

**RADIO AND AGRICULTURAL DEVELOPMENT: An influence assessment
of the programme *Mugambo Wa Murimi* on farming practices of farmers in
Gatanga Constituency.**

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DECLARATION

STUDENT'S DECLARATION

This research project is my original work and has not been presented for a degree award in any other university.

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This project has been presented for examination with my approval as the university supervisor.

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DEDICATION

For my dear children, Natasha and Victor, who gave me a reason to work hard.

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I owe my gratitude to many people who made a meaningful contribution to this research undertaking enabling me to complete it on time.

First I would like to thank my family for their patience and moral support as i worked on the project. I thank my husband Isaac, my sister Njeri and my mother for encouraging me to complete the project.

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ABSTRACT

The purpose of this study was to assess the influence of the program *Mugambo Wa Murimi* on farming practices of farmers in *Gatanga* Constituency. The study also sought to investigate the perceptions and attitudes of the farmers towards the program, find out how the farmers use agricultural information to improve farming methods and explore farmers' opinion on how agricultural programs on radio can be improved. It was carried out in *Gatanga* Constituency, *Muranga* County. The study used mixed methods. Both qualitative and quantitative research methods were used. The data collection instruments used in the study were questionnaires and interviews. The target population of the study was all small scale farmers aged between 25 to 65 years in *Gatanga* Constituency. In addition, the study used purposive sampling technique. Simple random sampling method was used in selecting three wards of *Gatanga* Constituency. These wards were: *Gatanga*, *Kakuzi* and *Kariara*. Qualitative data was analyzed in the form of words and narratives. On the other hand, quantitative data was analyzed using descriptive statistics. The main findings of the study revealed that the program *Mugambo Wa Murimi* had influenced most of the farmers to become better at their farming practice (96.6%) while 76.7% had been able to practice a new farming method learnt from the program. In addition the findings indicated that 91.4% of the farmers found the program useful and 81% of the farmers had been able to use information from the program to improve their farming practices. The study recommends that the producer should include topics on maize disease precaution and control, making biogas and waste product usage. Additionally topics on agribusiness, especially those that relate to production and markets as well as where farmers can borrow finances should be explored so as to improve farming practices.

LIST OF ACRONYMS

ASK:	Agricultural Society of Kenya
FAO:	Food and Agricultural Organization
FM:	Frequency Modulation
FVR:	Farmer Voice Radio
GDP:	Gross Domestic Product
GOK:	Government of Kenya
ICT:	Information Communication Technology
JKUAT:	Jomo Kenyatta University of Agriculture and Technology
KNBS:	Kenya National Bureau of Statistics
NGO:	Non- governmental Organization
NAEP:	National Agricultural Extension Policy
UNDP:	United Nations Development Program
UNESCO:	United Nations Education Scientific and Cultural Organization
USAID:	United States Aid
WHO:	World Health Organization

LIST OF KIKUYU TERMINOLOGIES

<i>GUCHUACHUA</i>	To move about in one place
<i>GUKERA</i>	To Sieve
<i>HUTIA MUNDU</i>	To give information that touches a persons heart
<i>INOORO RUCINI</i>	Breakfast Show on Inooro FM
<i>KIGOCHO</i>	To Praise God through music
<i>MUGAMBO WA MURIMI</i>	The voice of the farmer
<i>NGOGOYO</i>	Sugarcane juice

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CHAPTER ONE

1.1 BACKGROUND TO THE STUDY

Agriculture is the mainstay of the Kenyan economy directly contributing 26 percent of Gross Domestic Product (GDP) annually and 25 percent indirectly (GOK 2010). The sector accounts for 65 percent of Kenya's total exports and provides more than 70 percent of informal employment in the rural areas. This means that the agricultural sector drives the Kenyan economy and is also the main means of livelihood for the majority of the rural population.

The Agricultural Act (1986) was established to promote and maintain a stable agriculture, to provide for the conservation of the soil and its fertility and to stimulate the development of agricultural land in accordance with the accepted practices of good land management and good husbandry'. However this has not been very successful due to the performance of the public sector extension service which has been widely perceived as being below par (NAEP 2001)

Poverty is a major challenge in Kenya, with about 46% of the population living below the poverty line (UNDP 2009). Many Kenyans cannot afford basic needs such as food, clothing and shelter. The Kenya Vision 2030 is a long term development blueprint, expected to transform the country in to a rapidly industrializing middle income nation by the year 2030 (UNDP 2010). The economic pillar on this vision underpins agriculture as one of the priority sectors that will provide the impetus for economic growth and development.

The economic review of agriculture (GOK 2013) indicates that the growth of the agricultural sector declined in the second quarter of 2012. There are many factors that could have contributed to the decline but according to Festus T in (White 2008) there is increasing consensus that lack of communication can lead to insufficient agricultural production.

Farmers in rural Kenya rely on agricultural extension officers for information on best agricultural practices. However there are few extension officers in the Counties serving farmers with the ratio being one extension officer to 753 farmers (Sanga 2013). The National Agricultural Extension Policy (NAEP) recognizes the need for external assistance to extension by development partners. According to (Oriare et al 2010), all the major communities in Kenya have their own ethnic language radio station. Communication on best agricultural practices through these radio stations can fill the information gap left by the shortage of agricultural extension officers in the Counties.

1.2 INTRODUCTION

The media plays a crucial role in development. It has the ability to reach wide audiences with strong and influential messages which impact upon society. Broadcasting retains a position of enormous influence over social, cultural and political life in nearly all parts of the world (Buckley et al 2008). This is true for Kenya where the broadcasting industry has diverse media that impact either positively or negatively on the life of the populace.

Mass communication is the process of creating shared meaning between the mass media and their audiences (Baran 2006). This means that the messages that are passed on by the media should be understood by the audience. In the past mass communication concentrated on conveying messages from the government to the public in a top down hierarchical pattern to the disadvantage of the receiver (Okigbo 1996). However, participatory communication can promote the two way flow of information between people and government (Buckley et al 2008). Access to information enables citizens to actively participate in public discussion on issues that affect their lives.

Traditional media has served as a companion as well as an important source of information for the audience. Radio, television and newspapers provide listeners, viewers and readers with something to talk about. Studies based on new theories have supported the role and power of mass media in setting an agenda for public discourse, influencing public opinion and providing varied gratifications that may meet audience needs (Melkote 2001).

According to (Oriare 2010), Kenyan media are powerful drivers of socio economic transformation in the country providing people with information critical for making enlightened decisions and choices on socio economic issues. Kenya has over 63 radio stations and about 7.5 million rural and urban homes have radio sets (ibid)

Radio has been acclaimed by many development oriented communicators as the medium of the people and as the only medium which reaches all segments of society even in the poorest of countries (Okigbo 1995). Radio is particularly accessible in financial terms and is the only source of information for many of the world's poorest people (Buckley et al 2008). Radio has many advantages which include a low cost, easy access and the fact that it can easily speak to marginalized cultural groups in their own language (ibid)

Kenyan local radio has a wide outreach and can design programmes with development messages for their audience. Myers (2008) however points out that, one of the main challenges for developmental content on African radio is the need to produce programmes on a tight budget. This implies that African radio stations are financially constrained and may not be in a position to produce development oriented programmes which require a huge budget. This challenge can be overcome with the support of development partners funding some of these programmes.

Radio for development centers on community participation in development programs so as to improve their livelihoods and environment. Okigbo (1996) notes that the mass media if properly used can be an indispensable source in mass education of society, sharing of consciousness, creation of nationhood and promotion of socio-economic development.

For a long time in Kenya mass communication had been limited to two official languages that locked out the majority of the people especially in the rural areas who could not comprehend English or Kiswahili (Situma 2010). These people would have been well served if they had mass media in their local language.

Today Kenya has over 20 local language radio stations (Oriare 2010). Local language radio stations are popular because they speak in a language that the audience understands. These stations penetrate all social classes and can send messages that impact upon these classes.

Agriculture is practiced in the rural areas where majority of the population lives. The rural people are the main agents of experimentation on their plots of land, the seekers of new information and decision makers on the best way to introduce new farming practices (White 2008). Participatory communication on radio where the farmer gets actively involved in selecting the content of agricultural programs can be used to help the country achieve Vision 2030 blueprint to have enough food for the rising population.

Participatory radio campaigns have been used in Africa in the past to involve farmers in finding solutions to challenges in farming and improving farming practices. One such campaign was conducted by Farm Radio International in five African countries. The key finding of the campaign was that it was successful in motivating small-scale farmers to take up improved farming practices and adopt the improved farming methods.

According to (Oriare et al 2010), all the major communities in Kenya have their own ethnic language radio station. Local language radio has given the rural communities in Kenya a voice. Every day these communities engage in discussions on issues that affect their lives through local radio in a language they understand. Local language radio contributed immensely to the high levels of political participation in 2007 elections by delivering civic education platforms (ibid)

Local language radio stations have programming that targets rural communities. Though the stations play music most of the time, they have some talk programs that feature a variety of topics. Agricultural programmes, on these radio stations have content that targets a small scale farmer. Through these programs farmers discuss issues that affect them and are also advised by agricultural experts on best agricultural practices.

The rural communities will use media for different reasons. Mcquail (2010) posits that media use is largely shaped by certain relatively constant elements of social structure and media structure. Social structure includes demographics such as level of education, income level, age, gender, occupation among others. The rural farmer will use the media probably because he has a need that may be gratified by the media. Agricultural radio programs on local radio stations have the farmer as the target audience.

Inooro FM is a Kikuyu language radio station under the stable of Royal Media Services. It broadcasts in Gikuyu language. *Mugambo Wa Murimi* is a feature program that is broadcast on the radio station, Monday to Friday at 7.30 AM. It runs for ten minutes and focuses on various agricultural topics every day. This program is the focus of this research study. The study investigated the influence of this program on the agricultural practices of farmers in *Gatanga* Constituency, *Muranga* County.

The study was guided by three theories. Diffusion of innovation is a theory of change which explains the process by which an innovation is communicated through certain channels overtime among members of a social system. Radio is an important channel of communication that can be used to spread new agricultural innovations in rural Kenya. The other two theories used in the study are McLuhan's theory of medium is message and information processing theory.

1.3 Statement of the problem

Radio is a universal medium of communication that appeals to many people. It has the ability to inform and empower society through its programming. Radio broadcasting should provide a platform to the audience to express their concerns and raise questions with experts, thereby solving their problems (Buckley et al 2008). In an ideal situation the radio audience should be gratified and be able to influence their community as well as improve their livelihoods.

Through the radio, farmers in rural Kenya can be able to learn innovative farming practices which they can adopt and ensure food security. Agricultural based programs on radio can be useful for the farmer providing information that helps them to adhere to best agricultural practices. Dissemination of agricultural information can benefit farmers by enabling them to increase food production and improve land use and management. The economic pillar on Vision 2030 blueprint underpins agriculture as one of the priority sectors that will move economic growth (UNDP 2010). Agricultural programs through local radio can support the economic pillar to help revolutionize Kenya into an industrialized country by the year 2030.

In Kenya there are over 20 local language radio stations (Oriare 2010). Some of these radio stations have agricultural programs that target farmers in rural Kenya. These programs feature a variety of agricultural content that appeals to the farmer. The question that arises is how these

programs affect the farmer. Do they achieve their intended purpose and how can they be improved?

In view of the above, this research study investigated the influence of the agricultural program *Mugambo wa Murimi* on farming practices of farmers in *Gatanga* Constituency. It further sought the perceptions and attitudes of the farmers towards the program, established how the farmers used agricultural information to improve farming methods and explored farmers' opinion on how agricultural programmes can be improved.

1.4 Objectives of the Study

- i. Evaluate the influence of the program on the agricultural practices of the farmers.
- ii. Investigate the perceptions and attitudes of the farmers towards the program
- iii. Find out how the farmers use agricultural information to improve farming methods
- iv. Explore farmers' opinion on how agricultural programs on radio can be improved.

1.5 Research Questions

- i. What are the effects of the program on agricultural practices of the farmers?
- ii. How do the farmers perceive the agricultural program?
- iii. How do the farmers use the agricultural information from the program?
- iv. What can be done to improve agricultural radio programs?

1.6 Justification of the study

Radio is the most important source of information and entertainment for many Kenyans. About 68 percent of radio listeners' tune into local language radio stations and all the major communities have their own ethnic language radio station (Oriare 2010).

Agriculture is the mainstay of the Kenyan economy directly contributing 26 percent of Gross Domestic Product (GDP) annually and 25 percent indirectly (GOK 2010). The agricultural sector is one among others expected to propel Kenya in to an industrialized country by the year 2030 (UNDP 2010). The growth of the agricultural sector expanded by 2.3 percent in the first quarter of 2012 (GOK 2013). However, it declined in the second quarter of the same year to 1.6 percent from 4.2 percent experienced in the same quarter of 2011.

The agricultural sector provides more than 70 percent of informal employment in the rural areas (GOK 2010). This implies that the agricultural sector is the main means of livelihood for the majority of the rural population.

