

**The Role of Radio in Agricultural Development: An Evaluation of
the Programme *Oboremi Bwaito* on *Egesa* FM in Bomachoge
Cache Constituency**

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DECLARATION

Student's Declaration

This research project is my original work and has never been presented in any university for a ward of degree or Certificate.

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Supervisor's Declaration

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DEDICATION

I dedicate this research to my loving Mum, Yunuke Barongo Kembero who instilled in me the value of hard work and determination.

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ABSTRACT

The study sought to determine the role of radio in agricultural development in Bomachoge Chache Constituency by evaluating the program *Oboremi Bwaito* on *Egesa* FM. Particularly, the study sought to determine whether radio addresses the needs of the farming community in Bomachoge Chache Constituency. The findings from this study established that farmers adopted the information disseminated through radio, which was found to be highly relevant (51%) to their needs. Furthermore, through this programme, farmers formed a networking organization called the Farmers Welfare Forum (FWF) through which they visited each other to exchange agricultural market information and also seek expert advice. The study employed a mixture of qualitative and quantitative research techniques that included the collection of data using key informant interviews, Focus Group Discussions (FGDs) and questionnaires. A purposive sampling technique was used to select respondents for interviews and FGDs from each of the 8 target sub-locations. FGDs were carried out on three main groups- men, women and youths. The data was analyzed by the use of the statistical analysis software called Statistical package for social sciences (SPSS). The findings however established that the time allocated for the programme was not sufficient. The study therefore recommends that some more time should be allocated to the programme. In addition, the producer should consider airing a repeat of the programme. Also the study found that the programme fails to provide necessary information about markets for the produce, which at times led to huge losses. This study therefore recommends that the producer should consider coming up with a programme on agricultural marketing techniques.

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LIST OF ABBREVIATIONS

| | |
|-------------------|-----------------------------------------|
| APFK: | Agricultural Policy Frameworks of Kenya |
| CDA: | Critical discourse analysis. |
| DSC: | Development Communication Support |
| FAO: | Food and Agriculture Organization |
| FGDs: | Focus Group Discussions |
| FF: | Fam Forum |
| FWF | Farmers Welfare Forum |
| GDP: | Gross Domestic Product |
| GoK: | Government of Kenya |
| KCDP: | Kisii County Development Profile |
| KFSSG: | Kenya Food Security Steering Group |
| ICTs: | Information Communication Technologies |
| KM: | Kilometers |
| KNBS: | Kenya National Bureau of Statistics |
| MDGs: | Millennium Development Goals |
| PC: | Participatory Communication |
| RSG: | Radio Study Group |
| RRF: | Rural Radio Forum |
| SPSS: | Statistical package for social sciences |
| TV : | Television |
| UNICEF: | United Nations Children's Fund |
| U & G: | Uses and Gratifications Approach |

LIST OF KISII TERMINOLOGIES

- Boka Boka*** : A programme that airs early in the morning every day.
- Bomachoge Chache*** : A constituency on the western part of Kisii County.
- Egesa FM*** : A local language radio station broadcasting in Ekegusii.
- Ekegusii*** : A local language spoken by the Kisii Community.
- Ekerambauti*** : A radio programme talking about gossips and unusual occurrences in Kisii villages.
- Oboremi bwaito*** : Our farming.
- Omogusii N'ekebago***: A variety programme that airs during the mid-morning.
- Okemanyi M'ogosoro***: A village know- all.
- Okoraria Kw'ogokwa***: Death announcements.
- Okobanga Oroiboro*** : Family planning.
- Obosemi Bw'egesa*** : Radio advice.
- Rimore*** : A sexual programme exclusively targeting married couples and airs late night.

LIST OF TERMINOLOGIES

- Aquaponics :** A system of farming fish and plants together in a mutually beneficial cycle.
- Hydroponics:** It is a subset of hydro culture and is a method of growing plants using mineral nutrients solutions in water without soil.
- Rural areas:** Less developed and predominantly peasantry areas in the countryside, away from the metropolitan cities.
- Development:** Any process of change that improves the lifestyles of the people within a given society.

CHAPTER ONE

1.1 Introduction

Agriculture sector in Kenya is the fundamental part of the economy contributing 30 per cent of the total gross domestic product (GDP) and another 27 per cent indirectly (KNBS, 2010). Almost 70 per cent of Kenyans live in the rural areas where small-scale farming is the mother of the local economy producing the majority of Kenya's agricultural output. Most of the people earn a living from agriculture either by selling food crops, livestock produce or by engaging in informal businesses (KNBS, 2010).

However, according to KFSSG (2012:26), there is a worrying trend in food production in the country due to a combination of factors such as lack of information on proper farming techniques, continued subdivision of agricultural land, poor farming methods, and weak support systems from stakeholders on food security. For instance, Kisii County where this study is based is a largely agriculture area. However, the county experiences food insecurity threats at the rate of 60 per cent each year due to the continued subdivision of land and lack of proper farming techniques (KCDP, 2013).

According to Padre et al. (2003), agriculture is becoming information sensitive; hence, access to information has become a prerequisite and a valuable resource for agricultural development. In this context, information is required to exploit opportunities, raise awareness about modern farming innovations and technologies, and the impacts of the current choices.

FAO (2006:2) posits that achieving sustainable agriculture development relies not only on material inputs and people involved in their use, but also increased transmission of knowledge and information at every stage of agricultural production chain. Ani (2001) indicates that agricultural extension service delivery has been conceived with communicating research findings

and improved agricultural practices, and the efficiency with which this information and practices are conveyed would determine the level of productivity.

However, there are poor linkages between the farmer and the institutions concerned with the dissemination of agricultural information on better practices. According to Chapman et al. (2003), radio is widely regarded as a tool for extension services which links the farmer and the sources of agricultural information due to the fact that for more than 80 years after the world's first radio station was founded, radio is still the most pervasive, accessible, affordable and a flexible medium available in the developing world that can interpret the world from the local perspectives and talk in a local language.

This study therefore sought to investigate the role of radio in agricultural development in Bomachoge Chache Constituency by evaluating the program *Oboremi Bwaito* on Egesa FM. In particular, the study sought to determine whether radio addresses the needs of the farming community in Bomachoge Chache, to examine the competence of the resource persons used in radio programming, to determine the appropriateness of the time that the programme is aired, and finally investigate the benefits that the programme has made to farmers.

1.1.1 Kisii County profile

According to the KNBS (2012), Kisii County lies in the western part of Kenya with a population of 1,152,282, where 550,464 are males and 601,818 are females. It accounts for 2.9 per cent of the country's population. It is the second smallest county in Nyanza region after Nyamira County and covers an area of 1,332.7 sq. KM.

KCDP (2013:10) indicates that the county's labour force which ranges between 15-64 is estimated at 695,024 people of whom 318,520 are males and 376,513 are females. This age

group represents 57 per cent of the total county population. Furthermore, most of the labour force is unskilled with only a small percentage engaged in formal employment. The rest are involved in agriculture and related activities where they practice small scale subsistence farming. It is estimated that only 46 per cent of the total labour force is literate implying that only a relatively small population can be absorbed in formal employment.

Kisii County shares common borders with Nyamira County to the North East, Narok County to the South and Homabay and Migori Counties to the West. The county is divided into 9 constituencies namely; Bomachoge Chache, Bomachoge Borabu, Nyaribari Chache, Nyaribari Masaba, Bobasi, Bonchari, South Mugirango, Kitutu North, and Kitutu South constituencies. There 24 divisions, 75 locations and 190 sub-locations. Compared to other constituencies, Bomachoge Chache, where this study is centred and which occupies an area of 106.3 sq. KM is the least populated with a population of 93,530 people who accounts for 0.1 per cent of the county's total population (KNBS, 2012).

According to the KCDP (2013), the County exhibits a highland equatorial climate resulting into a bimodal rainfall pattern with an average annual rainfall of 1,500mm. The long rains are between March and June while the short rains are received from September to November each year. The maximum temperatures in the county range between 21 to 30 degrees Celsius while the minimum temperatures range between 15 and 20 degrees Celsius.

The profile further indicates that though Kisii County is most known for soapstone which is extensively used in the production of curios that form a large part of Kenya's tourism trade, agriculture is the main economic activity in the county. The high and reliable rainfalls coupled with moderate temperatures are suitable for agriculture. In addition, 75 per cent of the county has

red volcanic soils which are deep in organic matter suitable for growing crops such as tea, coffee, pyrethrum, maize, beans, bananas, sugarcane as well as dairy farming.

Approximately, 78 per cent of the county is arable of which 57 per cent is under crop. In addition, commercial activities also take place particularly wholesale and retail trade in agricultural products. Further there are 8 commercial banks and over 6 micro-finance institutions serving the county (KNBS, 2012).

KCDP (2013:34) indicates that despite all these, 49.6 per cent of the population lives below the poverty line and the county's food insecurity index is at 60 per cent. This implies that the county is far from achieving the MDGs goal 1 because more than half of its population lives below the poverty line. Continued land sub-division, poor farming methods, inadequate extension services and lack of information on market opportunities have been attributed to this problem. Furthermore, according to FAO (2008), new technologies generated by agricultural research organizations and universities lack linkages to reach the farmers on the ground.

1.2 Statement of the problem

KNBS (2010:56) indicates that over 70% of Kenya's population lives in rural areas where the majority engages in agricultural production. As Krishna et al. (1977:2) argues, rural agriculture plays a major role in producing food for both the rural and urban populations in addition to providing income, employment and export earnings to the country. Kenya's agricultural sector for instance contributes 30% to the national economy. However, most of the population experiences food insecurity due to the unfavourable climatic conditions, poor farming methods, lack of information and knowledge on new technologies and inadequate extension services (KFSSG, 2012:26).

For example, according to KCDP (2013:34), Kisii County where this study is based is a largely agricultural county with good soils and favourable climatic conditions for agriculture. However, due to lack of information on proper farming techniques and increased land sub-division, the county continues being food insecure every year at the index of 60%. FAO (2006:2) points out that achieving sustainable agricultural development is less based on material inputs such as seeds and fertilizer but the people involved in their use. This focus on human resource calls for increased knowledge and information sharing about agricultural production as well as appropriate communication methodologies.

FAO argues that various agricultural institutions such as universities, private companies, research institutes and even farmers themselves are always involved in generating new agricultural technologies and services but their flow to the rural farmer is very low or no-existent (FAO, 2006:1). This can be attributed to poor linkages between the farmer and the institutions concern with the dissemination of agricultural information on better practices on the farm.

Chapman et al. (2003:2) point out that radio is a widely regarded tool for extension services which can link the rural farmer with the sources of agricultural information. It can provide farmers with information relating to all aspects of agricultural production in a language they can understand. Chapman further argues that there is evidence in a study on the impact of radio that was conducted in Pune in India where, of the two sets of listeners who were selected, the one who listened to radio had more information about modern methods of farming than the one who did not listen.

It is upon this background that this study focuses on the role of radio in agricultural development in order to assess its efficacy in linking the farmer with the emerging agricultural techniques that can improve production.

1.3 Justification

There is little scholarly work on the role of radio in agricultural development in Kenya. In this regard, there is little information in the public discourse about the efficacy of radio in agricultural development so as to form the basis about the role of the majority of the local language radio stations in promoting agriculture in Kenya.

It is upon this background that this study builds a body of knowledge about the role of radio in agricultural development in Kisii County. This knowledge would be useful not only to the members of the Kisii community but also to other Kenyans who engage in similar practice.

1.4 Aim of the study

The aim of this study is to investigate the efficacy of radio programming in the enhancement of small-scale agricultural development in Bomachoge Chache Constituency.

1.5 Objectives

1. To determine whether radio addresses the needs of the farming community in Bomachoge Chache Constituency.
2. To examine the competence of the resource persons used in radio programming and sensitizing farmers on appropriate methods of farming.
3. To determine the appropriateness of time and frequency of the programme.
4. To investigate the usefulness of the programme to farmers.

1.6 Research Questions

1. In what ways does *Egesa* Radio station address the needs of the farming community in Bomachoge Chache Constituency?
2. What is the competence of the resource persons used to educate the farmers?
3. How appropriate is the time and frequency of the programme?
4. What are the benefits of the programme to the farmers?

1.7 Scope and limitations of the study

This study was based in Bomachoge Chache Constituency and targeted the 8 sub-locations found in the sub-county namely: *Nyaisero, Onseka, Kineni, Mesesi, Bosoti, Tendere, Gakero* and *Boochi*.

The study evaluated the role of *Oboremi Bwaito* radio programme in Bomachoge Chache Constituency. However, various limitations faced the study. For example, the amount of time and money required to collect data in all the 8 sub-locations was inadequate. Second, there is no local literature about the role of radio in promoting agriculture in Kenya. However, despite all these challenges, the findings are valid.

1.8 Theoretical framework

The framing of this study was based on four communication theories namely; the bottom-up approach, the two- step theory, uses and gratifications approach and the participatory model. These are briefly discussed below.

