
	% within Type of Farming	100.0%	100.0%	100.0%	100.0%	
	% of Total	33.7%	32.6%	25.3%	100.0%	

Purpose of Farming

The study found that 25.3% of the respondent engages in farming activity for the purpose of food production, 40% of the population engage in agricultural activity for the purpose of generating income while 34.7% engage in agricultural activity for both food production and commercial purposes. This shows that the majority of the populations engage in agricultural activity for income generation as shown in table 4.9

		Purpose for Farming			Total
		Food Purposes	Income Generating	Both	
Kimilili	Count	9	18	21	48
	% within Ward	18.8%	37.5%	43.8%	100.0%
	% within Purpose for Farming	18.8%	23.7%	31.8%	25.3%
	% of Total	4.7%	9.5%	11.1%	25.3%
Kamukuywa	Count	13	17	14	44
	% within Ward	29.5%	38.6%	31.8%	100.0%
	% within Purpose for Farming	27.1%	22.4%	21.2%	23.2%
	% of Total	6.8%	8.9%	7.4%	23.2%
Kibingei	Count	13	20	17	50
	% within Ward	26%	40%	34%	100.0%
	% within Purpose for Farming	27.1%	26.3%	25.8%	26.3%
	% of Total	6.8%	10.5%	8.9%	26.3%
Maeni	Count	13	21	14	48
	% within Ward	27.1%	43.8%	29.2%	100.0%
	% within Purpose for Farming	27.1%	27.6%	21.2%	25.3%
	% of Total	6.8%	11.1%	7.4%	25.3%
Total	Count	48	76	66	190
	% within constituency	25.3%	40%	34.7%	100.0%
	% within Purpose for Farming	100.0%	100.0%	100.0%	100.0%
	% of Total	25.3%	40%	34.7%	100.0%

Income Changes

The study found that 75.8% have had their income improve due to better agricultural advice from West FM farming program while 24.2% were of a contrary opinion that their income has not changed because of agricultural advice from West FM program. This shows that agricultural activity has been of great help to the people of this area as it has improved their livelihood as indicated in table 4.10 below.

		Income Changes		Total	
		Yes	No		
Ward	Kimilili	Count	39	9	48
		% within Ward	81.3%	18.7%	100.0%
		% within Income Changes	27.1%	19.6%	25.3%
		% of Total	20.5%	4.7%	25.3%
	Kamukuywa	Count	35	9	44
		% within Ward	79.5%	20.5%	100.0%
		% within Income Changes	24.3%	19.6%	23.2%
		% of Total	18.4%	4.7%	23.2%
	Kibingei	Count	36	14	50
		% within Ward	72%	28%	100.0%
		% within Income Changes	25%	30.4%	26.3%
		% of Total	18.9%	7.4%	26.3%
	Maeni	Count	34	14	48
		% within Ward	70.8%	29.2%	100.0%
		% within Income Changes	23.6%	30.4%	25.3%
		% of Total	17.9%	7.4%	25.3%
Total	Count	144	46	190	
	% within Ward	75.8%	24.2%	100.0%	
	% within Income Changes	100.0%	100.0%	100.0%	
	% of Total	75.8%	24.2%	100.0%	

Increase in Agricultural Produce

The study found 80.2% of the respondents agreed that due to better information from West FM, they have been able to improve their yields, while 19.8% disagreed that information from the media has improved their yield. This shows that the information passed by the media has greatly improved farm production as shown below in table 4.11.

The agricultural extension officers were asked whether the agricultural produce and standards in the area had improved. All the four extension officers interviewed said that from the reports that they were getting from the farmers during their different engagements, agricultural produce and standards had increased. This was attributed to subsidized fertilizer costs, extension services and information on different farming methods learnt through *Ukulima Ajira* and other agricultural programs on West FM Radio. The extension officers agreed that the program has been helpful in promoting farming in Kimilili Sub-County by providing information about inputs to farmers, thereby facilitating timely planting of crops.