The government of Kenya through the Ministry of Agriculture employs agricultural extension officers who teach rural farmers best agricultural practices. However, there are few extension officers in the Counties serving farmers, with the ratio being one extension officer to 753 farmers (Sanga 2013).

The National Agricultural Extension Policy (NAEP 2001) recognizes the need for external assistance to extension by development partners. The local radio therefore can collaborate with development partners in the production of agricultural programs so as to bridge the gap and help rural farmers to improve their agricultural practices and ensure a constant food supply for the population.

1.7 Significance of the study

Local language radio broadcasting in Kenya has been controversial with claims that some vernacular radio stations contributed to the 2007/2008 post election violence. While this may be true to some extent, radio still remains a powerful mass media whose strengths far outweigh its

weaknesses. 'Radio is a source for music entertainment, a means by which many people receive the latest news, a forum where ideas are debated on talk shows and an effective advertising medium' (Denis & Defleur 2002).

The findings of this study are useful because they indicate the place of agricultural programs on local radio in improving agricultural practices in Kenya.

Above all the study adds to the existing body of knowledge dealing with media and the content they offer to listeners and especially agricultural content. Effects of agricultural radio programs on the audience are also brought out.

1.8 Assumption of the study

The underlying assumption in this study was that radio plays an important role in economic development and that farmers in the rural areas listen to local radio for information on better agricultural practices.

1.9 Scope and limitation of the study

This research study was carried out in *Gatanga* Constituency of *Muranga* County. The subjects in the study were all small scale farmers in the Constituency. These were farmers who cultivate no more than two hectares (five acres) of land.

The study focused on radio as a tool for agricultural development. It specifically examined the effects of the program *Mugambo wa Murimi* which airs on *Inooro* FM on farming practices of small scale farmers in *Gatanga* Constituency.

Every research study has challenges which may negatively affect it and which are beyond the researchers' control.

In this research study the researcher needed finances to travel around *Gatanga* Constituency and to pay research assistants. However the study was not funded and it was therefore a great challenge for the researcher to fund it.

In the course of writing the proposal the researcher noted that there was scarce literature in the area of development communication and more so in the area of radio and development.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter reviews what has been written in relation to radio and agricultural development. It summarizes what is known in this area and highlights some case studies and previous findings on radio and agricultural development.

The review is divided into four sub-topics namely: Concept of radio, Radio and agricultural development, radio as an extension tool for agricultural development and radio and participatory development.

2.2 Concept of Radio

The radio has an important function of informing, educating and entertaining the masses. As (Denis & Defleur 2002) observes it is a source for music entertainment and a means by which people receive the latest news. For some people especially those in the rural areas, radio is the only source of entertainment.

According to Myers (2008) one of the greatest advantages of radio compared to other media is that it is portable and can be listened to while performing other tasks. This means that listening to radio is not an exclusive activity and one can engage in other activities as they listen to their favourite programme.

The radio has many other advantages over other mass media. Gough (1982) points out that, messages on radio are immediately received and so it can be topical and up to date eliciting immediate response from listeners. Other strengths of radio as a mass medium are that it does not

privilege the literate and that it's particularly accessible in financial terms (Buckley et al 2008). This means that even the poorest people in the community can be able to afford a radio set.

Myers (2008) states that radio stations can be divided into four categories which are: state controlled public radio, privately owned commercial radio, community controlled radio and international radio. Kenya has a three tier broadcasting system comprised of state broadcasters, commercial broadcasters and community radio (Gathigi 2009)

Since the liberalization of the airwaves over ten years ago, many radio stations have come up in Kenya. A number of them broadcast in the two official languages that is English and Kiswahili while the rest broadcast in local languages.

The radio has impacted positively in the lives of many people since its inception and as (Denis & Defleur 2002) puts it, "radio's future seems secure since it's a flexible medium capable of responding to changes that may come in the future".

2.3 Radio and agricultural development

The media have an information function that makes them play a crucial role in development. As (Chadra 2004) points out, 'media can play a much greater role in enabling people to take control over their own lives, in enabling people and societies to set their own agendas in relation to political, economic and social development; and in particular the voices of the economically and politically marginalized to be amplified and channeled to mainstream public and political debate'.

Strampickal (2006) echoes the same by stating that media such as radio, television, print and the internet can provide information creating a clear understanding of what development is and can inform a large mass of people about developmental concepts, programs and issues. He further

states that the mass media provide a vast reservoir of knowledge and information, serves as a tool for development and complements other development approaches.

The broadcast media have a unique role to play both in enabling governance and accountability and in giving voice to poor and marginalized communities (Buckley et al 2008). Rural communities in Africa are in most cases marginalized and have no access to information that can enable them to participate in debate or express their views on issues that affect them directly. Without access to information on improving agricultural practices, rural farmers lack knowledge for them to take effective action. Festus T in (White 2008) argues that, there are many causes to insufficient agricultural production, but there is increasing consensus that lack of communication has been one of the central problems. Communication through the radio on best agricultural practices may fill this gap.

The radio has proved to be one of the most effective mediums in promoting agriculture and development in rural areas (Hazbullah 2010). Rural communication is an interactive process in which information, knowledge and skills relevant for development are exchanged between farmers, extension/advisory services and information providers either personally or through media such as radio, print and more recently information and communication technologies (FAO 2006). This implies that radio can be used to pass on development messages to rural people. The aim is to put rural people in a position to have the necessary information for informed decision making and the relevant skills to improve their livelihoods (ibid)

Local and community based media have a particular role in enabling rural communities to access information in their local languages. Regular transmission of radio programmes related to agriculture gives valuable information about new farming methods (Ekoja 2003). As the farmer

receives useful information on the radio, they are able to apply the new techniques gradually improving farming methods (ibid)

There are many success stories where radio has been used to enhance agricultural production. Radio Madanpokhara in Nepal broadcasts across a rural agricultural community in which few people have access to electricity or a telephone and it has become the principal means of local communication and discussion of local development (Buckley et al 2008). According to an independent listener survey, the radio contributes to improved agricultural techniques and improves access to news and information.

In Kenya, The Kenya Broadcasting Corporation has radio stations that cater for particular regions and broadcast in local languages. Some of these stations air programmes that have useful development information. In Senegal, Senegalese state radio carries better quality development programmes and caters well for local languages compared to the under-resourced community stations (Myers 2008). In Egypt, the state radio and television are well known for their agricultural and health information (ibid)

In a research study carried out in *Kieni west, Nyeri County* on listeners' radio listening habits, farmers reported that they listen to agricultural programmes on the Kikuyu Vernacular stations because they provide practical information that they require in their daily farming activities (Gathigi 2009). These agricultural programmes addressed various issues such as different diseases that affect crops and animal husbandry.

In Nigeria, a study that was carried out to determine farmers' adoption of improved agricultural technologies disseminated through radio programmes in Enugu State found out that co-farmers and farm broadcasts were the major sources of information to many farmers (Agwu et al 2008).

96.3 percent of the farmers accepted radio as a useful source of information on improved agricultural technologies. The radio farm programme enhanced the extent of adoption of six technologies which included modern land preparation and planting of early season crop (ibid)

In the republic of Benin radio was used to educate rural peasant farmers in the 1960's, using small listening groups called 'Radio Clubs, formation of national and departmental committees, use of village chiefs as presidents of Radio Clubs and use of animators as group leaders (Thompson 1987). Group discussions were carried out after listening to the agricultural radio broadcasts. After one and a half years of experimentation, the administration of the agricultural radio programs and organization of the radio clubs was reformed. Messages from the radio clubs and questions and answers of interest to the development of agriculture formed important themes for the programmes. A year later, a national seminar was organized to evaluate the achievements of the agricultural radio and the results revealed that rural radio is an effective instrument of information and education among the rural peasants (ibid)

2.4 Radio as an extension tool for agricultural development

Radio can play a significant role as a tool in agricultural extension to facilitate transfer of knowledge and good farming practices to farmers. Extension is the oldest method of using communication to generate development (Moemeka in Okigbo 1996). In Kenya there are few extension officers in the counties who serve farmers. The ratio of farmers to extension officers is 753:1 (Sanga,2013). The National Extension Policy was established due to the poor performance of the agricultural sector in comparison to its potential (NAEP 2001)

Melkote (2001) observes that, extension had long been and continues to be regarded as a logical and systematic method for disseminating productive and useful knowledge and skills to

receivers. Radio based agricultural extension services have been introduced in various parts of Africa and the World in order to teach farmers various agricultural practices.

In Ghana radio stations in the regions devote considerable airtime to agricultural topics (Chapman 2003). An early example of using radio for agricultural extension was the Wonsoum project. This was a grassroots development communication project in Swedru District managed by the University of Ghana Communication Department and funded by UNESCO. It was started in 1983 (Obeng – Qwaidoo 1988, in Chapman 2003)

The project covered 18 villages and towns with a combined population of 90,000 people. Vernacular radio stations were used to broadcast in six local languages. The programme was produced in a Magazine format featuring drama, topical talk and discussion, interspersed with jingles and traditional music. The programme was designed to combine music and drama with information from the presenter and soil, water and conservation topics discussed by a panel.

The programme captured agricultural issues in an entertaining format and aimed to highlight the importance of sharing information in farming communities through various channels of information available locally.

Simli or friendship radio operated in Northern Ghana before it was shut down by the government. It's educational and extension role was well established (Chapman 2003). The radio station provided a mix of music, drama, news and discussion programmes on local issues aimed at tackling community development problems. It had agricultural extension programmes prepared by trained community radio agricultural extension officers. The extension officers visited farmers in the community and interviewed them as they discussed their problems and priorities. They then prepared a series of discussions with local experts. The officers spent at

least twelve days in a month recording information from farmers in the villages. The farmers were therefore highly involved in the programmes.

In Thailand, a Farm Radio pilot project was carried out whose purpose was to strengthen existing agricultural service and to obtain qualitative data on the value of radio farm forums in facilitating communication between the farmer audience and the extension service (Griffin in Thompson 1987). The evaluation found out that the two way flow of information between the farmer and the extension worker had improved. The frequency of farmers contact with extension agents increased and retention of information and overall learning were greatly improved because of high interest in the content and reinforcement of messages by communication channels such as radio. The extension staff and the farmer audience were extremely motivated by the Radio Farm Forum activity.

In Kenya, a number of higher education institutions carry out agricultural research that is meant to help farmers improve agricultural practices. Some of these institutions include: Jomo Kenyatta University Of Agriculture and Technology (JKUAT), Moi University and Egerton University. The research findings from these universities on improved seed varieties, better farming techniques and soil management among others rarely reach the farmers who should be the target of that information. This is also the case in Nigeria where there exists a gap between research findings from universities and the rural farmers. A study was carried out to examine the role of agricultural programmes in bridging gaps existing between research findings and the farmers. The study was carried out in Zaria Metropolitan area of Kaduna State, North Western region of Nigeria (Ango et al 2004)

The study findings were that most of the farmers (97.8%) obtained agricultural information through radio. The radio agricultural programmes were found to be very relevant linkages to agricultural information by majority of the farmers. The study recommended improvement of agricultural information programmes on radio and establishment of rural agricultural radio stations in the villages to disseminate agricultural information to teach farmers new science based agriculture (ibid). In other words the study recommended radio as an extension tool to bridge the gap between research findings and dissemination of the same to farmers.

In Tanzania, Farmer Voice Radio (FVR) employs a new model of agricultural extension that builds around radio extension teams supported by Information Communication Technologies (Sanga 2013). Through a project, Farmer Voice Radio set out to identify and implement ICT options that would assist in disseminating agricultural extension services to farmers through community radio stations in a selected district of Tanzania. In the project presentation of the radio programme is done by the farmers. The farmers participate fully in identification of the topics and agenda of the programme. Farmers are involved in the development of the programme with the help of experts in media, extension services and ICT. Farmers also participate in implementing the aired programmes in their farms.

2.5 Radio and participatory communication

In order for agricultural programmes to be effective, the producers should involve farmers in their production so that they can use the programs as a platform to address agricultural issues that affect them. Effective communication in a development process cannot be one way because it requires feedback and continuous exchange of information between partners and interest groups, communities and official entities (FAO 2006).

Srampickal (2006) explains that the term 'participatory development communication' is often used to draw attention to an emphasis on two way communication processes, and to distance them from one way communication approaches. He further observes that participatory communication gives preference to horizontal approaches that encourage dialogue centered on problem analysis and a search for solutions as well as bottom up approaches that aim to raise the awareness of decision makers.

Chadra (2004) observes that for more than fifty years radio has been the most appealing tool for participatory communication and development. He further states that radio has been instrumental for social change and has invented participatory communication as we know it today. The first participatory radio to appear in October 16th 1947 was radio Sutatenza in Colombia. The station was established by a catholic priest and it had two main objectives which were: to broaden the Christian doctrine to poor farmers and to teach skills that would contribute to community development (ibid)

Servaes (2002) presents the participatory model of communication whose main characteristics are: that it sees people as the controlling actors or participants for development, sees people as the nucleus for development and emphasizes on the local community rather than the nation state. This implies that the people are at the center of the development process and are expected to actively take part in development programmes.