1.8.1 The bottom-up model

The early development paradigm that emerged after the Second World War supported a top-down development approach. This approach believed there was little or no consultation at all

with the beneficiaries of development programmes (Kobayashi, 2005). This one-way implementation of development programmes proved unsustainable with time. What followed was a reversal of the approach, hence the now famous bottom-up approach also known as development support communication (DSC), which stresses the need to gather the views of the local people and work closely with them in all stages of development programmes (Melkote & Kendath, 2001). Kivikuru (2006) posits that the beneficiaries (the local community) are no longer considered mere passive, illiterate, irrational and unsuspecting spectators). The development support communication paradigm believes in the sharing of information and knowledge and the creation of links between different parties involved in the development process.

This implies that while development planners and implementers play a key role in the process, the emphasis should be on the benefiting community to participate actively in their own development. Although professionals may have a part to play in terms of designing the interventions, the key players are the people handling their problems in local settings (Melkote & Steeves, 2008). Development support communication therefore focuses on the revision of the levels of power maintained by experts and governments, and those powers that can be awarded to the communities (Melkote & Steeves, 2008). Simply put, the bottom-up approach aims at working with individuals and communities at the grassroots so that they eventually may enter and participate meaningfully in the political and economic processes in their societies. The bottom-up model is popular for it encourages consultation and participation of the intended beneficiaries of any development campaigns (FAO, 2002). In this case, the study intended to know the extent to which the local audience participates in the production of content that

addresses their needs as opposed to their consumption of radio content as designed by the producer.

1.8.2 Two-step theory

In 1944, Paul Lazarsfeld (1901), an American social researcher, Bernard Berelson (1912-1979) and Gazel Gaudet introduced the two-step flow of communication in their book called the 'people's choice', where their main objective was to establish how the voter made up his mind in a presidential campaign. The three researchers wanted to find out practically whether the mass media messages directly influenced the voting decisions of the voters (Baran and Davis, 2006). Unexpectedly however, they found out that the mass media were less influential than informal and personal communication voting behaviour.

In 1955 however, Elihu Katz and Paul Lazarsfeld developed the two-step theory. The theory asserts that information from the media moves in two distinct stages. Ideas often flow from the mass media to less active sections of the population through the opinion leaders. The power of the mass media is indirect and is reduced by the influence of the local opinion leaders. In reference to Katz and Lazarsfeld, Baran and Davis (2006), indicates that opinion leaders exist at all levels of society and that the flow of their influence tends to be horizontal rather than vertical. According to Katz and Lazarsfeld, there are three groups of people who screen media messages

This theory is related to the diffusion of innovation theory in the sense that messages pass from the media, through opinion leaders, to the opinion followers (Baran & Davis, 2006). This theory posits that in society, there are gatekeepers, opinion leaders and the opinion followers. The role of gatekeepers is to screen media messages and pass on those messages that help others share their views. Opinion leaders on the other hand pass this information to opinion followers

(Baran & Davis, 2006). Their conclusion was that messages filter through from the mass media to opinion leaders, peers or family, who then play a vital role in decisions that people make after being exposed to media messages (Baran & Davis, 2006). This means that there are influential people in the community who receive radio messages and pass them over to others.

This study followed the contribution of this theory in the dissemination of agricultural messages based on the role of the opinion leaders and the opinion followers of the messages delivered by the mass media.

1.8.3 Uses and gratifications theory

The theory posits that media users play an active role in choosing and using media. Proponents of this theory, Blumer and Katz believe that people use the mass media to their benefit or to satisfy their own needs (Baran & Davis, 2006). The uses and gratifications approach springs from a functionalist paradigm which presents the use of media in terms of the gratifications of social or psychological needs of the individual (Blumler & Katz, 1974).

The uses and gratifications theorists argue that people's needs influence how they use and respond to a medium (MacQuail, 1987). In addition, different needs are associated with individual personalities, stages of maturation, backgrounds and social roles. MacQuail offers a typology of the common reasons for media use such as the need for information and personal identity.

This approach was necessary to evaluate how the target farmers used agricultural information broadcast on radio to satisfy their farming needs.

1.8.4 Participatory communication model

The concept of participatory communication (PC) refers to the process by which people within a given community create and share information in order to reach a mutual understanding (White, 2008). In the case of radio, it means debates and other active forms of participation in the decision- making, production and sharing of diverse ideas. This study used this approach to know the extent to which phone-ins, discussions and interviews diffuse knowledge for the benefit of the farmers.

This approach has been discussed further in Chapter 2 in order to understand the extent to which members of the community, as beneficiaries, are involved in the process of conceiving, planning, implementing and evaluating agricultural- oriented development decisions.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction to the concept of radio

Okigbo (1995:338) notes that radio has been acclaimed by many development communicators as the medium of the people- the only mass medium which reaches all segments of the society. Meyers (2008:5) avers that radio is still the dominant mass medium with the widest geographical reach and highest audiences compared with television (TV), Newspapers and other information communication technologies (ICTs). Girard (1999:1) posits that for more than eighty years after the world's first radio station was founded, radio is still the most pervasive, accessible, affordable and flexible mass medium available especially in the developing world adding that radio's low production and distribution costs have made it possible to focus on local issues, to interpret the world from the local perspectives, and to talk in local languages. According to Okigbo (1995:339) and Moemeka (1981:44), radio's widespread ownership, affordability and immediacy – in addition to being the “only mass medium with which the rural communities are familiar”, make it a very appropriate medium for integrated rural development. In addition to being the most accessible medium, it fulfills a role as a “community telephone” in many isolated rural areas with several hours a day reserved for broadcasting personal messages, birth and death announcements, invitation to parties, talking to farmers, and sometimes calling for community emergency assistance and humanitarian aid (Meyers, 2008:7).

As Okigbo (1995) puts it, radio has one major disadvantage-it's an audio only medium which makes it difficult to offer practical demonstrations which are important in rural development endeavours. However, in spite of this limitation, he argues, radio has proven to be a priority

medium for rural development. Through talks, interviews, features, and magazines, news, commentary, discussions and reports, the radio can positively affect development activities within rural communities. Girard says in many rural areas, radio is the only source of information on market prices for crops, and thus the only defense against speculators. In addition, it is used in agricultural extension programmes as both a vehicle for both formal and non-formal education.

Meyers (2008:5) and McLeish (1999:226) argues that radio stations can be divided into four categories: state-controlled public radio; privately owned commercial radio; community controlled radio and international radio. However, as Meyers argues, there is much overlap. Private commercial stations have bigger audiences than government radio in many countries. In some countries, state radio, though dubbed the 'public service' may not actually have the capacity to reach some of the rural areas because of weak transmitters and lack of capacity to cater for local language groups.

Servaes (2008:76) asserts that there are four most important characteristics of radio that contributes to its strength as a medium for development-its pervasiveness, its affordability, its local nature, and its ability to involve local communities in interactive processes. According to McLeish (1999), there are more than ten characteristics of radio; this study however examines how the four characteristics works for rural development. According to MacNany (1973:7) and Meyers (2008:5), the four makes radio one of the most promising resources that countries have for their development and social change efforts in rural settings.

2.2 Characteristics of radio

Radio is local in nature

McAnany (1973) posits that radio's local nature can be seen in the way it localizes rural development efforts. For example, it allows for the creation of local content that serve a relatively limited area with homogeneous language, culture and interests. Radio programming may also not only educate but reinforce local values that may be threatened by dominant groups that are anxious to develop a marginal area or group. Local stations broadcasting in local languages can contribute to the solution of local problems and provide a voice for the audience through a more appropriate feedback mechanism.

Radio is interactive

Jemal (2013) posits that because television strives to bring about almost every segment of a story with picture of the event, it does not give a chance for its viewers to use their imagination to draw the picture of the event in their minds. But radio involves and stimulates the imagination of the listener (Howard, 1982). Though "radio is a blind medium", it has enormous capability to stimulate the listener's imagination (MacLeish, 1999).

Radio is pervasive

McLeish, (1999) posits that the very term broadcasting indicates a wide scattering output covering every home, village, city, town and country within the reach of a transmitter. Radio signals go across mountains and oceans with no difficulties. Thus for some developing countries which are naturally mountainous and with very poor infrastructures, radio is the unsurpassed medium to reach the rural mass (Jemal, 2013:8). Radio goes into the home with no prior initiative, no payments and so on. It is merely a turn of the switch and closing of the eyes (Howard, 1982). MacNany (1973:8) asserts that presently, radio reaches all populations in a large variety of languages. MacNany however portends that even though the distribution of radio

sets favours the urban areas, the diffusion of cheap transistor sets in rural areas is sufficient to guarantee coverage of most homes. And this makes radio a widespread phenomenon since its messages reach the most remote villages.

Radio is affordable

Howard (1982) posits that radio has the potential to reach the whole population even the poor at little cost. “Radio is also the prime electronic medium of the poor because it leaps the barriers of isolation and illiteracy; it is the most affordable electronic medium to receive in” (Fraser and Estrada, 2001:23). Jemal (2013) posits that compared to television sets, radio receivers are inexpensive and they can be affordable to farmers who are accessed by neither telecast nor newspapers. Its affordability can be taken as a first step for its accessibility. Other things being the same, radio’s cheapness can be one of the main reasons to attract a sustainable audience, particularly in the rural areas. “Radio is much more pervasive, accessible and affordable” (Servaes, 2008).

2.3 Strategies used in radio for education development

McAnany (1976:6) has identified five strategies of utilization of radio in rural education and development. These strategies have been employed in developing countries either separately or in combination. Though radio offers excellent potential for development, especially in rural settings, the level of success or failure of these strategies has been determined by the presence or absence of some preconditions. The preconditions include the creation of conditions to enable radio to become a medium of dialogue and exchange of ideas that exist in the rural communities, as well as how the radio is used and for what purposes.

Open broadcasting

Moemeka (1981:40) argues that this is a strategy through which broadcast is directed to an unorganized audience. It is based on the assumption that a good message is capable of being accepted by the individual on his own, and that the best way to attract and hold a mass audience is to offer spontaneous and continuous vicarious satisfaction as well as education. There is a problem that is related to the use of this strategy which directly affects its usefulness while using radio as a tool for the education of the rural people in community development efforts.

The problem is that “there is no interaction between the producers and consumers before programmes are planned, produced and broadcast” (Moemeka, 1981:44). This implies that radio programmes and their contents are decided, planned and broadcast by experts and journalists who are confined within the studio’s compound.

Instructional radio

In this strategy, a radio medium is employed to bring about social change and development. Unlike the open broadcast strategy instructional radio is “directed to an organized learning group led by a person able to supervise and direct, and also induce feedback” (Moemeka, 1981:46). Moemeka further argues that Tanzania has used this strategy, calling it ‘Radio Study Group’ (RSG) in order to teach practical skills and civic responsibility to rural communities. The application of this strategy requires a structure for organizing listening and learning practices, provision of support materials, presence of monitors or teachers and some kind of assessment. The problem with this strategy is that it demands a relatively high investment; hence, its implementation on a wide scale is very doubtful. Tanzania has been able to operate successfully because it is a relatively compact country, and the government places high priority on rural community education.

Rural Radio Forum

It is a strategy for using radio with discussion and decision for rural groups. The strategy involves regular weekly radio programs, often 15- 30 minutes presented to rural audiences (Moemeka, 1981). The programmes usually comprise rural news, answers to listeners' questions, family advice, a talk and discussion. The groups usually comprising between 10-30 listeners each listen to the programmes and discuss their contents under the guidance of a group leader on points raised. The leader then sends monthly reports to the source of the programme for review and possible solutions in subsequent programmes.

One of the advantages of the rural radio forum is the follow up of a radio message with localized discussion and ensures positive commitments to agreed-upon decisions and subsequently local change (Moemeka, 1994). Rural Radio Forum (RRF) was started in Canada and then spread to India and to some countries in Africa and Latin America. The Forum had weekly or semi-weekly radio broadcasts which focused on suggesting innovations to the farmer and his family (Schramm, 1979). The study that was conducted in India in 1979 on 145 rural radio forums found out that forum members were in a better position to learn much more about the topic under discussion than non-forum members.

Neurath (Cited in World Bank, 2007:27) "Radio Farm Forum as an agent for transmission of knowledge has proved to be a success beyond expectation. Increase in knowledge in the forum villages between pre- and post-broadcasts was spectacular, whereas in the non-forum villages it was negligible".

Radio schools

This strategy uses radio for rural community education. The audience of these radio 'schools' is primarily illiterate rural adults. The basic aim of this strategy is to offer fundamental and integral education which goes beyond mere reading, writing and cognitive skills and tries to change the passive and independent attitude of the rural man, creating a deepening of 'his sense of dignity and self-worth and turning him into a new man' (Moemeka,1981:53). This strategy has been successful in arousing the rural people to action, precisely because it identifies with rural population and its problems (Moemeka1994).