		Increased Agri Produce		Total	
		Yes	NO		
Ward	Kimilili	Count	43	12	55
		% within Ward	78.2%	21.8%	100.0%
		% within Increased Agri Produce	32.1%	36.4%	32.9%
		% of Total	25.7%	7.2%	32.9%
	Kamukuywa	Count	34	7	41
		% within Ward	82.9%	17.1%	100.0%
		% within Increased Agri Produce	25.4%	21.2%	24.6%
		% of Total	20.4%	4.2%	24.6%
	Kibingei	Count	28	5	33
		% within Ward	84.8%	15.2%	100.0%
		% within Increased Agri Produce	20.9%	15.2%	19.8%
		% of Total	16.8%	3.0%	19.8%
	Maeni	Count	29	9	38
		% within Ward	76.3%	23.7%	100.0%
		% within Increased Agri Produce	21.6%	27.3%	22.8%
		% of Total	17.4%	5.4%	22.8%
Total	Count	134	33	167	
	% within Ward	80.2%	19.8%	100.0%	
	% within Increased Agri Produce	100.0%	100.0%	100.0%	
	% of Total	80.2%	19.8%	100.0%	

Favorite Radio Station

The research sought to find out the popularity of West FM in Kimilili Sub-County. This was important to this research as it intended to survey the impact of farming programs aired on agricultural productivity in the area. Therefore the popularity of the vernacular radio station would relate to the listening and awareness of the program *Ukulima Ajira*. The respondents were therefore asked what their favourite radio stations are.

The study found that 33.7% of the respondents agreed that West FM radio station was their favorite radio station, 24.2% said Sulwe radio station was their favorite station, 15.8% said Radio Jambo, 10.5% said Citizen TV, 5.3% said Radio Maisha, 5.3% said Nyota FM while 5.3% said other radio stations. This shows that West FM is the dominant radio station in the region as shown in table 4.13

Ward			Favourite Radio Station						Total	
			West FM	Sulwe	Radio Jambo	Citizen Radio	Radio Maisha	Nyota FM		Others
Ward	Kimilili	Count	15	13	10	5	2	1	2	48
		% within Ward	31.3%	27.1%	20.8%	10.4%	4.2%	2.1%	4.2%	100.0%
		% within Favourite Radio Station	23.4%	28.3%	33.3%	25%	20%	10%	20%	25.3%
		% of Total	7.9%	6.8%	5.3%	2.6%	1.1%	0.5%	1.1%	25.3%
	Kamukuywa	Count	15	10	8	4	2	3	2	44
		% within Ward	34.1%	22.7%	18.2%	9.1%	4.5%	6.8%	4.5%	100.0%
		% within Favourite Radio Station	23.4%	21.7%	26.7%	20%	20%	30%	20%	23.2%
		% of Total	7.9%	5.3%	4.2%	2.1%	1.1%	1.6%	1.1%	23.2%
	Kibingei	Count	16	11	7	6	4	3	3	50
		% within Ward	32%	22%	14%	12%	8%	6%	6%	100.0%
		% within Favourite Radio Station	25%	23.9%	23.3%	30%	40%	30%	30%	26.3%
		% of Total	8.4%	5.7%	3.7%	3.2%	2.1%	1.6%	1.6%	26.3%
	Maeni	Count	18	12	5	5	2	3	3	48
		% within Ward	37.5%	25%	10.4%	10.4%	4.2%	6.3%	6.3%	100.0%
		% within Favourite Radio Station	28.1%	26.1%	16.7%	25%	20%	30%	30%	25.3%
		% of Total	9.5%	6.3%	2.6%	2.6%	1.1%	1.6%	1.6%	25.3%
Total	Count	64	46	30	20	10	10	10	190	
	% within Constituency	33.7%	24.2%	15.8%	10.5%	5.3%	5.3%	5.3%	100.0%	
	% within Favourite Radio Station	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	33.7%	24.2%	15.8%	10.5%	5.3%	5.3%	5.3%	100.0%	

Lessons learnt from Ukulima ajira and other Agricultural programs on West FM

Respondents were asked to provide a list of some of the lessons that they have learnt from Ukulima Ajira and other agricultural programs on West FM radio. 38.4% said that they have been able to learn different farming techniques and better land use, 24.2% said that they were able to plant their crops at the right time because of the advice that the station gave especially in regard to the weather patterns. 15.3% said that they have learnt the different methods of pest and disease control from the station. 10.5% have learnt better animal keeping techniques and the type of feeds to give different animals. Finally 11.6% said that they learnt a lot from the station about storage of their produce and how to market and where to get markets for their harvests. This shows that the station has really been of great help to the farmers as they have learnt lessons from it and also put the lessons into practice.