Participatory approaches are known to be effective methods in the transfer of agricultural knowledge to farmers. A case in point that proved successful was a participatory radio campaign carried out in five African Countries by Farm Radio International (Farm Radio Report 2011). The five African countries included Uganda and Malawi. Some of the key findings of the report

were that participatory radio campaigns have unprecedented success in motivating smallholder farmers to take up improved farming practices.

In communities where farmers were actively engaged in producing the campaign 39% of the farmers adopted the improved farming practice featured in the campaign. In communities where farmers had no active involvement in the campaign only 21% took up the improved farming practice. This means that if local stations involve the audience more in the production of Agricultural programs, then they may easily take up improved farming practices featured in the program. By participating in decision making over what content should be featured in the program the farmer in essence owns the program and feels a part of it.

The other key finding of the campaign was that participatory radio campaigns encourage farmers to try something new, and help them become knowledgeable about improved farming practices. The campaign shared a great deal of information about new agricultural practices from experts and experienced smallholder farmers. The more frequently the farmers' listened to the radio programs the more knowledge they gained.

The campaign found out that all types of radio stations can produce effective campaigns if they have proper training and support. This is a challenge to non-governmental organizations to partner with local radio stations with wide outreach and those that are trusted by farmers so as to reach as many smallholder farmers as possible with information that will help them improve agricultural practices. Farm Radio International partnered with community, Commercial, associative and public radio stations for the campaign.

2.6 Theoretical Framework

This research study was guided by three theories. These are: Diffusion of innovation theory, McLuhan's theory of Medium is Message and Information Processing theory.

2.6.1 Diffusion of Innovation

In 1962, Everett Rogers developed diffusion theory by combining the information flow research findings with studies about the flow of information and personal influence in several fields including, anthropology, sociology and rural agricultural work (Baran 2006). The diffusion model assumes that a proper combination of mass mediated and interpersonal communication strategies can move individuals through a process of awareness of a new technology to interest, evaluation, trial and finally adoption of that technology (Melkote2001)

Diffusion of innovation is the process by which an innovation is communicated through certain channels overtime among members of a social system. It is a theory of change that explains how an idea or even product spreads through a specific population. For it to spread there has to be a channel through which it is communicated to the people. This channel can be a radio or television station.

Everett Rogers put together data from numerous empirical studies to show that when new technological innovations are introduced they will pass through a series of stages before being widely adopted. Baran (2006) describes five stages that new technological innovations will pass through before being widely adopted. In the first stage most people will become aware of a particular innovation often through information from the mass media. In the second stage the innovation will be adopted by a very small group of innovators or early adopters. After this opinion leaders learn from the early adopters and try the innovation themselves. If they find the

innovation useful, they encourage their friends the opinion followers. In the final stage most people adopt the innovation and a group of laggards or late adopters also make the change.

The diffusion studies indicated a great difference among the adopters in terms of their personal characteristics, media behavior and position in the social structure (Melkote 2001). The early adopters were usually younger, had a higher social status, had more favourable financial status and were equipped with great mental abilities than late adopters (ibid). The early adopters used more mass media and had more opinion leadership characteristics.

Denis & Defleur (2002) observes that some innovations spread swiftly through society and are taken up by virtually everyone while others spread slowly and are adopted by only a fraction of the population. However (Melkote 2001) notes that, the characteristics of an innovation as perceived by the individuals in a social system affected its rate of adoption.

This theory was quite influential in the 1950's and 60's and (Baran 2006) further explains that the United States Agency for International Development (USAID) used the strategy to spread agricultural innovations in the Third World in the 1950's and 1960's. The theory became a training manual for new agricultural innovations around the world.

Though successful in spreading agricultural innovations around the world' the diffusion of innovation theory has some limitations. Criticisms of the model include its pro-innovation, pro-persuasion and top down nature. This means that it emphasizes more on adoption and underemphasizes on recipient input in to development decisions and programs (Colle 1989 in Melkote 2001). The recipient of the innovation is not involved in the innovation process. This also means that this theory is source dominated.

Another weakness of the theory as explained by (Baran 2006) is that it underestimates power of media especially contemporary media. It assigns very limited role to mass media. The media mainly creates awareness of new innovations. Its role ends there and only the early adopters are directly influenced by media content. Other people adopt innovations after being influenced by others, so they do not get the information directly from the media.

The theory's strength is that it integrates large amounts of empirical findings into useful theory and provides practical guide for information campaigns in United States and abroad. The strategy was largely used by the United States to spread agricultural innovations in the Third World.

Relevance of the theory to the research study

This theory guided this research study which explored the place of agricultural radio programs in improving agricultural practices in rural Kenya. Radio is an important channel of communication that can be used to spread new agricultural innovations in the rural areas in Africa. Farmers in rural Kenya listen to local language radio stations for information, education and entertainment. Local language radio stations have agricultural programs which teach farmers various farming practices.

The radio as a mass media will create awareness of new agricultural innovations through its programming. Farmers are the target audience for agricultural programs on radio. The diffusion model assumes that a proper combination of mass mediated and interpersonal communication strategies can move individuals from awareness of a new technology to adoption of the technology. This calls upon communicators on radio to use the best approach in their programs so as to move their audience from awareness to adoption of new farming technologies.

Farmers who listen to the programs will learn new agricultural innovations firsthand and probably adopt them. They will become early adopters of the innovations. After this they may pass on the innovations to others who will adopt them, increasing the number of those adopting the innovations.

One of the weaknesses of the theory is its top down nature. It emphasizes more on adoption and underemphasizes on recipient input into development decisions and programs. It is important for radio producers to do audience research before producing their programs. This way they can be able to assess the needs of their audience and incorporate them in their programs. Audience involvement is crucial to the success of any radio program.

2.6.2 McLuhan's theory of medium is message

Marshall McLuhan was a Canadian scholar who proclaimed what he thought about the effects of the mass media. In contrast to other researchers, McLuhan didn't collect any research data, he never did experiments or surveys to test his ideas but his ideas about media influence have stirred discussion and analysis from media scholars for more than 40 years (Sparks 2010).

McLuhan's theory that the medium is the message meant different things to different people and some scholars have given up trying to understand what he meant. Griffin (2000) explains that McLuhan believed that a medium changes people more than the sum of all the messages of that medium. He further states that the core idea in McLuhan's theory is that the primary channel of communication changes the way people perceive the world. What McLuhan meant was that what really changed people the most was not the message in a communication medium but the medium itself (Sparks 2010)

In coming up with the theory, it was not lost on McLuhan that particular type of media messages have a specific effect on human attitude, feelings and emotions. Research studies support the notion that human behavior changes from processing messages. What he meant was that the dominant medium of any age dominates people (Griffin 2000)

This research study was informed by the fact that the medium shapes people's perception of messages and that people perceive media messages in different ways depending on the channel of communication.

Radio is one of the most popular and widespread tools of communication in the rural areas where the majority of the population lives. This is because it is the most accessible and affordable mass media and it can disseminate important information to rural audiences. Through it they get entertained, receive the latest news and enjoy listening to various programmes.

The radio dominates the life of the rural people through its programming. In Kenya, 68% of radio listeners tune in to local language radio stations (Oriare 2010). Many do not miss their favourite programmes because radio is portable and they can move with it wherever they go and listen to it as they engage in other activities. The farmer will cultivate his *shamba* as he listens to an agricultural programme. Without the medium the message will not be received.

McLuhan's theory argues that the medium through which content is communicated to the audience plays a crucial role in the way the content is perceived. The medium often shapes the audience perception of the content. This is true and can be illustrated using the location where this research study was carried out. In that location, there are three main vernacular radio stations that the audience listens to which are; *Inooro* FM, *Kameme* FM, and *Coro* FM. Each of these stations has an agricultural program but the effects of the messages aired on the three stations

will not be the same. The way the messages will be received and perceived by the audience will depend on which radio station broadcast it.

The medium is the one that determines how the message will be perceived supporting McLuhan's theory that the medium is the message. The effect of the message depends on which medium is trusted more by the audience as well as on which medium is more popular with the audience. A message coming from a radio station that is trusted by the audience will have more impact than one coming from a station that is less popular with the audience.

2.6.3 Information Processing Theory

Cognitive psychologists have developed a perspective on the way individuals routinely cope with sensory information (Baran 2009). Information processing theory uses mechanistic analogies to describe and interpret how each of us takes in and makes sense of the flood of information that our senses encounter every day (ibid). It describes the process of learning.

Cognitive psychologists define learning as a change in a person's mental structures that creates the capacity to demonstrate different behaviors (Eggen 2007). Information processing theory looks at how stimulation from the environment goes through the processes of attention, perception and storage through a series of distinct memory stores (ibid). The theory assumes that 'individuals operate like complex bio-computers, with certain built in information handling capacities and strategies' (Baran 2009)

The theory focuses on three memory stores that are involved in cognitive processes which are; Sensory memory, short term memory and long term memory (Eggen 2007). The sensory memory is the first to come into contact with information and that information remains there for

approximately one to four seconds before it is stored in short term memory or lost. Short term memory also stores information for a short period of time, between ten and twenty seconds.

The third memory store is the long term memory which has an unlimited capacity when it comes to storing and recalling information (Eggen 2007). Within long term memory, two types of knowledge are stored; declarative knowledge which is specific information like facts, definitions procedures and rules. The other type of knowledge is procedural which is the information required to be able to perform a given task (ibid)

Baran (2009) explains that people are not so much information handlers as information avoiders and they have developed sophisticated mechanisms for screening out irrelevant and useless information. The information that is singled out for attention and processing is therefore stored in long term memory.

Radio is a medium that is extensively used for information and entertainment. It is also used to teach audiences how to accomplish various tasks. Local radio through their programming broadcast programs that target various audiences. Some programs on radio require the audience to be attentive and learn certain things. Information processing theory is relevant to this study because it describes the process of learning and radio can be used as a tool for learning.

The radio as a medium of communication has various characteristics. It has strengths and weaknesses. Radio is a sound medium which is transient in nature. It cannot demonstrate a skill and neither can a listener rewind if information passes them by. Local radios that have agricultural programs will teach farmers various farming techniques. The farmer has to be very attentive in order to learn a new farming technique and store it in long term memory so as to retrieve it later. It is therefore incumbent upon radio producers to find ways to present their

programs so that the farmer is able to learn from it. For instance, repeating a procedure when teaching farmers a new planting method would ensure that those who didn't get it the first time understand it the second time and are able to perform the task. Making a summary of what was learnt in the program would also assist the audience to get the main points.

The language used in teaching new techniques should be understandable by the audience. Use of a simple language that is understood first time is advisable. Radio audiences are likely to interpret messages in different ways if they are not clear interfering with the learning process. Use of sound effects and actuality sounds would also help the audience to visualize what is being taught and see the picture in their minds.

The learning process on radio requires the efforts of both the producers and the audience for it to be successful. Producers should always assess the needs of their audience before producing programs. Programs may also need to be broadcast more than once for them to achieve their intended effect.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

According to Chakraborty (2009) 'research is a human activity based on intellectual investigation and is aimed at discovering, interpreting and revising human knowledge on different aspects of the world'. The research activity follows a certain structure and the methodology is a part of the structure. The methodology section in a research study explains the research design and the methods to be followed in conducting the research. These will include the data collection methods, the sampling technique and how data is to be analysed and interpreted.

This research study used mixed methods, that is qualitative and quantitative research methods. It assessed the influence of the programme *Mugambo Wa Murimi* on farming practices of farmers in *Gatanga* Constituency, *Muranga* County.

The data collection instruments employed in this study were interviews and questionnaires. The questionnaires were both structured and unstructured. The interview questions were unstructured and open ended. These research instruments were useful in assessing the small scale farmers' perceptions on the agricultural programme.

Purposive sampling technique, which allows the researcher to use people who have the required information, was used. A criteria for choosing particular cases for study applied. Since the study was carried out in three wards of *Gatanga* Constituency, a sample size of 50 respondents from each ward filled the questionnaires.

Qualitative data in this study was analyzed in the form of words and narratives while quantitative data was analyzed using descriptive statistics. The data collected was analyzed using the SPSS computer programme.

3.2 Research Design

This research study used mixed methods. It used both qualitative and quantitative methods. Qualitative research is in the form of words rather than numbers while quantitative research includes designs and techniques that produce discreet numerical or quantifiable data (Mugenda 1999). Chakraborty (2009) notes that the selection of a research approach influences the questions asked, the methods chosen, the statistical analyses used, the inferences made and the ultimate goal of the research.

The use of mixed methods has various advantages such as minimizing bias. Mugenda (1999) explains that both methods supplement each other in that qualitative method provides the in depth explanations while quantitative method provides the hard data needed to meet required objectives. The subjectivity of the qualitative method is minimized by use of the quantitative method which is more objective and the findings from one approach validates the other (ibid)

The data collection instruments used in the study were questionnaires and interviews. These two methods yielded primary data that assisted in answering research questions.