Radio and animation

It is also known as the radio participating group, it "aims at promoting among local communities a trained cadre of decision leaders" (Moemeka, 1994:23). Programmes are made from recorded views and responses about a definite problem presented by some members of the listening public. After listening to the programmes, the participating groups discuss problems further, thus creating avenues for further responses from the public and subsequently eliciting some decision.

The assumption of this strategy is that no solutions to problems can be imposed on local communities from outside; that local communities must first of all arrive at a problem definition and then its solution on their own. In addition, community participation and social action is the goal and therefore feedback from the community is essential (Moemeka, 1981). This strategy which was developed from the French government's efforts towards rural development in its West African colonies of Senegal, Benin, Togo and Niger was directed at inculcating new farming methods, diversifying agriculture, and improving the administration and management of co-operatives (Moemeka, 1981).

2.4 The impact of Radio in agricultural Development

Bill and Melinda (2011:1) define agricultural development as the process of creating improvements in agricultural productivity in order to create social and economic ripple effects within communities. “With increased incomes, small scale farmers can better feed their families, send their children to school, provide for their health, and invest in their farms. This makes communities economically stronger and more stable”.

Agriculture is becoming increasingly information sensitive hence access to information has become a prerequisite and a valuable resource for development (Padre et al., 2003). In this context, information is needed to exploit opportunities in time, raise awareness about potential negative impacts of current choices and to get to know about opportunities and sustainable solutions (Leisa, 2002).

Therefore, this section discusses four main impacts that radio has made in agricultural development. This includes delivery of farm information, farmer participation in content enrichment, provision of extension services and market information.

Delivery of agricultural information

Chapman et al. (2003:23) posit that “due to its ubiquitous nature, radio has been proved to be an effective medium for social change and has been used to address issues related to education, health, population, economic, empowerment, peace building, environment, and human rights among others”. In addition, Nakabugu (2010) argues that through radio, vital information for example on better harvesting methods, soil conservation techniques, post harvesting handling, use of improved seeds and timely planting can be passed on. Dissemination of such information

along with new concepts and farming techniques can bring novel opportunities to the farmer (Retz and Hasbullah, 2010).

FAO (2003:67) points out that as long as it is the “preponderance for developing countries where most people reside in rural areas and are illiterate, radio is an invaluable medium that can deliver information to a large number of the population”. The continuing importance of radio as an information medium was soundly confirmed at the 1996 FAO International workshop on rural agriculture in Burkina Faso. Among the workshop’s declarations was fact that radio remains the most popular, accessible, and cost-effective means of communication for rural people. Similarly, Meyers (2008:24) observes that “local radio still performs the function of a community telephone kiosk in many isolated rural areas and radio’s immediacy, portability, and ubiquity make it an invaluable tool during emergencies and humanitarian aid context”.

Enhanced voice and participation

According to Mtega (2012:1), information is a vital resource alongside land, labour, capital and skills. People need information for their day to-day activities and for the development of their environment and their selves. Mtega further argues that information is the cornerstone of successful socio-economic development because it plays a key role in decision making. Reiz and Hasbullah (2010) define information as the gap in a person’s knowledge, that when experienced at the conscious level as a question, it gives rise to a search for an answer. They argue that after identifying the information needs, the information user embarks on a search for information from possible sources in order to solve their problems.

Meyers (2008) posits that the recent explosion in mobile ownership has been a significant advantage for radio. Radio presenters announce their phone numbers over the air and invite listeners to phone-in or send in short messages with comments on the news, questions, debates, requests among others. Meyers further argues that in some instances, audiences are able to give feedback without even having to pay for a call, by means of ‘beeping’ the station and being called back (Meyers, 2008:14).

As the farmers themselves participate in the radio programmes, they become more interested and effective because of the feeling of the ownership (Khanal, 2011). “Radio gives farmers an opportunity to interact with each other and other relevant authorities such as the extension workers, crop and animal experts and so on through format like talk shows, phone-in sessions and the on location broadcasts” (Retz and Hasbullah, 2010:33).

Provision of agricultural extension services

Ani (2001) defines extension as a communication and a process whereby various participants and stakeholders are linked in order to exchange information necessary for sustainable development. Nyaresa (2012:494) posits that extension services that exist do not satisfy the agricultural information needs of the farmer because: there are not enough extension workers; they do not have the means to reach the all households; they lack communication skills to interact effectively with peasant farmers; and they lack the motivation to carry out their work

The strength of rural radio as an extension tool lies in its ability to reach rural farmers and provide them with information relating to all aspects of agricultural production and in a language they understand (Chapman et al., 2003).For example, according to FAO, cited in Moemeka

(1994), in a study on the impact of radio in Pune, India, the listener who listened to radio had more knowledge about modern methods of farming than those who did not listen.

As we have seen above, the use of radio to develop farm communities is not unique. Moemeka (1994) argues that the first experiment using the “Farm Forum” (FF) was in Canada during the Second World War. The Farm Forum involved organized groups of farmers who met in their homes to listen to broadcasts, discuss their problems and take cooperative action to address them. The Farm Forum idea was taken up by India in 1949. Ghana in 1961 and in 1973, similar schemes were operational in Zambia, Malawi, Senegal and Nigeria. Radio listening and radio campaigns were the major activities. Since then, FAO (2005) argues that radio Farm Forum has functioned as the agent for the transmission of knowledge and information related to agriculture. “It has also contributed to strengthening social unity, enhancing communicative ability, giving knowledge about locality, preserving the environment and solving problems that arise in the communities” (FAO, 2005:37).

In addition, radio has been used as an educational tool in both development and literacy programmes for the reason that it is a “universal and versatile medium of communication that can be used for the benefit of society (Okigbo, 1996). Okigbo further argues that the use of radio as a pedagogic and educational tool has been motivated by its perceived strengths such as the following: “It is based on oral tradition, it appeals to and relies on the imagination of the listener, it crosses space and time without limit, it can evoke images that are impossible in real-life, and it is a personal medium (in being a companion that can reach millions at once with the power to speak to each one individually)” (Okigbo, 1996:35).

Provision of marketing surveillance

According to Ozowa (1995), marketing refers to all business activities involved in the movement of commodities from production to consumption. The farmer's marketing needs are those that enable him to make rational and relevant decisions about the market trends which are necessary in assisting farmers to plan their market products in order to avoid aglut. These needs include: Information on product planning, the current market prices of commodities, sales timing and information on improved marketing practices. As Okunmadewa (2011:28) points out, the marketing infrastructure is the key to ensuring remunerative prices for agricultural produce. With market information, the farmers are in a better position to obtain higher prices for their farm products. According to Okunmadewa, it is assumed that the higher prices are expected to translate into higher margins and improved household welfare in the form of increased rural income. It is also assumed that the negotiating power in determining prices for their produce could be improved through prompt dissemination of price information.

Girard (1999:3) posits that local radio stations in rural communities often broadcast the prices paid in by various national markets for agricultural products that are produced in the community. Girard argues that this enables farmers to grow crops that will provide them with the best returns, to sell their produces in markets that pay well and to avoid being defrauded by wholesale buyers and speculators.

Increased transparency

Transparency and the increase of information flow make up the fifth key impact of radio in agricultural development. Mefalopolous (2008:220) posits that narrowing the information gaps is central to economic growth and improved welfare. This is because information problems lead to market failures and impede efficiency and growth which are often at the core of the difficulties

that poor people in developing countries encounter in their daily struggle to survive and improve their lives. Transparency increases trust, consensus and plays a critical role in reducing opposition to reform. Furthermore it is helpful in circumstances where there is high degree of public distrust between the experts and the stakeholders.

2.5 The role of participatory communication in agricultural development

Tufte and Mefalopulos (2009:34) define participatory communication as the “involvement of ordinary people in a development process, leading to change”. In this process, the community members themselves become the agents of change, rather than being led by outside agents (Serveas, 1995). According to Nair and White (cited in White, 2010), participatory is seen as the “opening of dialogue, where the source and the receiver interact constructively about the situation, identifying developmental needs and problems, deciding what is needed to improve the situation, and acting upon it” .

From the above definitions, it's clear then that communication plays an important role in the process of participation as people become involved through continuous dialogue about the challenges that they face with regards to development. Participation necessitates a move away from the top-down or one-way flow of communication towards a horizontal communication process that facilitates interactive dialogue and discussion amongst members of the community. In this line, In reference to Thomson and Kinne, White (2010:56) posits “change is more likely to be successful and permanent when people it affects are involved in initiating and promoting it”.

To put this concept of participatory communication into context, we look at the following tools and their contribution to development.

To involve the use of traditional media

Chandra (2004:18) points out that “in a world dominated by electronic media, where both radio and television can be counted by the thousands even in the poorest towns, community theatre has not only survived, but has an important role in communicating for development”. Theatre puppets, dance and songs tales, riddles and proverbs are firmly rooted in traditional cultural and artistic expressions of many communities; it is difficult to imagine a community that has completely forgotten any of these forms of collective participation and entertainment. Ugboajah (1985) refers to this traditional media as Oramedia.

For instance, taking the cue from two-step theory, “several groups have realized the importance of participatory group media or traditional media as the ideal tool to create awareness and lead to change of attitudes” (Raj, 2011:2). Chivoloni (2004) defines traditional media as organized processes of production and exchange of information managed by rural communities. According to Chivoloni, these media are cultural and have endogenous responses to different community needs for information, education, social protest and entertainment. Similarly, Srampickal (2006) observes that the use of non-formal education rooted in the culture of the people can help create a civil consciousness and subsequent desire for development.

Chandra (2004) posits that there are several reasons for choosing theatre, puppets or dance as a means of communicating for development and encouraging community participation. The first and more obvious is that it’s already at the community level, and it’s appreciated by people. With folk media, traditional values are preserved and strengthened, and communication in local language contributes to the process of community participation.

Second, is that in spite of electronic media being almost everywhere nowadays, very little is there content wise that can improve their quality of life or to organize themselves better. Third, is the advantage of establishing a live dialogue that may derive in a learning process both for the audience and the drama groups. Finally, the entertainment factor which enables the contents to be conveyed, channels the energies of the audience, through surprise or through laughter, to the processes of comprehension and participation.

At least radio, compared to television makes a major effort to reach communities in their own local languages, but too often the contents of programming is sometimes detached from local needs and from local cultural identities (Chandra, 2004). “This is the reason many of the drama-based experiences that we know today of in the world were established because the available media were not accessible to the people, or were not responding to their needs for information and communication” (Chandra, 2004:2).

For example in 1990s, when UNICEF realized that investment in radio and television campaigns had little influence in zones of Nigeria where communities lived in complete isolation from any form of electronic-based information, small drama groups were established at the local levels (Chandra, 2004). Adoyo (2004) reveals that many rural people utilize folk media for communication of cultural messages. Adoyo notes that in the African context, sensitive information is never passed in a straightforward manner but through songs, dances and plays using proverbs and poems. This technique is called “the mirrors technique”. In other instances, music is the practical and traditional art of certain communities. For example, among the Luo community found in Western Kenya, Eastern Uganda and Northern Tanzania, there are songs for all occasions including communal work, such as, building and weeding, as well, as individual work, such as, pounding cereals, or winnowing (Smith, 2014).

The use of internet and village Telecentres

In our introduction to the concept of radio, we noted that radio technology has continuously advanced from being a terrestrial media to satellite, on-demand media, and so on. Internet is one of the emerging tools of participatory communication. Chandra (2004) argues that the convergence between radio and internet is the most interesting symbioses that new technology can offer. Foust defines internet as the “worldwide connection of computer networks that allows user access information located anywhere else on the network” (Meadows and Grant, 2006:219). The internet allows users to post and receive e-mail messages. It also allows real text communication between two or more users if one user types information on his or her keyboard, other users can read it in real time.

Girard (1999) argues that the internet is also characterized by interactivity and technically, its potential in development is almost equal as that of radio. Girard notes that if as many believe better access to information and knowledge would be a stimulant for development, and then the internet’s primary development potential is as a point of access to the global knowledge infrastructure.

Chandra (2004) observes that Kothmale Radio in Sri Lanka is an experience worth describing because it’s one of the projects that have embraced the convergence of radio and internet. Equipped with computers and internet access, the station receives requests for information from the audience, searches the web for the appropriate data, and returns the results to listeners in local language. Tufte and Mefalopulos (2009:42) posit that while the call for networking has become popularized, Sub-Saharan Africa in particular has faced deepening marginalization due to the digital divide. As information “depots” and “hubs”, the establishment of telecentres can place national, regional and international information at the fingertips of agricultural

development workers. And this includes information on markets weather forecasts, credit facilities, crops, livestock production, and natural resource protection. Knowledge about market information has increased farmer's profitability in setting up local crop selling rates and offered the base for better planning of quantities to plant in the future (Tufte and Mefalopulos, 2009:33).

In one case “by using market information provided through the network, a farmer association in Sri Lanka could be able to sell cotton for US\$82 per quintal as opposed to US\$72, the price local buyers were trying to impose” (Tufte and Mefalopulos, 2009:27). Girard (1999:) observes that while the internet is remarkably a big asset to agricultural development, the danger that is widely recognized is that access to this infrastructure continues to face challenges due to power connectivity in most rural communities.