Ward			Lessons learnt from Ukulima ajira & other agricultural shows					Total
			Better land use & farming techniques	Timely planting	Pest & disease control	Better animal keeping methods	Storage and marketing of produce	
Ward	Kimilili	Count	22	12	6	4	4	48
		% within Ward	45.8%	25%	12.5%	8.3%	8.3%	100.0%
		% within	30%	26.1%	20.7%	20%	18.2%	25.3%
		% of Total	11.6%	6.3%	3.2%	2.1%	2.1%	25.3%
	Kamukuywa	Count	16	10	9	5	4	44
		% within Ward	36.4%	22.7%	20.5%	11.4%	9.1%	100.0%
		% within	21.9%	21.7%	31%	25%	18.2%	23.2%
		% of Total	8.4%	5.3%	4.7%	2.6%	2.1%	23.2%
	Kibingei	Count	19	11	7	6	7	50
		% within Ward	38%	22%	14%	12%	14%	100.0%
		% within	26%	23.9%	24.1%	30%	31.8%	26.3%
		% of Total	10%	5.8%	3.7%	3.2%	3.7%	26.3%
	Maeni	Count	16	13	7	5	7	48
		% within Ward	33.3%	27.1%	14.6%	10.4%	14.6%	100.0%
		% within	21.9%	28.3%	24.1%	25%	31.8%	25.3%
		% of Total	8.4%	6.8%	3.7%	2.6%	3.7%	25.3%
Total	% within Ward	73	46	29	20	22	100.0%	
	% within	38.4%	24.2%	15.3%	10.5%	11.6%	100.0%	
	% within	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	38.4%	24.2%	15.3%	10.5%	11.6%	100.0%	

West FM Programs

The researcher sought to find the degree of popularity of *Ukulima ajira program* in Kimilili Sub-County. This was important for the researcher because the degree of popularity of this farming program was a sign that it is effective in communicating to the farmers. The study found that 29.5% listen to Ukulima Ajira Program, 18.4% listen to Bamasaba Program, 5.8% listen to Cross Fire, 5.3% listen to News, 10.5% listen to Amka na West FM, 5.3% Changamka na West FM, 5.3% listen to Za Kisasa with DJ Walter and 20% listen to other programs. The study shows that *Ukulima Ajira* is the program that is being preferred by the majority of the people in that area as shown in table 4.16 below.

Table 4.12. West FM Programs

Ward			WestFMPrograms								Total
			Ukulima Ajira	Bamasaba	Cross Fire	News	Amka na West FM	Changamka na West FM	Za Kisasa with Dj. Walter	Others (Kata Jasho, Jinyce Reggae, Tuliza na West FM)	
Kimilili	Count		17	11	2	1	5	1	2	9	48
		% within Ward	35.4%	22.9%	4.2%	2.1%	10.4%	2.1%	4.2%	18.8%	100.0%
		% within West FM Programs	34.7%	31.4%	18.8%	10%	25%	5%	20%	28.6%	32.9%
	% of Total		10.2%	7.2%	1.8%	1.2%	3.6%	1.2%	1.8%	6.0%	32.9%
		Count	12	7	2	3	4	3	3	10	44
		% within Ward	26.8%	14.6%	4.9%	7.3%	9.8%	7.3%	7.3%	22.0%	100.0%
	% within West FM Programs		22.4%	18.2%	25.0%	37.5%	22.2%	37.5%	37.5%	25.7%	24.6%
		% of Total	6.6%	3.6%	1.2%	1.8%	2.4%	1.8%	1.8%	5.4%	24.6%
		Count	15	8	5	3	5	3	3	8	50
	% within Ward		33.3%	21.2%	6.1%	3.0%	9.1%	3.0%	3.0%	21.2%	100.0%
		% within West FM Programs	22.4%	21.2%	25.0%	12.5%	16.7%	12.5%	12.5%	20.0%	19.8%
		% of Total	6.6%	4.2%	1.2%	.6%	1.8%	.6%	.6%	4.2%	19.8%
Maeni	Count	12	9	2	3	6	3	2	11	48	
	% within Ward	26.3%	21.1%	2.6%	5.3%	13.2%	5.3%	2.6%	23.7%	100.0%	
	% within West FM Programs	20.4%	24.2%	12.5%	25.0%	27.8%	25.0%	12.5%	25.7%	22.8%	
% of Total		6.0%	4.8%	.6%	1.2%	3.0%	1.2%	.6%	5.4%	22.8%	
	Count	56	35	11	10	20	10	38	10	190	
	% within Ward	29.5%	18.4%	5.8%	5.3%	10.5%	5.3%	5.3%	20%	100.0%	
% within West FM Programs		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.5%	18.4%	5.8%	5.3%	10.5%	5.3%	5.3%	20%	100.0%	