3.3 Location of the study

This research study was carried out in *Gatanga* Constituency, *Muranga* County. *Muranga* County lies approximately 85 kilometers Northeast of Nairobi and covers 2558 square kilometers (KNBS 2012). *Muranga* has an approximate population total of 942,581 people, 48% male and 52% female.

The backbone of *Muranga* County economy is agriculture. The residents engage in small scale farming and livestock keeping. Agriculture is practiced on small scale family land holding. The main cash crops grown in the county are tea and coffee.

Gatanga Constituency has a population of 163,597 people. Most of these people are small scale farmers' engaging in mixed farming and livestock keeping as the main economic activity. The Constituency has six County wards which are: *Ithanga*, *Gatanga*, *Kakuzi/Mitubiri*, *Mugumo-ini*, *Kihumbu-ini* and *Kariara* (KNBS 2012)

Gatanga is a rural constituency and the residents have access to a variety of radio stations broadcasting in local languages. The three main Kikuyu language radio stations that are accessible by the residents are: *Inooro* FM, *Coro* FM and *Kameme* FM. This study set out to assess the influence of the programme *Mugambo Wa Murimi* on farming practices of farmers in this Constituency. The program airs every week day on *Inooro* FM.

The Constituency was a few years back rated as the best in the country in use of Constituency Development Funds (CDF). This motivated the decision to carry out a research in the Constituency to establish whether farmers in the area are performing as well in agricultural development through listening to agricultural programmes on radio.

3.4 Population of the study

A population can be defined as the entire group of persons or set of objects and events the researcher wants to study (Collins et al 2000). The population contains all the variables of interest to the researcher.

The target population of this study was all small scale farmers aged between 25 to 65 years in *Gatanga* Constituency. These farmers engage in mixed farming and own no more than five acres of land. There are 63,235 people aged 25 – 65 years in this Constituency (KNBS 2009)

3.5 Sampling

Sampling is the process of selecting units from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen (Chakraborty, 2009). The sample that is chosen for a particular study is a subset of the entire population and it should be representative of the targeted population.

This research study used purposive sampling technique. This is a technique that allows the researcher to use cases that have the required information with respect to the objectives of the study (Mugenda 1999). A sample frame of all farmers in *Gatanga* Constituency was not available and therefore this made purposive sampling appropriate since the researcher was able to select only those subjects who had the information needed for the study.

A criteria for choosing particular cases applied where only those who were farmers, listened to the program *Mugambo wa murimi* and were between the ages of 25- 65 years were selected.

3.5.1 Selection of cases for study

There are six wards in *Gatanga* Constituency but the research study was carried out in three which are: *Gatanga*, *Kakuzi*, and *Kariara*. These three wards were chosen through simple random method of sampling.

A total of 150 small scale farmers were selected from the three wards, with 50 coming from each ward. Since there was no sample frame of farmers in the constituency from which a sample

could be drawn 50 cases from each of the three wards were selected at random to represent the entire population.

3.6 Data Collection Methods

Two data collection methods were used in this study. These were unstructured questionnaires and interviews. These two research instruments were prepared based on the research questions. Polonsky (2010) argues that the researcher has to ensure that the data collected are focused towards answering specific research questions.

The questionnaires were unstructured and open ended to allow respondents greater depth of response and not limit them to particular answers. As Mugenda (1999) points out, open ended questions can stimulate a person to express what he considers to be most important. However a few questions in the questionnaire were structured.

The Interview was administered orally .The interview has many advantages which include the fact that it can be flexible and the interviewer can get as much information as possible and respondents can give more complete and honest information (Mugenda 1999).

3.7 Reliability and Validity

Polonsky (2010) observes that there are a number of factors to consider when deciding the most suitable method for a research project .These include the validity and reliability of the data collection method. He argues that the method must provide data that will measure what the researcher set out to measure and provide valid answers to the research questions .The method chosen must provide data with consistent results especially if the study is repeated by others.

Mugenda (1999) on the other hand states that reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials. He further explains that

reliability in research is influenced by random error. As random error increases, reliability decreases as there is a deviation from the true measurement of what the researcher set out to measure due to factors that may not have been effectively addressed by the researcher.

To ensure reliability and validity in this research study, the researcher tried to minimize random error by preparing questions which addressed specific objectives in the study using a language that was understandable to the respondents. The researcher also made use of the advantages of using the questionnaire and interview and tried to overcome the limitations of these two data collection methods.

The questionnaire and interview methods were used in this research study because they were suitable and provided valid and reliable data that helped answer research questions and minimized bias.

3.8 Data Analysis and Interpretation

Analysis covers the assembling, cleaning and examining of the data, whereas interpretation is making sense of data that the researcher has generated (Polonsky, 2010). Raw data in this study was first sorted out and organized thematically for easier management. For instance, similar responses to various research questions were put together for easier identification. These included the perceptions and attitudes of farmers towards the programme and other responses such as how the farmers used agricultural information from the program.

Qualitative data was analysed in the form of words and narratives. This was done through reference to responses to interview questions by the respondents. Direct and indirect speech from the respondents was also analysed and interpreted by the researcher.

Quantitative data was analysed using descriptive statistics. The data collected was analysed using Statistical Package for Social Sciences (SPSS). The outcome of quantitative data obtained was tabulated using pie charts, graphs and tables which are relatively easy to interpret.

After organizing and analyzing the data, the researcher interpreted it by reflecting on the possible meaning of the data and exploring particular themes.

CHAPTER 4

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents the results and findings of the study based on the research objectives. The purpose of this study was to assess the influence of the program *Mugambo Wa Murimi* on farming practices of farmers in *Gatanga* Constituency. The study also sought to evaluate the influence of the program on the agricultural practices of the farmers; investigate the perceptions and attitudes of the farmers towards the program, find out how the farmers use agricultural information to improve farming methods; and explore farmers' opinion on how agricultural programs on radio can be improved.

4.1.1 Response Rate

The sample size of this study was 150 small scale farmers who were from *Gatanga*, *Kakuzi* and *Kariara* wards, of *Gatanga* Constituency, with 50 coming from each ward. Out of 150 respondents 116 filled and returned their questionnaires and 28 were interviewed. This gave a response rate of 96%.

Table 4. 1: Response Rate

	Target Population	Questionnaires	Interviews	Response Rate
Gatanga	50	39	9	96.00
Kakuzi	50	39	9	96.00
Kariara	50	38	10	96.00
Total	150	116	28	96.00

From table 4.1 above, all the wards had a response rate of 96% and the total response rate was 96%. In addition to the interviews and questionnaires responses from the farmers, the researcher also interviewed the producer of the program.

4.2 Demographic Information

The demographic information in this study included the gender of the farmers, age of the respondents, their education level, how often they listened to the radio, who owns the radio set that they listened to, whether they listened to *Inooro* FM, respondents favorite program, whether they listened to the program "*Mugambo wa Murimi*" and the type of farming they practiced.

4.2.1 Gender of the Farmers

The farmers were asked to indicate their gender. The results are shown in figure 4.1 below.

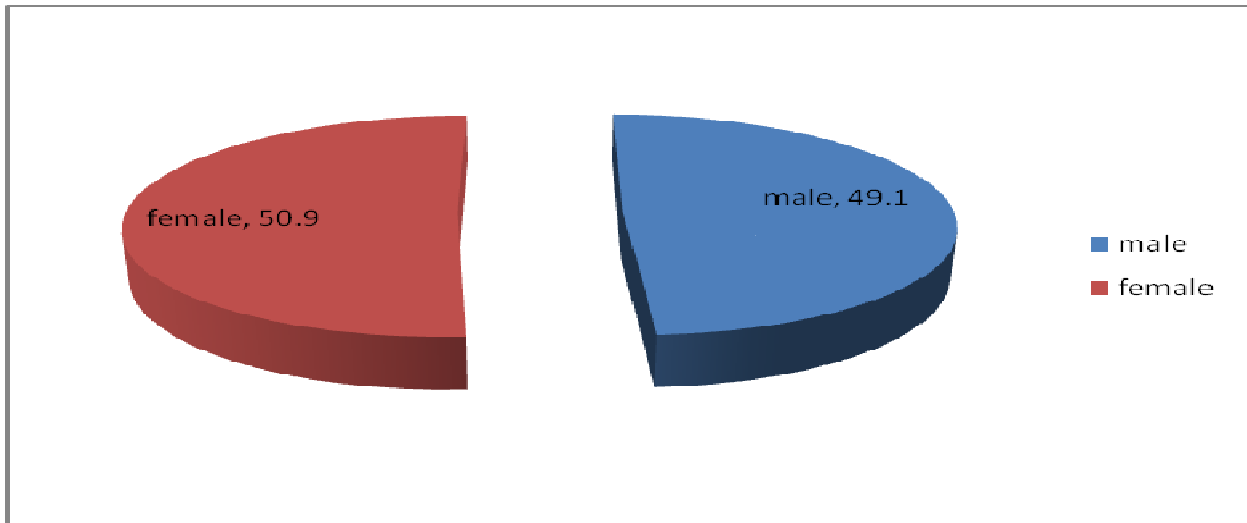


Figure 4. 1: Gender of the Farmers

From the findings, 50.9% of the farmers indicated that they were female while 49.1% indicated that they were male. This shows that the number of female farmers and male farmers was almost equal and hence the sampling of the study was not biased.

4.2.2 Age of the Farmers

The respondents were asked to indicate their age bracket. Their responses are presented below.

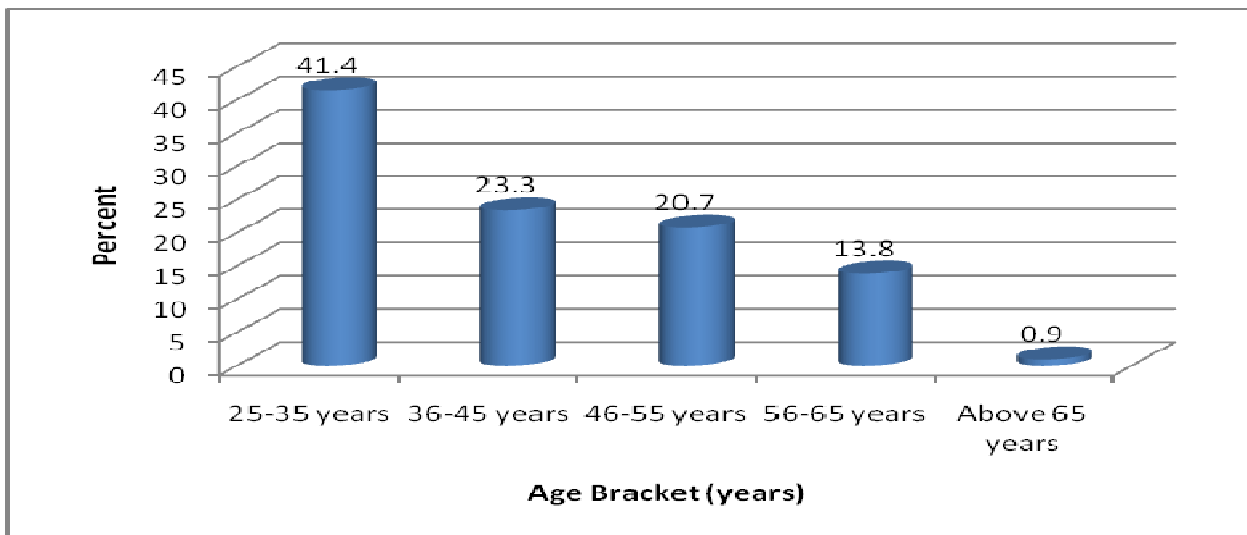


Figure 4. 2: Age of the Farmers

According to the findings, 41.4% of the farmers reported that they were aged between 25 and 35 years, 23.3% reported that they were aged between 36 and 45 years, 20.7% reported that they were aged between 46 and 55 years, 13.8% reported that they were aged between 56 and 65 years and 0.9% reported that they were above 65% in age. This shows that most of the farmers in this study were aged between 25 and 35 years. Individuals in this age bracket are energetic and strong which is needed in farming.

4.2.3 Farmers' Education Level

The farmers were asked to indicate their highest level of education. The results were as shown in figure 4.3 below.