The use of interpersonal communication

FAO (2003) interpersonal communication is fundamental to learning and change in the rural areas and no amount of media can supplant it when it comes to adding persuasiveness and credibility to messages. Whether it is in the form of a skilled extension worker making his or his rounds, or farmers learning from other farmers, when it comes down to making a decision with regard to a new technology or changing farming practices, interpersonal sources make a difference between adoption and rejection (Meyers, 2008). Training for extension workers has been mainly directed towards perfecting their interpersonal communication skills and in facilitating participatory involvement of farmers in defining their own problems and reaching consensus on actions to be taken (FAO, 2003).

The use of group Media

The group facilitator relies “on a number of media such as slides, audio cassettes, flip charts, village theatre, and video to make his presentation. These media add punch and authority to a

presentation” (FAO, 2003). The most advantageous aspect of group media is the possibility for immediate feedback from the audience and a two-way flow of information. The cassette’s chief advantage is the control that a group facilitator has over the flow of information and the ability to start and stop at will, and repeat messages. In addition, cassettes recordings are a convenient way to bring farmer’s questions and information needs to the extension worker (FAO, 2003).

2.5.1 A typology of participation

Tufte and Mefalopulos (2009) argue that when initiating a development project, it’s useful to clarify the kind of perception that will guide the programme. Consequently, Pretty (1985) has developed a typology of participation as follows: First, is functional participation where people participate by forming groups to meet predetermined objectives related to the project. Such involvement tends to come after major decisions have been made, rather than during planning. Tufte and Mefalopulos (2009) call this typology as collaborative participation. Collaborative participation embraces a component of horizontal communication and capacity building among all stakeholders.

And that though dependent on facilitators and experts, with time, collaborative participation has the potential to evolve into an independent form of participation (Tufte and Mefalopulos, 2009).

FAO (2003) the practice of full interactive participation, a product of 1990s, started with beneficiaries deciding which development initiatives should be pursued, whether initiatives were feasible and prioritizing those that were and only deciding how to carry them out, all the while keeping in mind the requirements for sustainability.

Second, is interactive participation. Pretty (1985) people participate in joint analysis, which leads to action and plans the formation of new local institutions or the strengthening of existing ones.

It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systemic learning processes. These groups have control over local decisions, and so people have stake in maintaining structure or practices. Tufte and Mefalopulos (2009) call this as empowerment participation. They argue that while outsiders are equal partners in the development effort, the primary stakeholders are the *prime inter pares* (equal partners with a significant say in decisions concerning their lives). And that dialogue identifies and analyses critical issues, and an exchange of knowledge and experiences leads to solutions. Ownership and control of the process rest in the hands of primary stakeholders (Tufte and Mefalopulos, 2009).

Finally, is self-mobilization where people participate by taking initiative independent of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Self-initiated mobilization and collective action may or may not challenge inequitable distribution of wealth and power (Pretty, 1985).

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter contains the methodology that was used to conduct this study. The study gives details of the research design, research site, sample population, data collection methods, and data analysis procedures and interpretation.

3.2 The research Design

This study used the mixed methods design that involves both qualitative and quantitative methods. Qualitative research refer to a design that utilizes a diverse range of data, including the spoken and printed word, recorded and vision, and image, forms and structures in various media (Polonsky, 2010). This implies that qualitative research interprets the social world using flexible data generation techniques and produces rounded understandings on the basis of rich, contextual and detailed data.

It uses data collection techniques such as interviews, focus groups, field observations, critical discourse analysis and case studies (Wimmer& Dominick, 2011). This method is advantageous because it allows a researcher to view behaviour setting without the artificiality that sometimes surrounds other techniques such as experimental or survey research (Wimmer & Dominick, 2011).

Secondly, qualitative research can increase the researcher's depth of understanding of the phenomenon under investigation because it allows for follow-up questions that may end up

making the researcher discover certain facets of the subject that were not considered before the study began (Polonsky, 2010:23).

Quantitative research on the other hand involves the process of gathering information from a relatively large number of respondents and performing a statistical analysis to generate valuable information that can be projected to the entire population being studied (Malhotra et al., 2006). The analysis is important because it aims to assist in recommending a final course of action for decision makers (Polonsky, 2010:140). It involves several methods of data collection such as telephone surveys, mail surveys, and internet surveys.

One disadvantage with this method is that it is not flexible; the questioning is static or standardized-all respondents are asked the same questions and there is no opportunity for the follow-up questions (Wimmer & Dominick, 2011:56)

This research study used interviews, questionnaires, focus group discussions, and the critical discourse analysis. These techniques have been discussed in detail under data collection methods in the course of this chapter.

3.3 The research site

Bomachoge Chache Constituency is located 20 kilometres from Kisii town along the Kisii-Kilgoris Road. Administratively, the constituency is composed of a sub-county coordinator based in Ogembo town. There are 2 divisions, 4 locations and 8 sub-locations. The area has a population of about 93,306 people (KNBS, 2012).

Agriculture is the main economic activity and involves coffee, tea, sugarcane, bananas, horticulture, poultry, and dairy farming. Commercial activities also take place particularly wholesale and retail trade mainly in agricultural products (KNBS, 2012).

3.4 The population

The population for this study was the farmer in Bomachoge Chache constituency who listened to the program *OboremiBwaito* and was between 18-65 years of age.

3.5 Sampling Size and Sampling Procedures

The target population were farmers who had listened to radio for the last 6 months. The research specifically sampled those who listened to the program *Oboremi Bwaito* which in English means “Our farming”. The study used both cluster and purposive sampling techniques in order to collect data from the farmers in all the 8 sub-locations of Bomachoge Chache Constituency.

To start with, it was difficult to obtain a sample size from the population (Bomachoge Chache) because it is large and scattered over a large geographical area. Second, there was no likelihood that all the listeners of this program could be found at one point. Therefore the study used cluster sampling in order to obtain an intact group where each member of the group was taken as a unit of observation (Mugenda and Mugenda, 2003:25). In the case of this study, Bomachoge Chache Constituency which was the target population was clustered into divisions, locations, sub-locations or villages and homesteads.

As noted earlier, there were 8 sub-locations (or villages as this study will be referring to them) in Bomachoge Chache Constituency. In order to obtain a precise and definite sample frame, this research study used the same procedures of the purposive sampling technique in order to select

village after another. At the village level, this research selected cases that had the required information with respect to the objectives of the study (Mugenda&Mugenda, 2003:50).

Using purposive sampling, the researcher was able to locate homesteads where farmers had listened to the program and were within the age bracket of between 18-65 years of age. And because this was the sample frame for this research, questionnaires and interviews were administered using the criteria until the required number of 20 persons per village was reached. This implies the study ignored cases that had no such characteristics of age requirement and radio program listenership.

This study considered these procedures necessary because it was difficult to establish the number of farmers in this constituency who listened to the program in order to obtain a sample frame.

.To achieve this, the study took a sample of 160 participants for the research, meaning 20 participants from each sub-location were sampled and given questionnaires to fill.

3.4 Data Collection Methods

This study used questionnaires, interviews, focus group discussions and the critical discourse analysis. These are discussed below;

3.4.1 Interviews

This study used key informant interviews. This is a one-to-one dialogue with an individual or a number of individuals (Mugenda&Mugenda, 2003 56; Polonsky, 2010:148). This kind of interview provided detailed background information about the reasons why respondents gave certain answers (Wimmer& Dominick, 2011). In addition, this interview allowed for lengthy observation of respondent's nonverbal responses during the conversation. It is a far more personal form of research than questionnaires (Chakraborty, 2009:74). It is considered a personal

interview because the interviewer works closely and directly with the respondent. This implies that the interviewer has the opportunity to probe or ask follow-up questions (Chakraborty, 2009:75).

This research study preferred interviews because they allow the researcher to have a dialogue at the research site. Secondly, the study took advantage of interviews because they have an appearance of a face-to-face conversation or discussion as opposed to formal question and answer format. Furthermore, interviews allowed the researcher to do follow-up on issues that arise as well as probe where there was need to further interrogate an issue. Based on the research questions, interviews were conducted with key informants such as the producer, elders, opinion leaders, chiefs and their assistants to determine a number of issues raised. A total of 16 interviews were conducted at different locations such as homes, farms, shopping centres, markets, and in social places such as hotels and restaurants.

3.4.2 Use of questionnaires

A questionnaire is a data collection tool with a list of questions prepared by the researcher to be answered by the respondent (Mugenda&Mugenda, 2003:60)A questionnaire has the ability to collect a large amount of information in a reasonably quick space of time (Orodho, 2005:122). The researcher prepared and administered 160 questionnaires to the farmers.

3.4.3 Critical discourse analysis

According to Van Dijk (1998), CDA is a field that is concerned with studying and analyzing written and spoken texts to reveal the distinctive sources of power, dominance, inequality and bias contained. Furthermore, it reveals how the discursive sources are maintained and reproduced within a social, political and historical context.

Simply put, this study used CDA to find out how the language and vocabulary used by the programme helped in causing social change. In addition, the design was important in order to evaluate the needs of the farmer and how they benefit from the content delivered “in their dialect” (c.fFairclough, 1995). And because CDA involves interactions between and among people in a social context, the study sought to know how various groups, for example, maize, horticulture, poultry, dairy, sugarcane, coffee, and tea farmers interacted with one another based on their needs in order to improve their farming practices.

3.4.4 Focus Group Discussions (FGDs)

The focus group or interviewing is a strategy for understanding peoples’ attitudes and behaviours (Wimmer & Dominick, 2011:89). Respondents are interviewed simultaneously with a moderator leading respondents in a relatively unstructured discussion about the topic under investigation (Polonsky, 2010:156). A focus group is composed of 6 to 8 individuals who do not know each other prior to the group discussion, and have been selected because they share certain characteristics which are relevant for the topic being studied (Orodho, 2005). A total of 24 FGDs were conducted in all the 8 sub-locations of Bomachoge Chache Constituency.

3.5.Triangulation of data

Triangulation refers to a situation where two kinds of evidence are required in respect to that which is being studied (Polonsky, 2010). This is aimed at converging the findings from more than one source (Lidlof& Taylor, 2012). In this study, information from interviews, focus groups, questionnaires and critical discourse analysis are converged in order to lend complementary support to the explanation. Triangulation borrows from the idea that looking at something from multiple points of view improves accuracy (Neuman, 2011).

There are several types of triangulation and for the purposes of validity and reliability, this research study used two types of triangulation namely; triangulation of method and triangulation of measures (Neuman, 2011). Triangulation of method means mixing qualitative and quantitative styles of research and data in order to fully understand the nature of the research problem (Wimmer& Dominick, 2011). Quantitative and qualitative approaches are complimentary, and where appropriate, they should be combined to maximize their strengths and minimize their limitations (Orodho, 2005).

Neuman (2011) defines triangulation of measures as taking multiple measures of the same phenomenon. By measuring something in more than one way, researchers are more likely to see all aspects of it. For example, the study used interviews, focus group discussions, questionnaires and critical discourse analysis to increase the study's confidence in getting accurate measures.

In other words, when the several methods are used, "differences in results become interesting and informative as well" (Neuman, 2011:67).

3.6 Data Analysis and Interpretation

Raw data obtained from the field is not sensible unless it has been analyzed. Data analysis refers to the process of assembling, cleaning and examining data (Polonsky, 2010). Interpretation on the other hand refers to the process of making sense of the data generated.

This study used software package called statistical package for the social sciences (SPSS) to analyze data. The data analyzed has been presented in the form of graphs and pie-charts. On the other hand, qualitative data obtained through interviews and FGDs has been analyzed and presented in the form of narratives in a simple language that everyone can understand.

Thereafter, the study has drawn conclusions, recommendations and suggested areas for further studies based on the findings.

3.7 The research variables

Orodho (2005) defines a variable as an empirical property that is capable of taking two or more values. Variables have different roles in a research study. For example, it may influence the other variables, hence determining the values of the affected variable(s) (Neuman, 2011). The variable that is used for prediction or is assumed to be causal is called the independent variable while the variable that is predicted or assumed to be affected is called the dependent variable (Wimmer & Dominick, 2011). Simply put, “the independent variable is that factor which is measured, manipulated or selected by the researcher to determine its relationship to an observed phenomenon which constitutes the dependent variable” (Orodho, 2005:215).

The two are tied to each other by a certain relationship, whereby the variation in one (dependent variable) is a function of the changes of the other (independent variable) (Mugenda & Mugenda, 2003). For this study, radio was the independent variable while agriculture was the dependent variable where the study measured the attributable influences of radio programs on agriculture as a result of the levels of frequency of exposure.