Impact of the *Ukulima Ajira* program on the audience

The program producers were asked how the *Ukulima Ajira* program had been helpful to the farmers. They responded that the program had helped farmers to achieve their dreams and that it had taught them new technologies in farming such as greenhouse farming.

The producers also said that the program has met its objectives, which are:

- To be able to inform the listener on new ways of farming.
- To help farmers get the market for their produce.
- To educate the farmers on emerging technologies in livestock keeping
- To connect farmers with trained farmers and experts so as to be able to get what is needed in farming

Ukulim ajira and other agricultural programs according to the West FM producers has been very helpful and has managed to meet its objectives.

4.14. Listen to Agricultural Programs

The study found that 73.2% of the respondents listen to agricultural program while 14.6% disagreed to listening to agricultural activity. The study shows that most of the respondents listen to agricultural program as a source of education to improve their farm produce as shown in table 4.17.

			Listento Agri Programs		Total
			Yes	NO	
Ward	Kimilili	Count	38	10	48
		% within Ward	79.2%	20.8%	100.0%
		% within Listen to Agri Programs	20%	5.3%	25.3%
		% of Total	24.6%	8.4%	32.9%
	Kamukuywa	Count	34	10	44
		% within Ward	77.30%	22.7%	100.0%
		% within Listen to Agri Programs	25.4%	22.0%	24.6%
		% of Total	17.9%	5.3%	23.2%
	Kibingei	Count	35	15	50
		% within Ward	70%	30%	100.0%
		% within Listen to Agri Programs	20.6%	17.1%	19.8%
		% of Total	18.4%	7.9%	26.3%
	Maeni	Count	32	16	48
		% within Ward	66.7%	33.3%	100.0%
		% within Listen to Agri Programs	21.4%	26.8%	22.8%
		% of Total	16.8%	8.4%	25.3%
Total	Count	139	51	167	
	% within Ward	73.2%	26.8%	100.0%	
	% within Listen to Agri Programs	100.0%	100.0%	100.0%	
	% of Total	73.2%	24.8%	100.0%	

Time Allocated for Agricultural Program on Air

The study sought to find whether the time allocated to agricultural program was sufficient, the study found that 54.7% of respondents agreed that agricultural programs were allocated enough time while 45.3% disagreed that agricultural programs were allocated enough time and requested for more time to be allocated. This shows that the majority of respondent were satisfied by time allocated for agricultural programs on West FM as shown in table 4.18 below.

			Frequency of Agricultural Program Sufficient		Total
			Yes	No	
Ward	Kimilili	Count	27	21	48
		% within Ward	56.3%	43.7%	100.0%
		% within Frequency of Agri Program Sufficient	33.7%	32.0%	32.9%
		% of Total	14.2%	11.1%	25.3%
	Kamukuywa	Count	25	19	44
		% within Ward	56.1%	43.9%	100.0%
		% within Frequency of Agri Program Sufficient	25.0%	24.0%	24.6%
		% of Total	13.2%	10%	23.2%
	Kibingei	Count	28	22	50
		% within Ward	57.6%	42.4%	100.0%
		% within Frequency of Agri Program Sufficient	20.7%	18.7%	19.8%
		% of Total	14.7%	11.6%	26.3%
	Maeni	Count	24	24	48
		% within Ward	50.0%	50.0%	100.0%
		% within Frequency of Agri Program Sufficient	20.7%	25.3%	25.3%
		% of Total	12.6%	12.6%	25.3%
Total	Count	104	86	190	
	% within Ward	54.7%	45.3%	100.0%	
	% within Frequency of Agri Program Sufficient	100.0%	100.0%	100.0%	
	% of Total	54.7%	45.3%	100.0%	