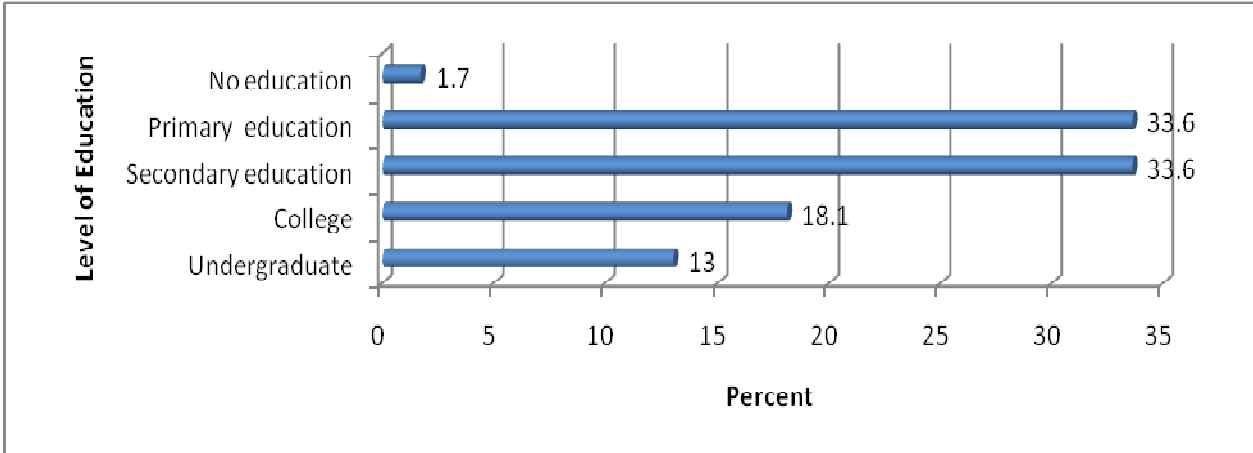


Figure 4. 3: Respondents Education Level

According to the findings, 33.6% of the farmers indicated that they had primary education and the same percentage indicated that they had secondary education. In addition, 18.1% of the farmers indicated that they had college education, 13% indicated that they had undergraduate and 1.7% indicated that they had no education at all. These findings clearly show that most of the farmers had primary and secondary education.

4.2.4 General Information of the Interviewees

The interviewer sought to find the gender, level of education of the interviewees and whether they listened to radio.

Table 4. 2: General Information of the Interviewees

	Frequency	Percent
Gender		
Male	17	60.7
Female	11	39.3
Level of education		
Primary	20	71.4
Secondary	8	28.6
Listening to radio		
Yes	28	100
No	0	0

From the findings, 60.7% of the interviewees were male and 39.3% were female. This shows that most of the interviewees were male. Further, 71.4% of the interviewees indicated that they had primary education and 28.6% indicated that they had secondary education. In addition, all the respondents (100%) indicated that they were listening to radio. Additionally, the respondents indicated that they listened to the radio on daily basis in the morning.

4.2.5 Regularity of Listening to the Radio

The respondents were asked to indicate how often they were listening to the radio. From the findings most of the farmers indicate that they were listening to the radio on daily basis while

others indicated that they were listening to the radio frequently. In addition, most of the interviewees indicated that they were listening to the radio every day while one interviewee indicated that he was listening to the radio twice a week. Those interviewees who listened to radio regularly indicated that they benefitted from it. From these findings we can deduce that the farmers were listening to the radio on a regular basis.

4.2.6 Ownership of the Radio the Respondents Listen to

The respondents were also asked to indicate who owns the radio set that they listened to.

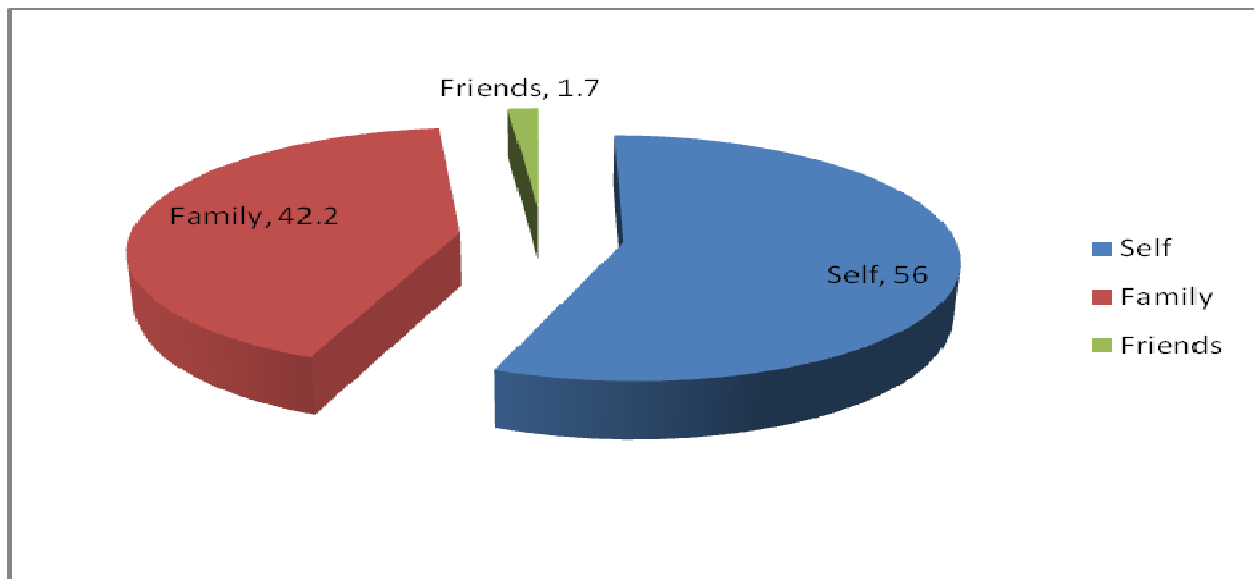


Figure 4. 4: Ownership of the Radio the Respondents Listen to

From the findings, 56% of the farmers reported that they owned the radio they listened to, 42.2% indicate that the radio they listened to was owned by their family and 1.7% indicated that the radio they listened to was owned by their friends. This shows that most of the farmers in this study owned a radio set. These findings are also echoed by the interviewees who indicated that the radio set they were listening to was owned by individuals or family.

4.2.9 Listening to the program *Mugambo wa Murimi*

The farmers were further asked to indicate whether they listened to the program "*Mugambo wa Murimi*".

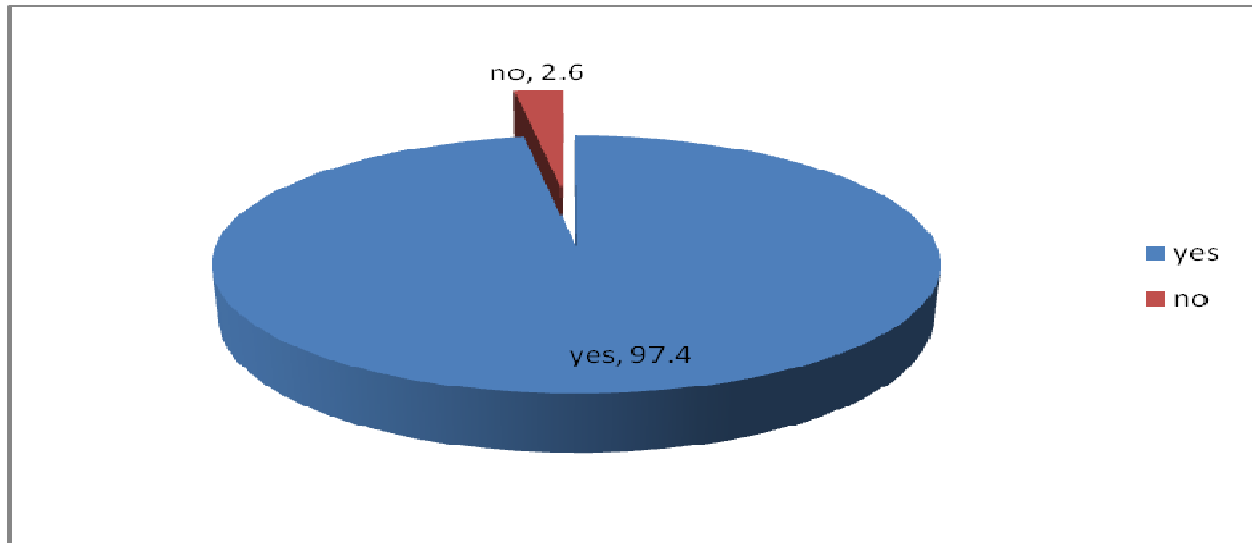


Figure 4. 6: Listening to the program "*Mugambo wa Murimi*"

From the findings, 97.4% of the farmers indicated that they listened to the program "*Mugambo wa Murimi*" while 2.6% indicated that they were not listening to the program. On the other hand, all the interviewees (28) indicated that they listened to the program "*Mugambo wa Murimi*". This shows that most of the respondents in this study were listening to the program "*Mugambo wa Murimi*" and hence they had the information required to meet the objectives of this study.

4.2.10 Types of Farming Practiced

The farmers were also asked to indicate the type of farming they practiced. From the findings, the farmers indicated that they practiced coffee farming, bananas farming, maize farming, beans farming, potatoes farming, bee keeping, livestock keeping, keeping of pigs, tomatoes farming and dairy farming. From the interviews, the interviewees indicated that they were practicing

bananas farming, maize farming, potatoes farming, coffee farming, dairy farming, sukuma farming, tea farming, avocados farming, mixed farming and poultry farming.

4.3 Influence of the Program on Agricultural Practices of the Farmers

The first objective of this study was to evaluate the influence of the program on the agricultural practices of the farmers.

The farmers explained that the program addresses their farming needs on coffee, bananas, beans, potatoes. In addition, the farmers indicated that the topics are well researched before presentation and give information about how to fight pests and how to plant. These findings were in line with those of the interviewees. The interviewees also added that they had been able to maintain healthy bananas plants.

4.3.1 Influence of the Program to Become a Better Farmer

The study sought to find out whether the farmers think the program had influenced them to become better farmers.

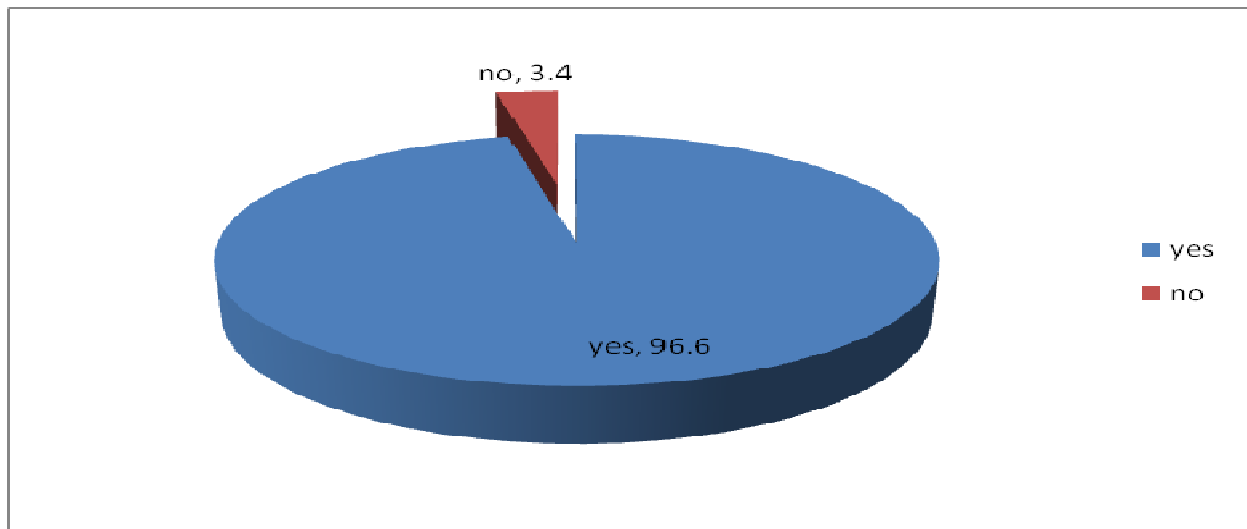


Figure 4. 7: Influence of the Program to Become a Better Farmer

According to the findings, 96.6% of the farmers reported that the program had influenced them to become better farmers while 3.4% disagreed. On the other hand, all the interviewees indicated that the program had influenced them to become better farmers. This shows that the program "*Mugambo wa Murimi*" had influenced most farmers to become better farmers.

4.3.2 Practicing a new farming method learnt from the program

The farmers were also asked to indicate whether they had been able to practice new farming methods learnt from the program.

Table 4. 3: Practicing a New Farming Method learnt from the Program

	Frequency	Percent
Farmers		
Yes	89	76.7
No	27	23.3
Total	116	100.0
Interviewees		
Yes	25	89.3
No	3	10.7
Total	28	100.0

According to the findings, 76.7% of the farmers reported that they had been able to practice new farming methods learnt from the program. However, 23.3% of the farmers indicated that they had not been able to practice new farming methods learnt from the program. On the other hand, 89.3% of the interviewees had been able to practice new farming methods learnt from the

program while 10.7% had not. From these findings, we can deduce that most of the farmers had been able to practice new farming methods learnt from the program.

4.4 The perceptions and attitudes of the farmers towards the program

The second objective of this study was to investigate the perceptions and attitudes of the farmers towards the program.

4.4.1 Appropriateness of the time the program is aired

The respondents were asked to indicate whether they thought the time the program is aired is right. The results are presented in figure 4.7 below.