3.8 Validity and Reliability of the data.

Validity refers to the accuracy and meaningfulness of inference, which are based on the research results (Orodho, 2005). In other words, it is the degree to which results obtained from the analysis of the data represent the phenomenon under investigation. Muhammad et al. (2008) posits that validity refers to the extent to which the data is plausible, credible and trustworthy; and thus can be defended when challenged. Validity suggests truthfulness. It refers to how well

an idea “fits” with the actual reality (Neuman, 2011:97). This implies that without validity, there is poor fit between the constructs a researcher uses to describe, theorize or analyse the social world and that which actually occurs in the social world (Neuman, 2011).

Reliability on the other hand refers to the extent to which results are consistent over time and are the accurate representation of the total population under study (Joppe, 2000). This means that if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. Neuman (2011) defines reliability as the degree of dependability or consistency of results. Perfect reliability and validity are virtually impossible to achieve, hence they are ideals that researchers strive to achieve because they (validity and reliability) help to achieve truthfulness, credibility, or believability of findings (Neuman, 2011).

Fully aware of this quality, this research study used various techniques in order to increase the chances of validity and reliability of the findings. One of these techniques is triangulation. Though it has been discussed earlier, triangulation refers to the process of using multiple sources of evidence, investigators and methods during the data collection and data analysis phase of the research in order to enhance credibility (Lincoln & Guba, 1985). As quoted in Muhammad et al. (2008:43), researchers (Seale, 1999; Stebacka, 2001) agree that triangulation is typically a strategy for improving the validity and reliability of research. Triangulation strengthens a study by combining several methods or data, including qualitative and quantitative approaches (Patton, 2001).

In this case, the study used mixed methods with the aim of complimenting each other. In addition, the study employed interviews, focus groups, questionnaires and critical discourse analysis with the aim of checking the consistency and dependability of the research study.

The second technique of ensuring credibility and consistency was the researcher's self-monitoring process (Merriam, 1988). This process occurs during data collection and analysis phases. Continuous refinement of the sample and data collection techniques throughout the process increases reliability and credibility (Macmillan & Schumacker, 2006).

Lastly, validity and reliability was increased through prolonged and persistent field work. This allowed interim data analysis and corroboration to ensure there is a match between the findings and participants' reality (Muhammad et al. 2008:37).

3.9 Challenges to the study

A number of challenges faced this research study. As Welch (1985) puts it, the presence of one or two dominant participants may repress the opinions of others. Some participants may not feel confident about expressing an opinion. Some may submit to the opinions of others rather than cause conflict or argument to the group. For instance, during group discussions, men dominated the discussions against women until the researcher was compelled to arrange for separate discussions with women hence altering the whole FGD process as earlier planned.

Second, the study was faced with the problem of inadequate time. The researcher was required to spend substantial time collecting and analyzing data. However, due to time, the researcher had to ask some respondents to fill the questionnaires quickly in order to beat time. Furthermore, due to time, this analysis was somehow rushed hence important aspects of the data may be missed.

In addition, this study was to be appealing and interesting if it employed the concept of ethnographic research. In ethnographic studies, as Orodho (2005) points out, the researcher makes direct observation of human activity in an ongoing naturalistic setting before descriptions are made. This was not possible for this study due to time.

CHAPTER 4

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents a general description of the data and the results according to the objectives of the study. The study sought to determine whether radio addresses the needs of the farming community in Bomachoge Chache Constituency; to examine the competence of the resource persons used in radio programming; to examine the appropriateness of the time and frequency of the program and to investigate the usefulness of the programme to farmers. The data collected from the respondents was analyzed and computed into percentages, frequency tables, bar graphs and pie charts. Each graphical presentation is preceded by a description and an explanation of the analyzed data.

4.1.1 Response Rate

The study focused on a sample population of 160 farmers from whom their responses was intended to inform the study about the efficacy of radio in agricultural development. Out of this sample size, 149 responses were obtained, which gives a 93.13 per cent response rate. This makes the study redeemably reliable. Some of the respondents overstayed with the questionnaires hence at the time of retrieval, quite a number could not be traced. Despite these hitches, the total collected was good enough to warrant the study to proceed.

Table 4.1 Questionnaire Response Rate

| Respondents | Administered | Returned | % Return Rate |
|--------------------|---------------------|-----------------|----------------------|
| Onseka | 20 | 18 | 90 |
| Nyaisero | 20 | 19 | 95 |
| Tendere | 20 | 18 | 90 |
| Gakero | 20 | 19 | 95 |
| Boochi | 20 | 19 | 95 |
| Kineni | 20 | 19 | 95 |
| Mesesi | 20 | 19 | 95 |
| Mang'ere | 20 | 18 | 90 |
| TOTAL | 160 | 149 | 93.13 |

In addition, the focus group targeted two sets of farmers such as youths, and women together with men. This classification was borne out of the concern that these groups have different needs and expectations. However, while in the field the researcher realized that women did not actively participate in discussions when put together with men. In fact men dominated the discussion while women kept quiet throughout. Attention of the researcher was drawn by some women that in Kisii traditions, it was wrong for them to engage with men in meetings. This made the researcher to arrange for separate discussions with women. A total of 24 FGDs was done.

Further, the study intended to carry out 16 interviews but upon conducting 10, the researcher realized that the responses were the same. Therefore, the researcher ended up with 11 interviews including that of the producer of the programme.

4.2 Demographic Information

The farmers were asked to indicate their demographic information which included their age bracket, gender and level of education.

4.2.1 Gender of the Farmers

As indicated in figure 4.1 below, 66.4% of the farmers reported that they were male while 33.6% indicated that they were female. This shows that most of the farmers involved in the study were male. From the FGDs and interviews, it was established that because males were relied upon by their families, they were more involved in the farming.

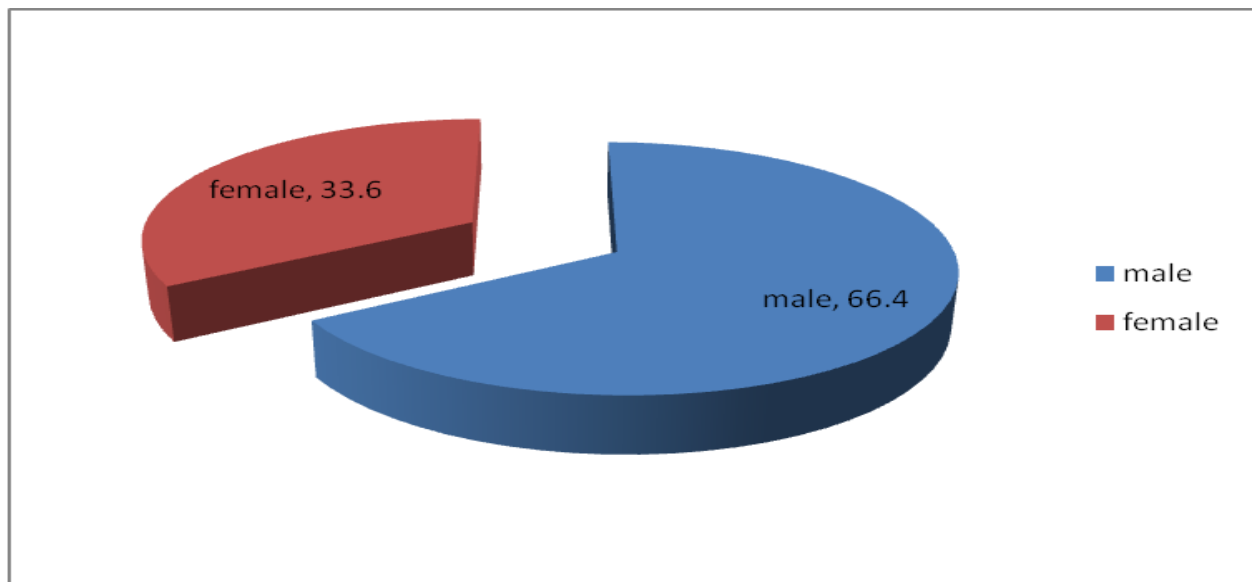


Figure 4. 1: Gender of the Farmers

4.2.2 Age of the Farmers

Figure 4.2 below shows the age of the respondents. According to the findings, 36.9% of the respondents were aged between 18 and 25 years, 21.5% were aged between 26 and 33 years,

20.1% were aged between 34 and 41 years, 13.4% were aged between 50 and 58 years, 4% were aged between 42 and 49 years, 2.7% were aged between 59 and 66 years and 1.3% were aged between 67 and 74 years. This shows that the target population was aged between 18 and 25 years.

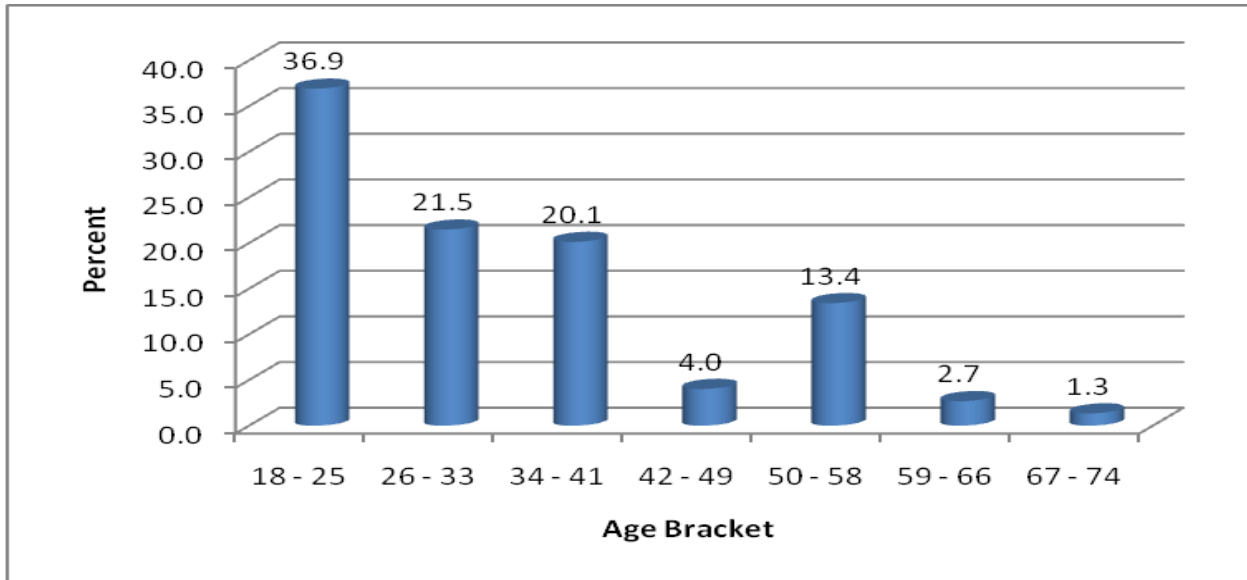


Figure 4. 2: Age of the Farmers

4.2.3 Level of Education of the Framers

As shown in figure 4.3 below, 32.2% of the farmers had secondary education, 28.2% had college education, 22.1% had primary education and 17.4% had university education. This shows that most of the respondents had secondary education and above. These findings imply that most of the farmers had the ability to read and write. In addition, most of the farmers were in a position to participate in Egesa FM in relation to farming.

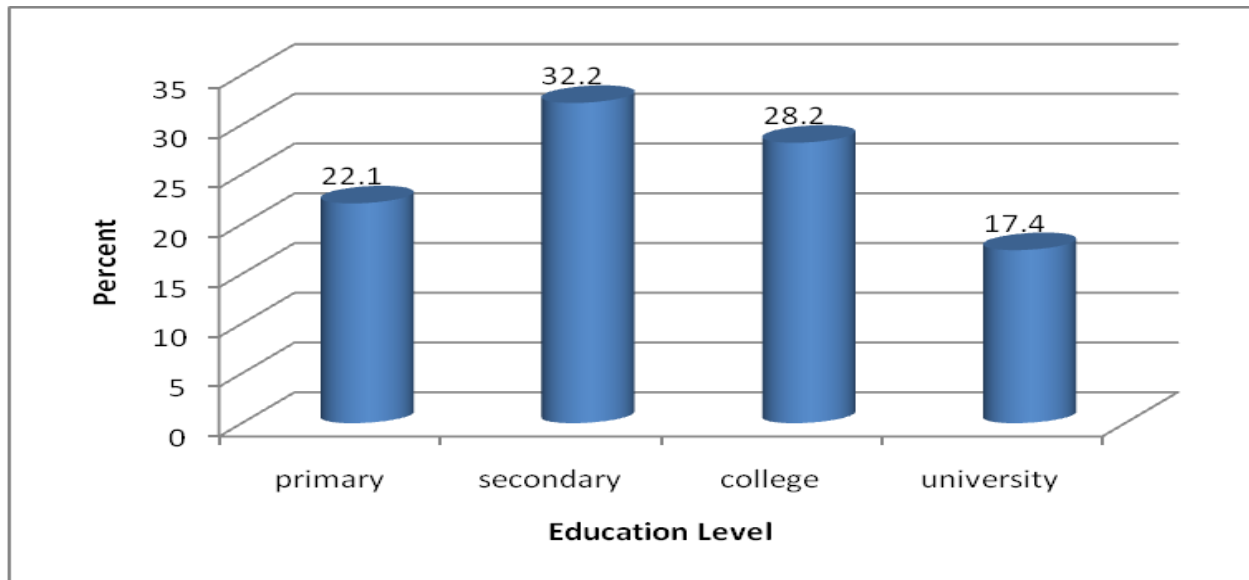


Figure 4. 3: Level of education of the Framers

4.3 Awareness and Participation in Egesa FM Radio Station

In an effort to establish the awareness and response of the farmers to Egesa FM radio programmes, the farmers were asked to indicate whether they were aware of Egesa FM, whether they were listening to Egesa FM, from where they were listening to Egesa FM, their favorite programmes and whether they were participating in the programme.