Participation in the West FM Programs

The researcher wanted to find out whether these programs were customized to engage public opinion. The study found that 68.4% agreed that West FM program engaged the audience in their deliberation and the station sought input while 31.6% disagreed that public opinion was sought. This shows that a significant number were of the opinion that the programs involved public participation as shown in table 4.18

		Participate in the West FM Programs		Total	
		Yes	No		
Ward	Kimilili	Count	36	12	48
		% within Ward	75%	25%	100.0%
		% within Participate in the West FM Programs	33.6%	31.4%	25.3%
		% of Total	39.5%	6.3%	25.3%
	Kamukuywa	Count	32	12	44
		% within Ward	70.7%	29.3%	100.0%
		% within Participate in the West FM Programs	25.0%	23.5%	23.2%
		% of Total	17.4%	7.2%	23.2%
	Kibingei	Count	33	17	50
		% within Ward	72.7%	27.3%	100.0%
		% within Participate in the West FM Programs	20.7%	17.6%	26.3%
		% of Total	14.4%	5.4%	26.3%
Maeni	Count	29	19	48	
	% within Ward	63.2%	36.8%	100.0%	
	% within Participate in the West FM Programs	20.7%	27.5%	25.3%	
	% of Total	14.4%	8.4%	25.3%	
Total	Count	131	59	167	
	% within Ward	68.4%	31.6%	100.0%	
	% within Participate in the West FM Programs	100.0%	100.0%	100.0%	
	% of Total	68.4%	31.6%	100.0%	

Maeni	Count	15	9	3	6	2	3	38
	% within Ward	39.5%	23.7%	7.9%	15.8%	5.3%	7.9%	100.0%
	% within Lessons from WestFM	25.4%	26.5%	12.5%	25.0%	12.5%	30.0%	22.8%
	% of Total	9.0%	5.4%	1.8%	3.6%	1.2%	1.8%	22.8%
Total	Count	59	34	24	24	16	10	167
	% within Ward	35.3%	20.4%	14.4%	14.4%	9.6%	6.0%	100.0%
	% within Lessons from West FM	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	35.3%	20.4%	14.4%	14.4%	9.6%	6.0%	100.0%

How Ukulima Ajira has benefitted the farmers

Respondents who found the program helpful were asked how it has been helpful to them. 27.9% said the program has enabled them to increase their farm output, 26.3% were able to increase their income, 16.3% were able to reduce their cost of farming, 14.7.5% were able to control pests and diseases and 14.7% were able to buy quality seeds. The findings therefore indicate that majority of the respondents were able to increase their farms' output.

			Increased output	Reduced farming cost	Ability to buy quality seeds	Ability to control pests and diseases	Increased income	
Ward	Kimilili	Count	13	8	8	7	12	48
		% within Ward	27.1%	16.7%	16.7%	14.6%	25%	100.0%
		% within West FM Programs	34.7%	36.4%	37.5%	25.0%	33.3%	25.3%
		% of Total	6.8%	4.2%	4.2%	3.7%	6.3%	25.3%
	Kamukuywa	Count	11	7	8	6	12	44
		% within Ward	25%	15.9%	18.2%	13.6%	27.3%	100.0%
		% within West FM Programs	22.4%	18.2%	25.0%	37.5%	22.2%	23.2%
		% of Total	6.6%	3.6%	1.2%	1.8%	2.4%	23.2%
	Kibingei	Count	17	7	5	6	15	50
		% within Ward	34%	14%	10%	12%	30%	100.0%
		% within West FM Programs	22.4%	21.2%	25.0%	12.5%	16.7%	26.3%
		% of Total	8.9%	4.2%	1.2%	.6%	1.8%	26.3%
	Maeni	Count	12	9	7	9	11	48
		% within Ward	25%	18.8%	14.6%	18.8%	22.9%	100.0%
		% within West FM Programs	20.4%	24.2%	12.5%	25.0%	27.8%	25.3%
		% of Total	6.0%	4.8%	.6%	1.2%	3.0%	25.3%
Total	Count	53	31	28	28	50	190	
	% within Ward	27.9%	16.3%	14.7%	14.7%	26.3%	100.0%	
	% within West FM Programs	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.9%	16.3%	14.7%	14.7%	26.3%	100.0%	