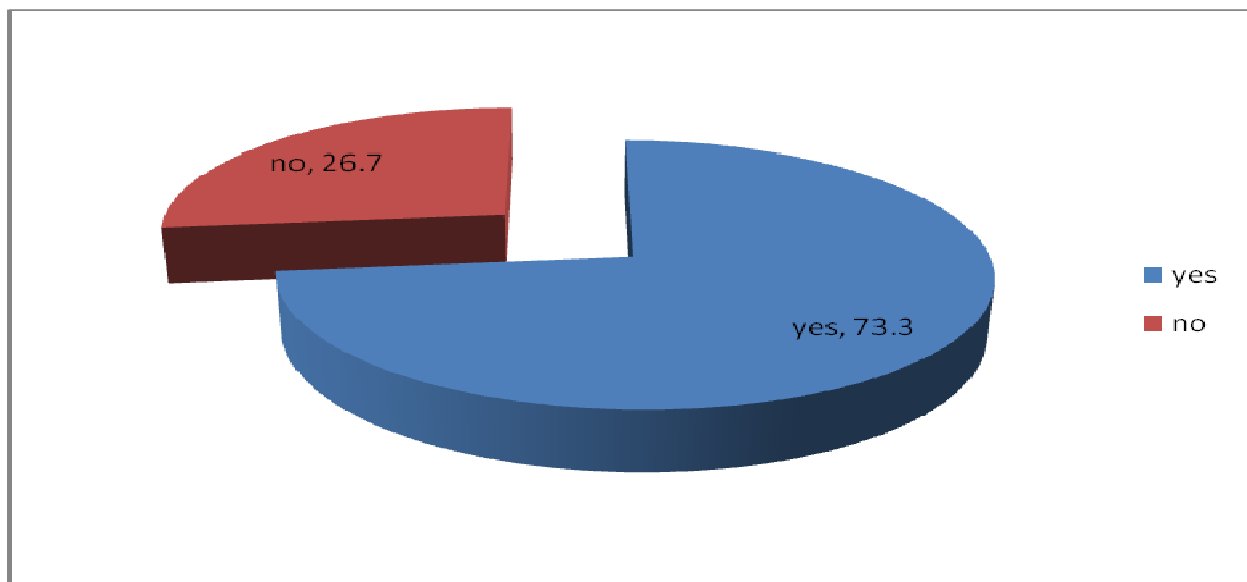


Figure 4. 8: Appropriateness of the time the program is aired

According to the findings, 73.3% of the farmers reported that the time the program is aired is right while 26.7% disagreed. This shows that although most of the respondents had a feeling that the time the program "*Mugambo wa Murimi*" is aired is right a good number of the farmers felt otherwise.

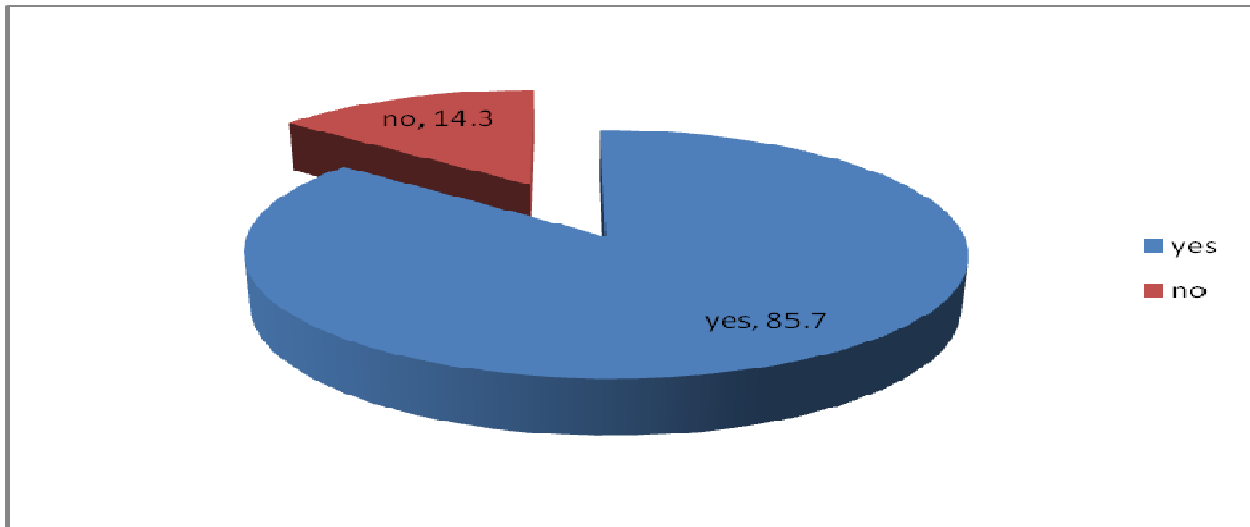


Figure 4. 9: Interviewees; Appropriateness of the time the program is aired

From the interviews, 85.7% of the interviewees indicated that the time the program is aired is right while 14.3% disagreed. These findings clearly show that according to the interviewees the time the program is aired is right though to some interviewees it was not. The interviewees who indicated that the time the program was aired was not right also indicated that the time in the morning is inconvenient to farmers.

The respondents suggested that the program should be aired in the evening when people are relaxing. Other respondents indicated that the program should be aired every day at 7.30 pm to 8.00 pm.

4.4.2 Sufficiency of time Allocated for the Program

The farmers were asked to indicate whether the time allocated for the program was enough.

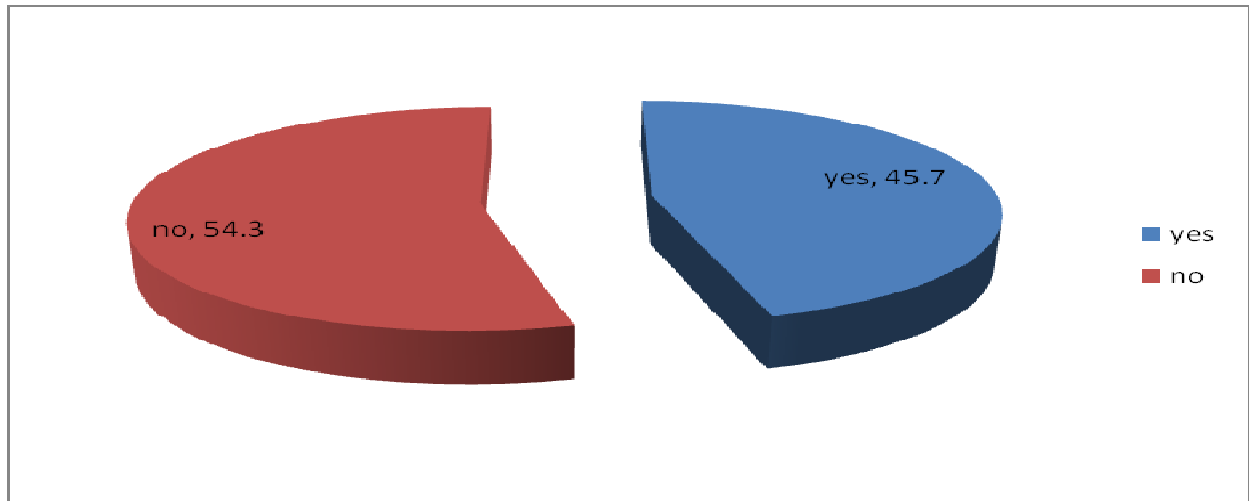


Figure 4. 10: Sufficiency of time Allocated for the Program

According to the findings, 54.3% of the farmers reported that the time allocated for the program was not enough while 45.7% felt otherwise. From these findings, we can deduce that although some of the farmers felt that the time allocated for the program was enough a good number felt otherwise.

The farmers suggested that 20 more minutes should be added to the time the program is aired. Some other farmers suggested that the producer should increase the time to around 30 minutes in order to cover more topics.

4.4.3 Other People Listening to the Program

The farmers were further asked to indicate whether they knew other people who listened to the program.

Table 4. 4: Other People Listening to the Program

	Frequency	Percent
Yes	93	80.2
No	23	19.8
Total	116	100.0

From the findings, 80.2% of the farmers reported that they knew other people who listened to the program while 19.8% did not. From these findings we can deduce that most of the farmers knew other people who listened to the program.

4.4.4 Participating in the Program

The farmers were asked to indicate whether they were participating in the program "*Mugambo wa Murimi*".

Table 4. 5: Participating in the Program

	Frequency	Percent
Farmers		
Yes	25	21.6
No	91	78.4
Total	116	100.0
Interviewees		
Yes	4	14.3
No	24	85.7
Total	28	100.0

From the findings, 78.4% of the farmers indicated that they were not participating in the program "Mugambo wa Murimi" while 21.6% indicated that they were participating in the program. On the other hand, 85.7% of the interviewees indicated that they were not participating in the program while 14.3% indicated that they were participating in the program. From these findings, we can deduce that although most of the farmers were listening to the program "Mugambo wa Murimi " they were not participating in the program. Those respondents who indicated that they were participating or contributing to the program did so through sending of short messages. The interviewees indicated that most of the times the calls do not go through. The producer informed the researcher that they only allow farmers' participation in the program through short messages because the time allocated to the program is not enough to allow calls.

4.4.5 Problems in Listening to the Program

The farmers were further asked to indicate whether they face any problems in listening to the program.

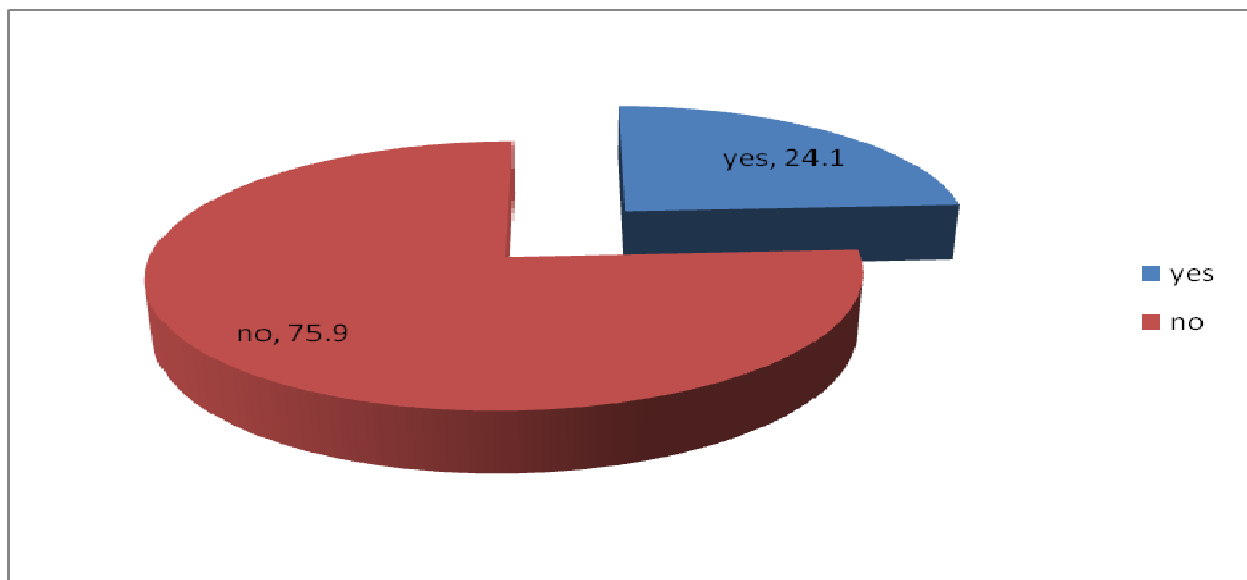


Figure 4. 11: Problems in Listening to the Program

From the findings, 75.9% of the farmers indicated that they were not facing any problems in listening to the program while 24.1% indicated that they were facing some problems in listening to the program. This clearly shows that although most of the farmers were not facing problems in listening to the program, a good number of them were facing challenges. Those who were facing challenges said that they were facing network challenges while others indicated that by the time the program is starting they are already busy. In addition, some farmers indicated that sometimes the language used is not easy to understand. Further, the farmers indicated that some participants are not audible. Additionally, the farmers indicated that most of the times the time of the program coincide with their working hours. Other farmers indicated that the frequency was not clear. These findings agree with the interviewee responses.

4.4.6 Other Source of Agricultural Information

The farmers were further asked to indicate their other source of agricultural information apart from radio. From the findings, the farmers reported that their other sources of agricultural information included agricultural extension officers, agricultural field days, other farmers, televisions and seminars. The interviewees also indicated that they were getting agricultural information from ASK shows, seminars, trainings, NGOs like USAID, World Bank and agricultural field days.

4.4.7 What Farmers Like about the Program

The farmers were asked to indicate their thoughts about the program. From the findings, the farmers reported that they liked information on coffee farming because they got to know chemicals to use against diseases as well as farm inputs. The farmers also reported that they liked

the mode of presentation as it is listener friendly, the presentation is easy to follow and the program is educative. These responses were in line with the interviewees' responses.