4.3.1 Awareness and Listening to Egesa FM

The farmers were asked to indicate whether they listened to Egesa FM. According to the findings as shown in figure 4.4 below, 99.3% of the respondents indicated that they listened to Egesa FM while 0.7% indicated that they were not listening to Egesa FM. In addition, from the FGD, all

participants indicated that they were aware and listened to Egesa FM. This is supported by the producer who indicated that the program *Oboremi bwaito* (Our farming) targeted small scale farmers, especially youths, living in rural areas of Kisii County. This shows that most of the farmers in this study were listening to Egesa FM and hence they had the information required in relation to farming.

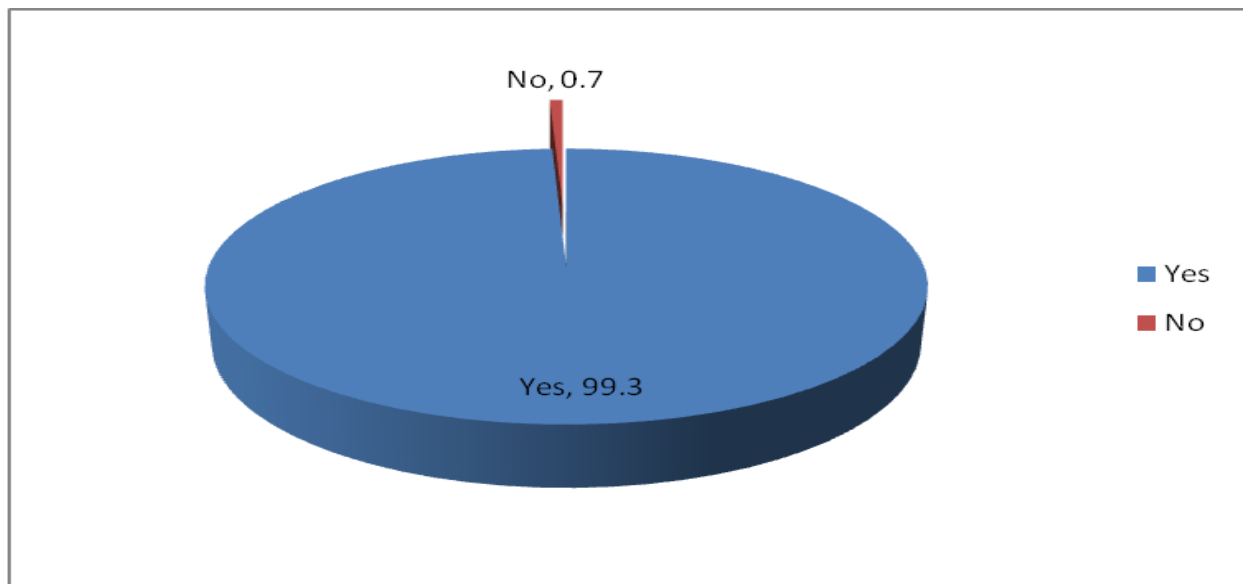


Figure 4. 4: Awareness and Listening to Egesa FM

4.3.2 Listening Alone or in Group

The respondents were also asked to indicate whether they were listening to the radio alone or in a group. As indicated in figure 4.5 below, 83.2% of the respondents reported that they listened to Egesa FM alone, while 16.8% indicated that they listened to Egesa FM in a group.

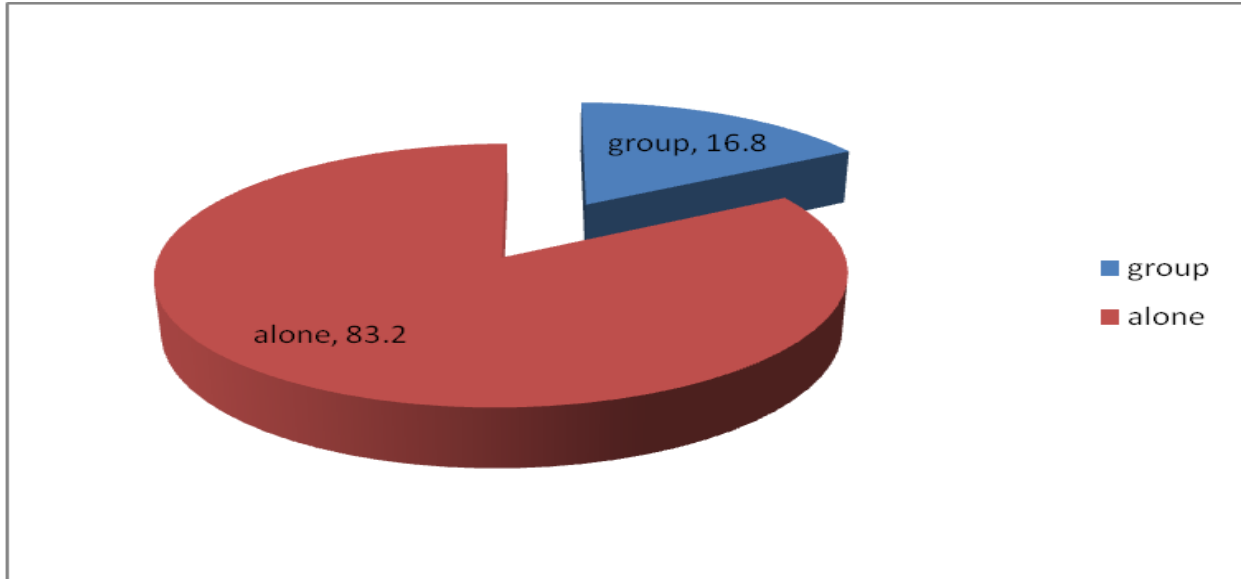


Figure 4. 5: Listening alone or in Group

4.3.3 Place of Listening to the Radio

The farmers were further requested to indicate where they were listening Egesa FM from. From the findings, 77.2% indicated that they were listening their radio from their houses, 14.1% of the farmers indicated that they were listening their radios from the farm, 7.4% of the respondents indicated that they were listening their radio from their offices and 1.3% indicated that they were listening their radio from public places/market. This shows that most of the farmers were listening their radio from their houses or homes.

Table 4. 1: Place of Listening to the Radio

| | Frequency | | Percent | |
|----------------------|-----------|-----|---------|------|
| | Yes | No | Yes | No |
| In the house | 115 | 34 | 77.2 | 22.8 |
| In the farm | 21 | 128 | 14.1 | 85.9 |
| At office | 11 | 138 | 7.4 | 92.6 |
| Public places/market | 2 | 147 | 1.3 | 98.7 |

4.3.4 Favorite Programme

The respondents were asked to indicate their favorite programme. From the findings, 85.9% of the respondents indicated that their favorite programme was news, 51% indicated that their favorite programme was entertainment, 49% indicated that their favorite programmes were development issues and 9.4% indicated that they listened to radio to pass time.

Table 4. 2: Favorite Programme

| | Frequency | | Percent | |
|--------------------|-----------|-----|---------|------|
| | Yes | No | Yes | No |
| News | 128 | 21 | 85.9 | 14.1 |
| Entertainment | 76 | 73 | 51.0 | 49.0 |
| Development issues | 73 | 76 | 49.0 | 51.0 |
| Pass time | 14 | 135 | 9.4 | 90.6 |

More specifically, the farmers indicated that their favorite programme include *ekerambauti* (the cyclone), *okemanyi mog'Osoro* (the know- all), *oboremi bwaito* (our farming), *kanyeka* (relax),

okoraria kw'ogokwa (death announcements), *obosemi bw'Egesa* (Egesa's advice), *Ekegusii* (our culture), *omogusii N'ekebago* ('the hoe'), *okobanga oroiboro* (family planning), *rimore* ('the torch'), and *boka boka* (wake up).

4.3.5 Participation in the Programme

As indicated in figure 4.6 below, 65.1% of the farmers reported that they were not participating in the programme while 34.9% indicated that they were participating in the programme. This shows that although most of the farmers were listening to *Oboremi bwaito*, they were not participating in the programme.

From the FGDs, all the participants seemed to know that they had a role to play in determining the kind of topics that the producer can educate them on agriculture. However they could not do it frequently and consistently due to various reasons. For example, men and women discussants in Kineni sub-location reported that there was no permanent contact line particularly for the program. The programme producer used the station's general mobile line which discussants found constantly engaged making it difficult for them to contribute in whichever ways. Some of the discussants attributed their failure to contribute to lack of finances to buy credit. Some others blamed the producer for reading the contact number a bit fast. Despite all this, youths reported that they used other means to reach the producer such as face book and SMS.

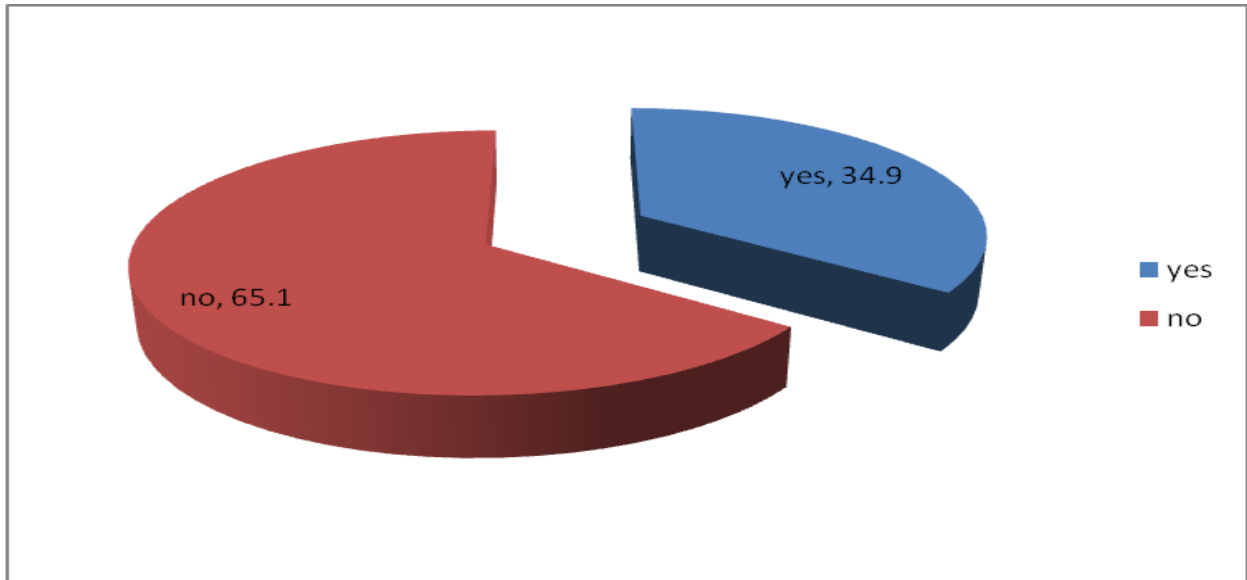


Figure 4. 6: Participation in the Programme

4.3.6 Mode of Response

From the respondents that indicated that they were participating in the programme, the study sought to establish which modes of response they were using. From the findings, 16.1% of the respondents reported that they were using short messages to participate in the programme, 15.4% indicated that they were making calls, 8.1% indicated that they were using Facebook and 4.7% indicated that they were using emails. This percentage response indicates that only 44.3% participated while the rest 55.7% never participated at all.

Table 4. 3: Mode of Response

| | Frequency | | Percent | |
|-----------------|-----------|-----|---------|------|
| | Yes | No | Yes | No |
| call-ins/phones | 23 | 126 | 15.4 | 84.6 |
| short messages | 24 | 125 | 16.1 | 83.9 |
| emails | 7 | 142 | 4.7 | 95.3 |
| Facebook | 12 | 137 | 8.1 | 91.9 |

4.3.7 Reasons for not Participating in the Programme

From the respondents who indicate that they were not participating in the programme, the study sought to find out why they were not participating in the programme. According to the findings, the respondents indicated they were not participating due to lack of credit. Others indicated that they lacked time to participate. In addition, some respondents indicated that the presenter read the contact numbers very fast while others indicated that the numbers were too busy.

4.3.8 Other Sources of Agricultural Information Apart from Radio

The farmers were also asked to indicate other sources of agricultural information apart from radio. From the findings, they indicated that other sources included educated family members, other experienced farmers, relevant farming organizations, newspaper, television, internet, agricultural shows, extension officers, magazines on agriculture, seminars concerning agriculture, schools, through the elders, field days, books and chiefs' barazas.