Effective communication method between the Extension workers and Farmers

The extension workers said that the most effective way of communicating with the farmers was through farm visits, field days, posters, phone calls and radio. Radio was significant as a platform for communication as it gave farmers great insights and ideas on different agricultural methods and how to improve yields.

Improvement of farming standards in the area

The agricultural workers were asked whether the agricultural programs on West FM radio improved the standard of farming. Their response was that the agricultural programs have contributed positively in agricultural productivity as yields have increased and farmers' complaints had reduced significantly. This is attributed to the ideas provided by the station like new ways of farming (green house), subsidized farm inputs, importance of buying quality seeds, different methods of controlling diseases and pests, how to market their produce etc.

Promotion of Farming by *Ukulima Ajira* program

The extension officers were asked if the ukulima ajira program had been helpful in promoting farming in Kimilili Sub-County. This question was significant because it gave an opportunity to get the experts' opinion. The officers agreed that the regional stations especially West FM have been helpful in promoting farming in Kimilili Sub-County by providing information about inputs to farmers, thereby facilitating timely planting of crops.

The respondents came up with the following recommendations to West FM radio as the best way forward to improve agricultural output in the region. 33% of the respondents were of the opinion that the radio station should increase the number and frequency of agricultural programs to at least twice a week. 24.2% were of the opinion that the station should invite different agricultural experts to the show in order to have varied ideas on different farming methods and how to increase yields. This also includes invitation of both County and national agricultural officers to come and educate and inform farmers on the different strategies that the government was working on to help overcome the different challenges that farmers were experiencing and to also get views from farmers on farming. 20% of the respondents recommended that the radio station introduces initiatives that will help the farmers financially. 11.1% were of the opinion that the radio station increases developmental programs that touch on issues that were affecting the community/ society. They include health, social, economic and religious programs. 11.1% wanted the radio station presenters to visit the farmers so that they could have first hand information on what happens on the ground.

Conclusion

The study found that the age group of 42-49 with a presentation of 32.6% of the population was more dominant in the agricultural activity. The study further found that the majority of people involved in agricultural activity have no formal education at 36.2% of the population. The major reason given for this is lack of school fees. Despite agriculture being the main economic activity of the area, most farmers have 2-6 acres of land for agriculture representing 29.5% of the total farmlands in the area.

The main type of farming being practiced in the area is crop farming at 33.7% of the farming activity in the region. This implies that most farmers exercise crop farming as a way of earning livelihood. Since the introduction of West FM radio station in the area and the introduction of farming programs at the station, farmers have recorded high production as a result of this programs at 80.2% compared to earlier years without the programs. This has enabled farmers to engage presenters and experts from the field of agriculture on good practices for their farms. This is further supported by a massive population at 40.7% who said that they listen to West FM on a daily basis. Their favorite program at 29.3% of the respondent sample said that *Ukulima ni Ajira* program is more educative and is known to make a positive impact in the society. The researcher noted that at 75.4% of the population were more interested in conservative programs like agricultural programs that keep them laid back and listening. This has been as a result of daily engagement between farmers, presenters and experts who come on air to share their knowledge and experience.

Most respondents in Kimilili Sub-County tune to West FM due to its agricultural program *ukulima ajira*. *Ukulima Ajira* is the most popular program aired by the station. The research findings revealed that farmers and especially in the area chosen for study expressed positive views on the role the regional station West FM and its agricultural program has played in enhancing their farming activities and above all the productivity of their farming activities

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