4.4.8 Whether Topics Presented Address Farmers Needs

The farmers were asked to indicate whether they thought the topics that are presented address their needs.

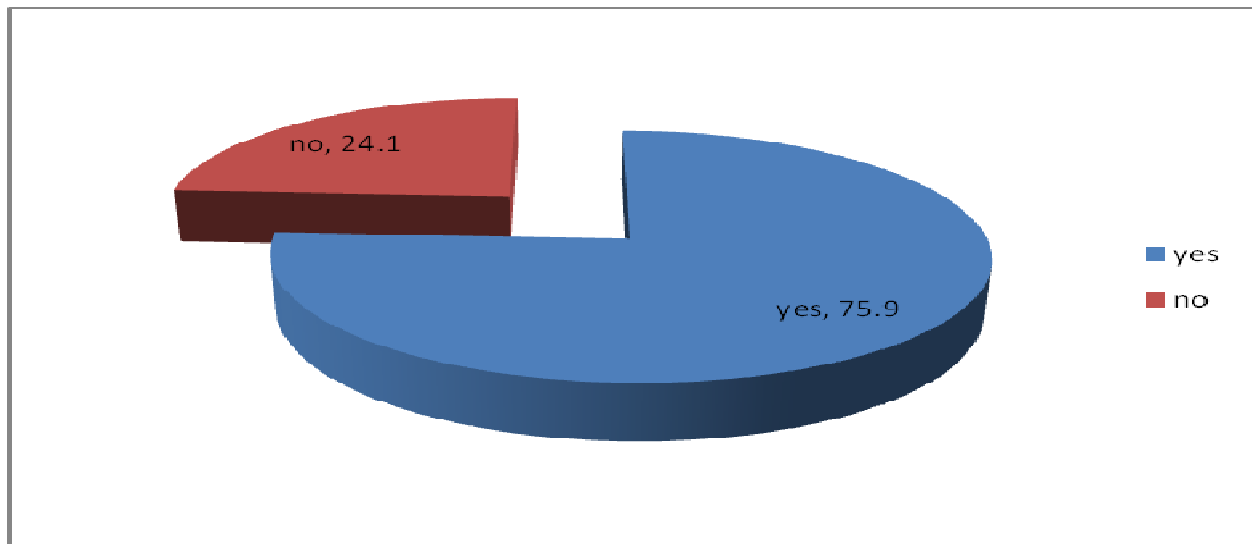


Figure 4. 12: Whether Topics Presented Address Farmers Needs

From the findings, 75.9% of the respondents reported that the topics that are presented address their needs while 24.1% disagreed. In addition, all the interviewees indicated that the topics that are presented address their needs. From these findings, we can deduce that topics presented in the program "*Mugambo wa Murimi*" address farmers' needs.

4.4.9 Usefulness of the Program

The farmers were also requested to indicate whether they find the program useful. The findings are shown below.

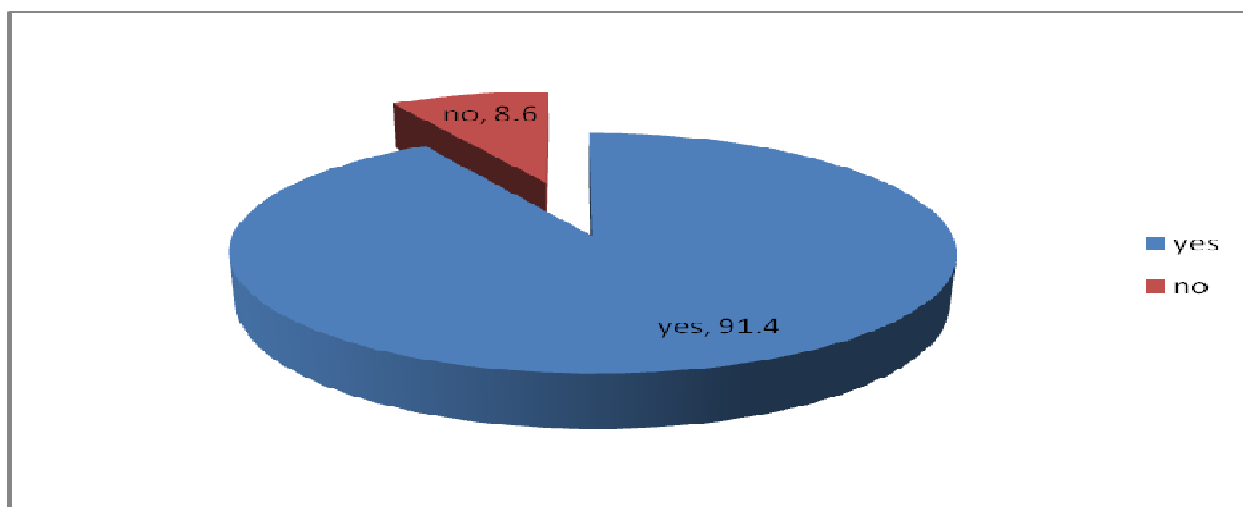


Figure 4. 13: Usefulness of the Program

From the findings, 91.4% of the farmers reported that the program *"Mugambo wa Murimi"* is useful while 8.6% indicated that it is not useful. In addition, all the interviewees indicated that the program was useful to them. From these findings we can deduce that the program *"Mugambo wa Murimi"* is useful to farmers.

4.4.10 Level of usefulness

The farmers were asked to indicate how useful the program *"Mugambo wa Murimi"* was.

Table 4. 6: Level of usefulness

	Frequency	Percent
very useful	47	40.5
Useful	64	55.2
slightly useful	4	3.4
don't know	1	.9
Total	116	100.0

From the findings, 55.2% of the farmers indicated that the program "*Mugambo wa Murimi*" was useful, 40.5% indicated that it was very useful, 3.4% indicated that it was slightly useful and 0.9% indicated that they did not know whether the program was useful or not. This clearly shows that the program "*Mugambo wa Murimi*" was useful to farmers.

4.4.11 Rating of the program content

The farmers were further asked to rate the content of the program "*Mugambo wa Murimi*". The results are shown below.

Table 4. 7: Rating of the program content

	Frequency	Percent
very good	45	38.8
Good	62	53.4
Fair	8	6.9
Poor	1	.9
Total	116	100.0

From the findings, 53.4% of the farmers indicated that the content of the program "*Mugambo wa Murimi*" was good, 38.8% indicated that it was very good, 6.9% indicated that it was fair and 0.9% indicated that it was poor. From these findings we can deduce that the content of the program "*Mugambo wa Murimi*" was good.

4.5 How the farmers use agricultural information to improve farming methods

The third objective of this study was to find out how the farmers use agricultural information to improve farming methods.

4.5.1 How the Farmers have used Information from the program

The respondents were asked to indicate how they had used information from the program to improve their farming methods. According to the findings, the farmers indicated that they had started growing fruit trees so that bees can be attracted by the flowers. They also indicated that they were avoiding food shortage for their livestock by storing the feed as silage. Further, the farmers indicated that they used pipes for irrigation, they practiced farming of tomatoes on larger pieces of land, they had started giving their cows animal feeds and got more milk, they had been able to build sheds with cemented floors for their animals. In addition, they indicated that they were practicing mulching, spraying and weeding.

On the other hand the interviewees indicated that they had gained skills on coffee disease control and protection which had enabled them to improve their yields. Further, the interviewees indicated that they had been able to prepare their farm early for planting and buy the right seeds for planting. Others indicated that they had been able to improve avocados and Sukuma farming.

4.5.2 Use of Information from the Program to improve Farming Practices

The farmers were asked to indicate whether they had been able to use information from the program to improve their farming practices.

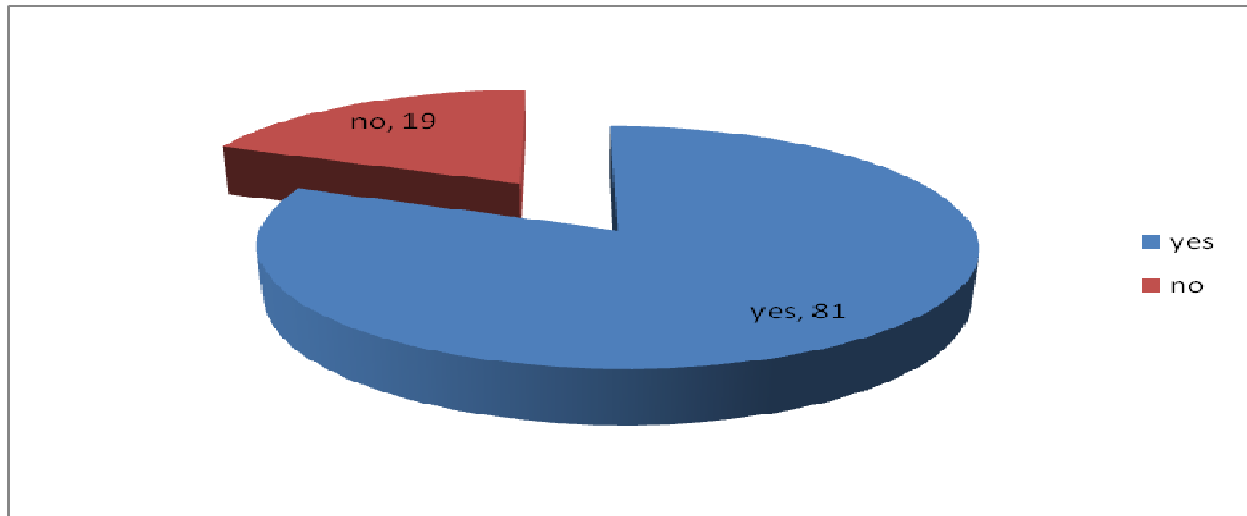


Figure 4. 14: Use of Information from the Program to improve Farming Practices

From the findings, 81% of the farmers indicated that they had been able to use information from the program to improve their farming practices while 19% did not. In addition, all the interviewees indicated that they been able to use information from the programme to improve their farming practices. These findings clearly show that most of the farmers in this study had been able to use information from the program to improve their farming practices.

4.5.3 New Method of Farming Learnt From the Program

The farmers were also asked to indicate which new method of farming they had been able to practice learnt from the program. According to the findings, the farmers indicated that they had been able to practice beans farming, horticulture crops farming especially short-term growing crops, dairy farming, storage of fodder – dry animal feeds for use in dry season, green house farming, feeding methods for animals, chicken rearing and use of mulching.

From the interviews the interviewees indicated that they had learnt how to plant and maintain healthy banana plants, they practiced artificial insemination, grafted avocados and reared livestock and poultry. Other interviewees indicated that they had learnt a new way to plant

Napier grass, maize farming and had been advised to spray their plants which in turn improved their yields. Further, the interviewees were growing cabbage using sacks and growing arrowroots at kitchen gardens.

4.6 Farmers' Opinion on how Agricultural Programs on Radio can be improved

The fourth objective of this study was to explore farmers' opinion on how agricultural programs on radio can be improved.

4.6.1 Agricultural Information/Topics to be Included in the Program

The farmers were asked to indicate what agricultural information/topics they would like to be included in the program. From the findings, the farmers indicated that they would want the following to be included in the program: maize diseases precaution and control, prevention of diseases for horticultural crops, pig keeping, making biogas, value addition of outputs, waste products usage, dealing with ticks and diseases that attack hooves and marketing of the products.

On the other hand, the interviewees indicated that the producer should include topics like marketing of farm produce, agribusiness topics especially those that relate to production and markets, rabbit farming, right feeds for poultry farming and where farmers can borrow finances so as to improve farming.

4.6.2 Improvements in the Program

The farmers were also asked to indicate what they thought the makers/producers of the program can do to improve it. From the findings, the farmers suggested that the producer should add more information about crop diseases, their causes and how they can be controlled. The farmers also indicated that the producer should invite well known farmers to give first-hand information to farmers, invite the experts to the radio station, and add time for airing the program.

On the other hand, the interviewees indicated that the producer should include more information on markets for coffee, invite successful farmers to share their experiences in the program and add more time to the program so that farmers can engage the experts or other farmers and get clarification on the issues they may not have understood.

CHAPTER 5

SUMMARY, CONCLUSIONS & RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the findings, conclusions and recommendations for practice and further research on the problem in relation to the purpose of the study. The purpose of this study was to assess the influence of the program "*Mugambo Wa Murimi*" on farming practices of farmers in Gatanga Constituency. The chapter begins with a summary of the study, followed by conclusions, recommendations and suggestions for further studies.

5.2 Summary of the Findings

The number of female farmers and male farmers was almost equal and hence the sampling of the study was not biased. In addition most of the farmers in this study were aged between 25 and 35 years. Individuals in this age bracket are energetic and strong which is needed in farming. In relation to level of education, most of the farmers had primary and secondary education. The study found that most of the farmers were listening to the radio regularly. The study found that most of the farmers in this study owned a radio set or their families owned a radio set.