Further, in the FGDs, the participants from Onseka, Kineni, Mesesi, Tendere and Nyaisero-sub-locations reported that agricultural shows topped, followed by agricultural extension officers, Television and farm demonstrations. On the other hand FGDs in Gakero, Mangere and Boochi

sub-locations indicated that field days and demonstrations, and radio were the main sources of agricultural information.

However, the respondents reported that none of these other sources was popular than radio. This is because every farmer is able to access a radio, a radio is more broad and understandable, it is portable, it is affordable, and easy to maintain.

4.4 Radio in Addressing the Needs of the Farming Community

The first objective of the study was to determine whether radio addresses the needs of the farming community in Bomachoge Chache Constituency.

4.4.1 Listening to *Oboremi Bwaito* Programme

The respondents were asked to indicate whether they listened to the morning program *Oboremi Bwaito*. From the findings, 98% of the farmers indicated that they were listening to *Oboremi Bwaito* programme while 2% indicated that they were not listening to the programme. On the other hand, all the participants in the FGDs indicated that they listened to *Oboremi bwaito* programme. From these findings we can deduce that most of the farmers involved in this study were listening to *Oboremi Bwaito* programme in Egesa FM.

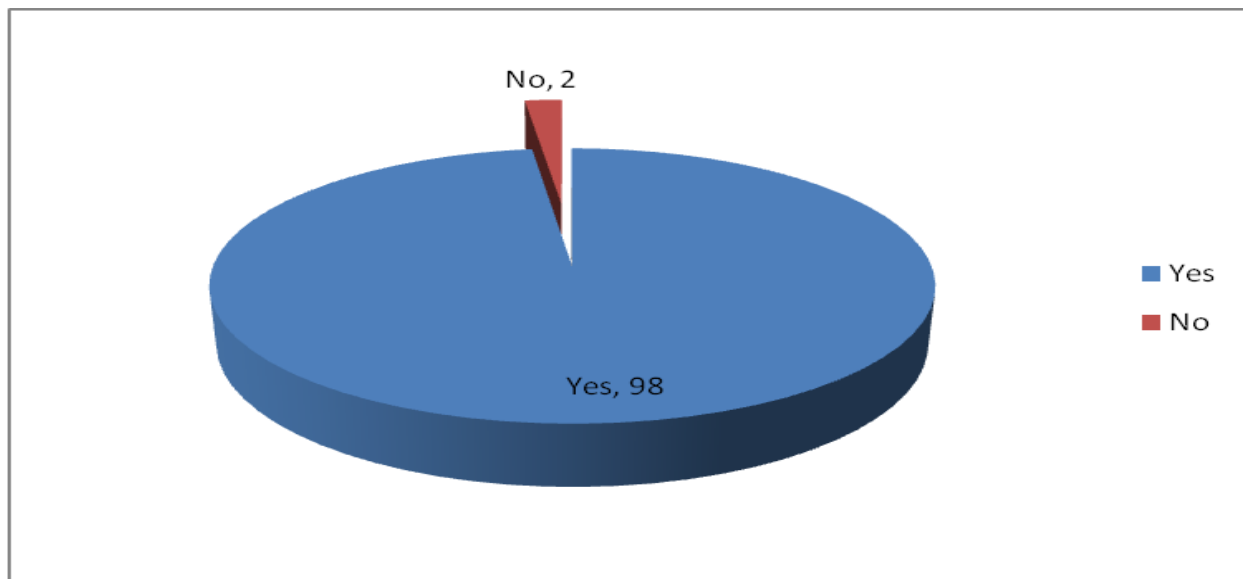


Figure 4. 7: Listening to *Oboremi Bwaito* Programme

4.4.2 Lessons Learnt from *Oboremi Bwaito* Programme

The farmers were asked to indicate the lessons they learn from the programme. From the findings, the farmers indicated that they learnt agricultural and related skills, types of farming, diseases and pests control, guides on how to practice farming, how to obtain market information, poultry farming, how to improve farm yields, how to maximize benefits from agriculture and modern technology in agricultural production. In addition, the farmers learnt how to practice agri-business

4.5 Competence of the Resource Persons used in Radio Programming

The second objective of this study was to examine the competence of the resource persons used in radio programming.

4.5.1 Experts Understanding of Modern Techniques of Farming

The farmers were asked to indicate whether the experts used in the programme to explain issues understood modern techniques of farming. From the findings, 92.6% of the farmers reported that the experts used in the programme to explain issues understood them well while 7.4% felt that they did not. From these findings, we can deduce that the experts used in the programme to explain issues understood modern techniques of farming. This is supported by the producer who indicated that manufacturing organizations such as Syngenta, Osho chemicals and Agri-Seed Company sponsored experts to discuss agricultural issues. The producer also indicated that he hosted informed, experienced and passionate interviewees to the program.

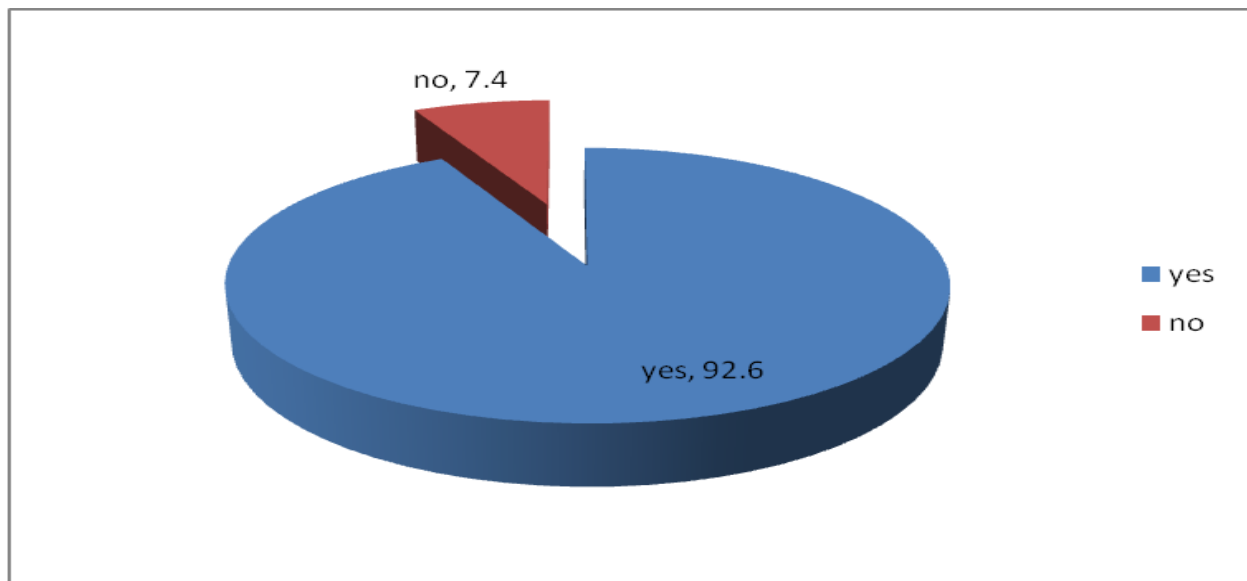


Figure 4. 8: Experts Understanding Modern of Techniques of Farming

4.5.2 The Programme in Addressing the Needs of Farmer

The farmers were asked to indicate whether the programme addresses their needs. From the finding, all the farmers (100%) reported that the programme was informative which show that the radio programmers were competent. More specifically, the farmers indicated that the radio programmers advised on the required time for farming, type of farm inputs to use and how to maintain their products in the farm. In addition, the farmers indicated that the programmers talked about crop rotation, zero grazing, use of certified seeds, proper storage of grains and use of scare craws all of which were relevant to practices. The respondents further indicated that the programme explained the modern techniques to farmers, educated them on better farming methods, clarified areas where they did not understand and improved their production quality.

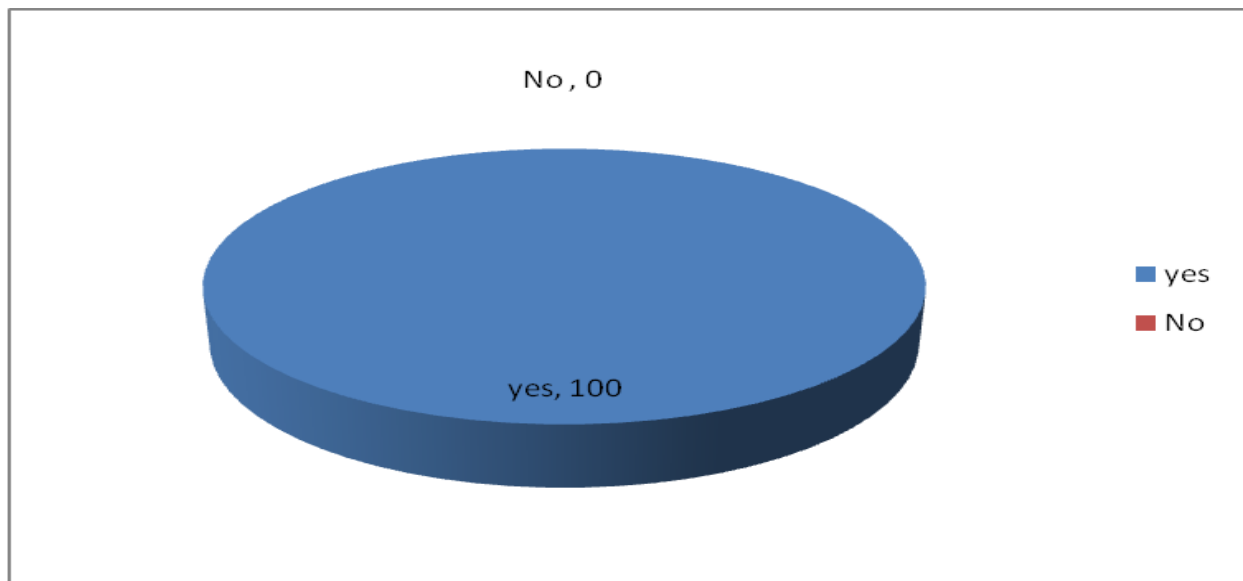


Figure 4. 9: The Programme in Addressing the Needs of Farmers

From the FGDs, all the groups agreed that the topics discussed were very relevant and addressed the needs of the farmer. Men and women discussants in *Gakero* sub-location for example reported that information from the programme had led them to growing high quality cabbage,

carrots, bananas, onions and tomatoes that matured faster and earned them quick income. In addition, the participants reported that the programme had informed them of how to control plant and animal diseases for high quality productions. With all the information however, the programme fails to provide necessary information about markets for the produce, sometimes leading to huge losses.

At *Bosoti* sub-location, youths have benefited from the program in a different way. They have learned to do fish farming, poultry farming, growing of sugarcane, and high quality bananas which do not go bad quickly once they ripen as compared to other varieties. They also reported that apart from sugarcane and bananas which have markets in Nairobi and other major towns, fish and poultry products were locally consumed. The programme has also made them understand certain conditions which do not favor certain crops and dairy animals.

4.6 Appropriateness of the Time and Frequency of the Programme

The third objective of this study was to examine the appropriateness of the time and frequency of the program.

4.6.1 Appropriateness of the Time the Program is Aired

The farmers were asked to indicate whether the time the programme aired was appropriate. From the findings, 73.7% of the men indicated that they the time the programme was aired was appropriate while 26.3% felt otherwise. On the other hand, 72% of the women indicated that the time the programme was aired was appropriate while 28% felt otherwise. This shows that although most of the farmers (male and female) were okay with the time the programme was aired, a good number of farmers were not.

Table 4. 4: Appropriateness of the Time the Program was Aired

| | | | gender | | Total |
|----------------------------------------------------|------------|-----------------|--------|--------|--------|
| | | | Male | Female | |
| Is the time the programme airs appropriate? | yes | Count | 73 | 36 | 109 |
| | | % within gender | 73.7% | 72.0% | 73.2% |
| | no | Count | 26 | 14 | 40 |
| | | % within gender | 26.3% | 28.0% | 26.8% |
| Total | | Count | 99 | 50 | 149 |
| | | % within gender | 100.0% | 100.0% | 100.0% |

Of those who had contrary responses were of the opinion that the programme be moved to mid-morning or evening hours because at 7:30 am, the farmer had a lot of movements. Female farmers were preparing breakfast for their children while male farmers were engaged in the fields looking for animal food. This hindered proper attention to the programme by the farmer.

4.6.2 Sufficiency of Time Allocated for the Programme

The respondents were asked to indicate whether the amount of time allocated to the programme was sufficient. From the findings, 73.2% of the respondents indicate that the amount of time allocated to the programme was sufficient while 26.8% indicated that it was insufficient.