The study also established that most of the farmers in this study listened to Inooro FM and their favorite programs were; *Guchuachua*, *ngogoyo*, *Inooro ruucini*, *Kigocho* on Sunday, *Mugambo wa murimi*, *Saimo na Kata*, Current affairs professor, *Muturi wa Muiru*, *Hutia mundu* and *gukera*. The study also found out that most of farmers were listening to the program *Mugambo wa Murimi* and hence they had the information required to meet the objectives of this study.

In relation to the type of farming they practiced, the study established that farmers in Gatanga Constituency practiced coffee, banana, maize, beans, potatoes and tomato farming. In addition they kept bees, livestock and pigs. The farmers also practiced *sukuma*, tea, avocados and poultry farming.

5.2.1 Influence of the Program on Agricultural Practices of the Farmers

The first objective of this study was to evaluate the influence of the program on the agricultural practices of the farmers. The study established that the program *Mugambo wa Murimi* had influenced most farmers to become better farmers.

The study also established that the farmers had been able to use information from the programme to improve their farming practices. In relation to new method of farming the farmers had been able to practice a new farming method learnt from the program. The study found out that the farmers had learnt horticulture crops farming especially short-term growing crops, dairy farming, storage of fodder and greenhouse farming. They had also learnt new feeding methods for animals, chicken rearing and use of mulching.

Other new methods that the farmers were practicing include artificial insemination, grafting avocados, rearing poultry, new ways of planting napier grass, maize farming and had been advised to spray their plants which in turn improved their yields. Further, the farmers were growing cabbage using sacks and growing arrowroots at kitchen gardens.

5.2.2 The perceptions and attitudes of the farmers towards the program

The second objective of this study was to investigate the perceptions and attitudes of the farmers towards the program. The study established that they liked the mode of program presentation as it is listener friendly, the presentation is easy to follow and the program is educative. The study

also established that the topics presented in the program "*Mugambo wa Murimi*" address farmers' needs on coffee, bananas, beans, potatoes and maize farming. The topics are well researched before presentation and give information about how to fight pests and how to plant. The study also found that the program *Mugambo wa Murimi* is useful to farmers. In relation to the program content, most farmers indicated that the content of the program *Mugambo wa Murimi* was good. However, the farmers were also getting agricultural information from agricultural extension officers, field days, neighboring farmers, television, ASK shows, seminars, trainings, NGOs like USAID, World Bank and agricultural field days.

The study also established that although most of the respondents had a feeling that the time the program *Mugambo wa Murimi* is aired is right, a good number of the farmers felt otherwise as the time in the morning is inconvenient to farmers. This is because in the morning farmers are preparing to go to the farm and they have to start by milking, feeding the cattle, poultry as well as other animals. The farmers suggested that the program should be aired every day at 7.30 PM to 8.00 PM.

In relation to whether the time allocated for the program was enough, some of the farmers felt that the time allocated for the program was enough while a good number felt otherwise. The farmers suggested that about 20 or 30 more minutes should be added to the time the program is aired in order to cover more topics. The study also established that most of the farmers knew other people who listened to the program.

The study also revealed that although most of the farmers were listening to the program *Mugambo wa Murimi*, they were not participating in the program. The farmers who were participating in the program were doing so through sending of short messages. In listening to the

program, the farmers were facing various challenges which include network challenges. In addition, the farmers reported that sometimes the language used is not easy to understand and some participants are not audible. Additionally, the farmers indicated that most of the times the airing of the program coincides with their working hours and at times the frequency was not clear. Some farmers indicated that, most of the times the calls do not go through.

5.2.3 How the farmers use agricultural information to improve farming methods

The third objective of this study was to find out how the farmers use agricultural information to improve farming methods. The study established that the farmers had started growing fruit trees so that bees can be attracted by the flowers. In addition, as a result of training in the program, farmers were in a position to avoid food shortage for their livestock by storing the feed as silage. Further, the farmers used pipes for irrigation, practiced large scale farming of tomatoes, had started giving their cows animal feeds and got more milk. They had also been able to build sheds with cemented floors for their animals and were practicing mulching, spraying and weeding.

In addition, the study found that the farmers had gained skills on coffee disease control and protection which had enabled them to improve their yields. Further, the farmers had been able to prepare their farm early for planting and buy the right seeds for planting.

5.2.4 Farmers' Opinion on how Agricultural Programs on Radio can be improved

The fourth objective of this study was to explore farmers' opinion on how agricultural programs on radio can be improved. The farmers suggested that the producer should include other topics like maize diseases precaution and control, prevention of diseases for horticultural crops, pig keeping, making biogas, value addition of outputs, waste products usage, dealing with ticks and diseases that attack hooves and marketing of the products. Other topics that should be included

are marketing of farm produce, agribusiness topics especially those that relate to production and markets, rabbit farming, right feeds for poultry farming and where farmers can borrow finances so as to improve farming.

Further, the study found that the program can be improved by adding more information about crop diseases, their causes and how they can be controlled. In addition, the producer should invite successful and experienced farmers to give first-hand information to other farmers, invite agricultural experts to take part in the program and add time for airing the program.

5.3 Conclusions

Based on the findings of the study the following conclusions were made:

- The program *Mugambo Wa Murimi* is useful to farmers in Gatanga Constituency and has greatly influenced their farming practices. The farmers have learnt new farming skills from the program and gained knowledge on various farming methods. The program can be effectively used to supplement other sources of agricultural information such as agricultural extension officers, NGO's and ASK shows.
- The topics presented in the program *Mugambo wa Murimi* address farmers' needs on coffee, bananas, beans, potatoes farming among others. However, farmers also get agricultural information from agricultural extension officers, field days, neighboring farmers, television, ASK shows, seminars, trainings, NGOs like USAID, World Bank and agricultural field days.
- The study also concludes that as a result of training in the program, farmers were in a position to avoid food shortage for their livestock by storing the feed as silage. Further, farmers can now use pipes for irrigation, practice farming of tomatoes on larger pieces of land, have started giving their cows' animal feeds and got more milk. They have been able to build sheds

with cemented floors for their animals and were practicing mulching, spraying and weeding. The farmers in Gatanga Constituency also practice artificial insemination, grafting avocados, rearing livestock and poultry. They have learnt new ways to plant napier grass, and had been advised to spray their plants which in turn improved their yields.

- There is need for the producer of the program to include other topics like maize diseases precaution and control, prevention of diseases for horticultural crops, pig keeping, making biogas and value addition of outputs. Other topics which should be included in the program are: waste products usage, dealing with ticks and diseases that attack livestock hooves and marketing of the products.
- The time the program *Mugambo wa Murimi* is aired is inconvenient to some farmers as most of the times it coincides with their working hours. In addition, the time allocated for the program is not enough. The study also found that although most of the farmers were listening to the program *Mugambo wa Murimi*, they were not participating in the program due to network challenges.

5.4 Recommendations

Based on the findings of the study it is deemed necessary to make the following recommendations:

- The study established that the program *Mugambo wa Murimi* was aired at a time when most of the farmers were busy preparing to go to the farm and when they were feeding their animals. This study therefore suggests that the program should be aired between 7.00 pm and 8.00 pm. In addition, the program can be aired in the morning then a repeat of the same done in the evening. This will ensure that those farmers who were not able to listen to the program in the morning catch it in the evening.

- The time allocated for the program which is 10 minutes was not sufficient. This study therefore recommends that about 10 or 20 more minutes should be added to the time the program is aired in order to cover more content.
- The study also found that most of the farmers were not participating in the program as most of the times the calls do not go through. This study therefore recommends that the producer should have a specific line for the program *Mugambo wa Murimi* so as to reduce congestion in the line.
- The producer should include other topics like maize diseases precaution and control, prevention of diseases for horticultural crops, pig keeping, making biogas, value addition of outputs, waste products usage, dealing with ticks and diseases that attack livestock hooves and marketing of the products.
- Additionally, the producer should include topics on agribusiness, especially those that relate to production and markets as well as where farmers can borrow finances so as to improve farming.
- Lastly, the study recommends that the producer should invite successful and experienced farmers to give first-hand information to other farmers. In addition, the producer should invite agricultural experts to take part in the program and allow farmers to interact with them.

5.5 Suggestions for further Studies

This study focused on assessing the influence of the program *Mugambo Wa Murimi* on farming practices of farmers in *Gatanga* Constituency. The study was limited to *Inooro* FM which is a kikuyu radio station and limited to *Gatanga* Constituency. This study therefore suggests further investigation on the role of radio in improving Farming and agriculture in Kenya.

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APPENDICES

Appendix 1. Questionnaire for farmers

My name is Josephine Mwangi. This questionnaire will be used to assess the influence of the program *Mugambo Wa Murimi* on farming practices of farmers in Gatanga Constituency. This is in partial fulfillment of a requirement for the award of Master of Arts degree in Communication studies at The University of Nairobi. The information given will be used only for academic purposes.

SECTION A

- 1) Name..... (Optional)
- 2) Gender. Male Female
- 3) Age (tick as appropriate)
 - a) 25 – 35
 - b) 36 – 45
 - c) 46 – 55
 - d) 56 – 65
- 4) What is your level of education.....
- 5) How often do you listen to the radio.....
- 6) Who owns the radio set that you listen to?
 - a) Self
 - b) Family
 - c) Friends
 - d) Community
- 7) Do you listen to *Inooro* FM.....
- 8) Which is your favourite program.....
- 9) Do you listen to the program *Mugambo Wa Murimi*.....
- 10) What type of farming do you practice.....

SECTION B

- 1) Do you think the time the program is aired is right? Yes No
- 2) If no why and when would you like it to go on air.....
.....
- 3) Do you think the time allocated to the program is enough Yes No
- 4) If no how long would you like it to be.....
- 5) Do you know other people who listen to the program? Yes No
- 6) Have you been able to use information from the program to improve your farming practices?
Yes No

- 7) Have you been able to practice a new farming method learnt from the program Yes []
No []
- 8) If yes which one?
- 9) Do you think the program has influenced you to become a better farmer? Yes [] No []

SECTION C

- 1) What do you like about the program.....
.....
- 2) Do you think the topics that are presented address your needs? Yes [] No []
- 3) If yes please explain.....
.....
- 4) In your opinion, do you find the program useful? Yes [] No []
- 5) If yes, how useful
- a) Very useful []
- b) Useful []
- c) Slightly useful []
- d) Don't know []
- 6) How would you rate the program content?
- a) Very good []
- b) Good []
- c) Fair []
- d) Poor []
- 7) Apart from radio which is your other source of agricultural information?
.....

SECTION D

- 1) How have you used information from the program to improve your farming methods?
.....
- 2) Do you participate or contribute to the program? Yes [] No []
- 3) If yes how.....
.....
- 4) What agricultural information/topics would you like to be included in the program?
.....
- 5) Do you face any problems in listening to the program? Yes [] No []
- 6) If yes please explain.....
- 7) What do you think the makers/producers of the program can do to improve it.....

THANK YOU

Appendix 2. Interview guide for farmers

SECTION A.

1. Name _____
2. Gender _____
3. Age _____
4. What is your level of education?

5. How often do you listen to radio?

6. Who owns the radio set that you listen to?

7. Do you listen to *Inooro* FM?

8. Which is your favourite program?

9. Do you listen to the program *Mugambo wa Murimi*?

10. What type of farming do you practice?

SECTION B

11. Do you think the time the program is aired is right?

12. Do you think the time allocated to the program is enough?

13. Do you know other people who listen to the program?

14. Have you been able to use the information from the programme to improve your farming practices? _____

15. Have you been able to practice a new farming method learnt from the program?

16. Do you think the program has influenced you to become a better farmer?

SECTION C

17. What do you like about the program?

18. Do you think the topics that are presented address your needs?

19. In your opinion, do you find the program useful?

20. How would you rate the program content?

21. Apart from radio which is your other source of agricultural information?

SECTION D

22. How have you used information from the program to improve your farming methods?

23. Do you participate or contribute to the program?

24. What agricultural information/ topics would you like to be included in the program?

25. Do you face any problems in listening to the program?

26. What do you think the makers/ producers of the program can do to improve it?

Appendix 3. Interview questions for the producer of the programme ‘Mugambo wa Murimi’

1) What informed your decision to start an agricultural feature program? _____

2) Who is the target audience for the program? _____

3) When does the program go on air and why did you choose that particular transmission time? _____

4) How long is the program and do you think the duration is sufficient to cover the topics? _____

5) How do you decide on what content to present to the farmers everyday? _____

6) Who are the resource persons in the program? _____

7) Do you involve the audience in the program? _____

8) How do you involve them? _____

9) Do you get feedback from the audience? _____

10) What do they say about the program? _____

11) Is the program sponsored? _____

12) What role do the sponsors play in the program?

13) How do you think the program has helped farmers to improve their farming practice?

14) Have you ever conducted an impact assessment of the program? _____

15) If yes where and what were the results? _____

16) What challenges have you encountered as a producer in the course of producing the program *Mugambo Wa Murimi*?

17) Do you think radio can fill the information gap left by the shortage of extension officers in the counties to educate farmers on best agricultural practices? _____

18) If yes how?

19) What do you think Royal Media can do to improve this program? _____