However, from the FGDs, women participants reported that the time was inadequate for the programme to address the farming needs. They indicated that a repeat of the programme was necessary and the programme should be added more time from 10 minutes to between 25-30 minutes. They indicated that this will enable farmers to participate in asking questions in order to clarify more on some of the issues discussed. Discussions with men and youths indicated that only a repeat would be necessary. They all concurred with the producer who also reported that the time was not sufficient and the farmers had always suggested a repeat of the programme in the evening.

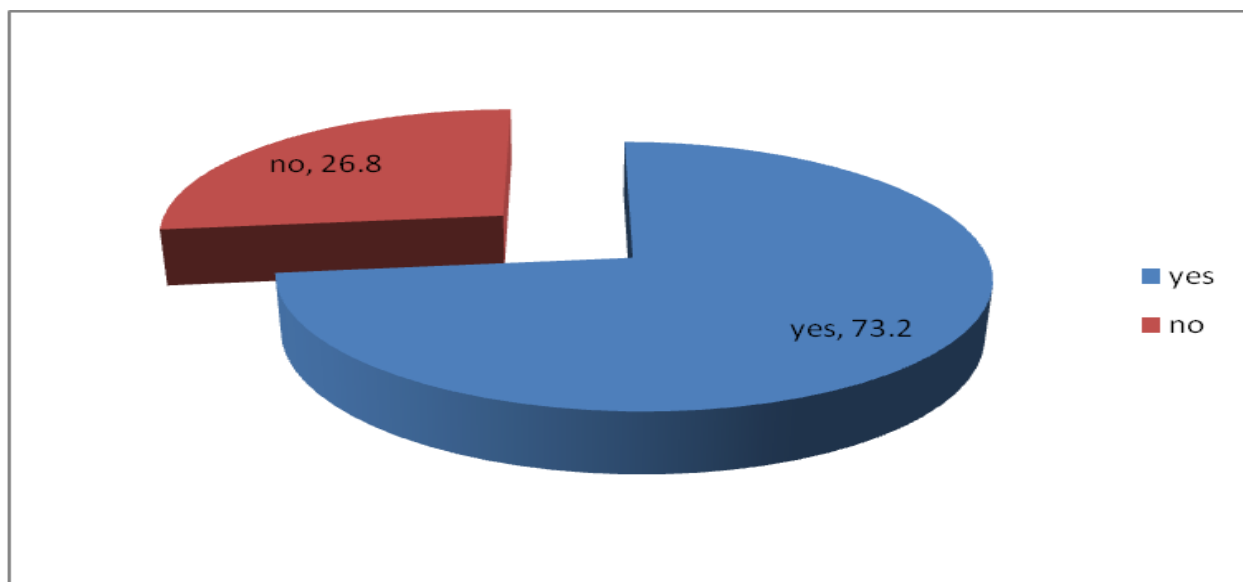


Figure 4. 10: Sufficiency of Time Allocated for the Programme

4.6.3 The influence of the language used in communicating agricultural information

The farmers were requested to indicate whether the local language used was helpful in communicating agricultural information. According to the findings, 100% indicated that the producer packaged the program content skillfully in the local language, *Ekegusii* which everyone understood. Those aged between 45-65 years indicated that the richness of the local language endeared them more to the programme, making it more interesting and appealing.

4.7 Usefulness of the Program to Farmers

The fourth objective of the study was to investigate the usefulness of the programme to farmers.

4.7.1 Whether the Programme helps the Farmers to Improve their Production

The farmers were requested to indicate whether the programme helped farmers improve their production. According to the findings, 95.3% of the farmers indicated that the programme helped farmers improve their production while 4.7% indicated that the programme had no help. From these findings we can deduce that the programme help farmers improve their production. This

was in line with the producer who reported that the ideas for the programme was usually guided by Kenya's vision 2030 which aspired to making Kenya an agriculturally productive society with the aim of curbing food insecurity among the Kenyan population.

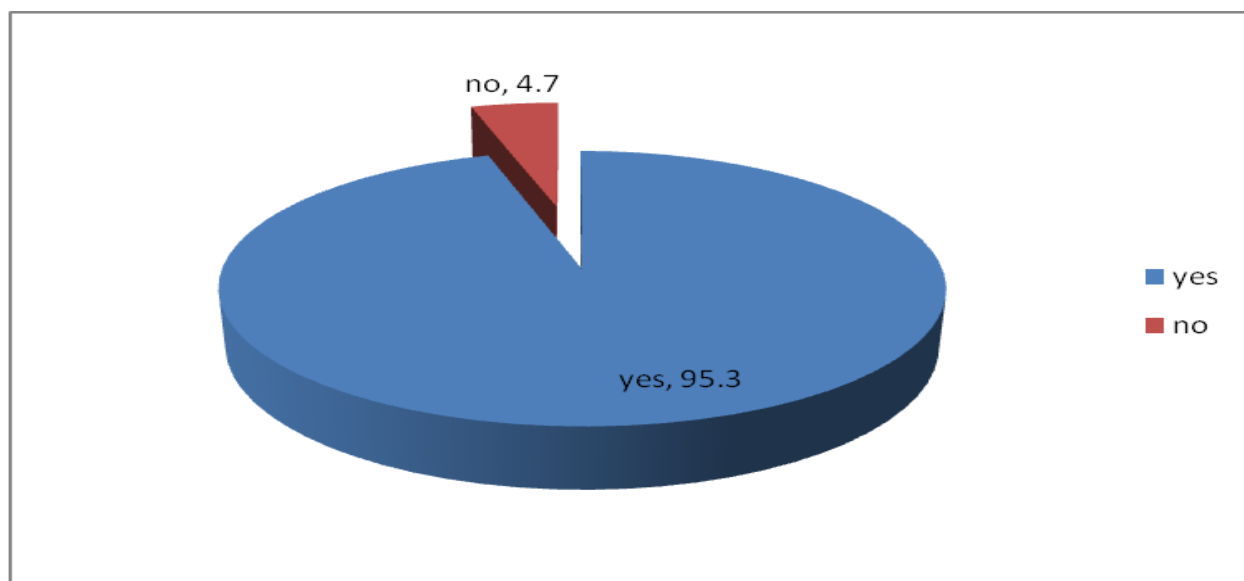


Figure 4. 11: Whether the Programme helps the Farmers to improve their Production

4.7.2 Techniques of Farming that the Program Talks About

The farmers were asked to indicate some of the techniques of farming that the programme talks about. From the findings, the farmers indicated that techniques the programme talked about included agro- forestry, soil conservation, well utilization of farms, application of fertilizers, ways to improve productivity, new techniques of weeding, top dressing and control of field pests, cross breeding and use of greenhouses.

From the FGDs, the participants agreed that the program talked about variety of techniques such as aquaponics, hydroponics, green house technology, horticulture, use of composite manure,

modern methods of controlling diseases in animals and crops, techniques of applying farm inputs, market infrastructure for the produce and so on.

4.7.3 Benefits of Techniques of Farming

The respondents were also asked to indicate the benefits of the techniques of farming that the program talks about. From the findings, the farmers indicated that farmers were informed of the appropriate farm input and outputs that help increase production, it educated farmers on how to plan in planting crops; it provided solutions to pest related problems and it made farmers aware about new methods of farming, diseases and pests.

Further, at *Mesesi* sub-location, men FGDS reported that they had benefited from the program by growing short-term crops such as carrots, beatrudes, cucumbers, pumpkins, vegetables and grafted avocados that mature fast. At *Onseka* sub-location, the programme had benefited the farmers in improving their yields, controlling diseases and storage techniques of farm produce. These had enabled them pay fees for their children and meet the costs for their basic needs.

The producer reported that since 2006 when the programme started, farmers had formed networking organizations such as farming welfare forum (FWF), where they visited each other. Secondly, they used this forum to exchange information about markets and to seek expert advice to enhance farming.

4.8 Barriers in the Production Process of the Program.

The producer was requested to indicate some of the barriers he faced in the production process of the program. The producer indicated that he faced financial challenges because sometimes the company failed to notice the urgency of some productions like this. Secondly, some technologies talked about caused high yields for the farmer and when the market lacked, the farmer blamed

the producer for failure to advise appropriately. Third, there was also misunderstanding between the producer and the farmer about what constitutes marketing and information. Some farmers always thought the intention of inviting the producer was to promote their farming activities. This conflicted with the producer's intended objective of seeking information.

CHAPTER FIVE

SUMMARY, CONCLUSION & RECOMMENDATIONS

5.1 Introduction

The study sought to determine the role of radio in agricultural development in Bomachoge Constituency by evaluating the program *Oboremi Bwaito* on *Egesa* FM. Particularly, the study sought to determine whether radio addresses the needs of the farming community in Bomachoge Chache Constituency; to examine the competence of the resource persons used in radio programming; to examine the appropriateness of the time and frequency of the programme and to investigate the usefulness of the programme to farmers. This chapter presents the summary of the major findings, conclusions and recommendations.

5.2 Summary of the Findings

5.2.1 Radio in Addressing the Needs of the Farming Community

The first objective of the study was to determine whether radio addresses the needs of the farming community in Bomachoge Chache Sub-county. The study established that most of the farmers involved in this study were listening to *Egesa* FM and hence they had the information required in relation to farming. In addition, most of the farmers were listening to the radio alone from their houses and homes. However, a small number was listening to radio from their farms and offices.

The study found that the most favorite programme to the farmers was *ekerambauti* (the cyclone), *okemanyi mog'Osoro* (the know- all), *oboremi bwaito* (our farming), *kanyeka* (relax), *okoraria kw'ogokwa* (death announcements), *obosemi bw'Egesa* (Egesa's advice), *Ekegusii* (our culture),

omogusii N'ekebago ('the hoe'), *okobanga oroiboro* (family planning), *rimore* ('the torch'), and *boka boka* (wake up).

The study found that despite the fact that most of the farmers were listening to Egesa FM, most of them were not participating in the programme. However, the youth discussants indicated that they used mobile line to call or send short mobile messages and also used social media such as Facebook and WhatsApp. Elderly interviewees mostly from the age of 40 years and above reported that they rarely made their contributions due to lack of the contact line to the producer. In addition, the study found that most of the farmers were having challenges in participating in the programme. For example, the study found that there was no permanent contact line particularly for the programme. The programme producer used the station's general mobile line which was constantly engaged making it difficult for them to contribute in whichever ways. Other farmers were having financial challenges. Further, the producer read the contact number a bit fast. However, some farmers were using short messages, calls, facebook and emails to participate in the programme.

Other sources of agricultural information apart from radio were found to be educated family members, other experienced farmers, relevant farming organizations, newspaper, television, internet, agricultural shows, extension officers, magazines on agriculture, seminars concerning agriculture, schools, the elders, field days, books and chief's barazas. However, the radio was the most preferable as every farmer was able to access a radio.

The study established that most of the farmers involved in this study were listening to *Oboremi bwaito* programme. From the programme, they learnt agricultural and related skills, types of

farming, diseases and pests, guides on how to practice farming, how to obtain market information, how to improve their farming skills, poultry farming, how to improve their farm yields, how to maximize benefits from agriculture and modern technology in agricultural production.

5.2.2 Competence of the Resource Persons used in Radio Programming

The second objective of this study was to examine the competence of the resource persons used in radio programming. The study established that the experts used in the programme to explain issues understood modern techniques of farming. In addition, manufacturing organizations such as Syngenta, Osho chemicals and Agri-Seed Company sponsored experts in the studio to address agricultural issues. In selecting the interviewee/expert, the producer looked for informed and interesting interviewees who were also experienced and passionate about their area of interest. The study also found that the programmers were competent because they hosted experts who addressed the needs of the farmer. More specifically, the programme advised farmers on the planting seasons, type of farm inputs to use and how to maintain their products in the farm. In addition, programmers provided the farmers with information about crop rotation, zero grazing, use of certified seeds, proper storage of grains and use of scare crows all which are relevant to farmers.

In addition, the study found that the programme explained well the modern techniques to farmers, educated farmers on better farming methods, helped the farmers to know more about issues they did not understand and this improved the quality of their production. Further, the youth had learnt to do fish farming, poultry farming, growing of sugarcane and high quality bananas. The study further indicated that apart from sugarcane and banana which had markets

locally and outside, fish and poultry products were locally consumed. The programme also made them understand certain conditions which did not favor certain crops.

5.2.3 Appropriateness of the Time and Frequency of the Programme

The third objective of this study was to examine the appropriateness of the time and frequency of the programme. The study established that although most of the farmers were okay with the time the programme was aired (7.30am), a good number of farmers were not. In addition, the youths were not comfortable with the timing of the programme and were therefore of the view it be changed to evening because in the morning, they were engaged in other activities. However this time was convenient to women as they were still in the house preparing breakfast for their families. Men on the other hand were of the view that the programme should be changed to evening hours.

In relation to sufficiency of time allocated for the programme, the study found that the time was inadequate for the programme to effectively address the farming needs. Repeat of the programme was necessary and the programme to be added more time from 10minutes to between 25-30 minutes.

5.2.4 Usefulness of the Programme to Farmers

The fourth objective of the study was to investigate the usefulness of the programme to farmers. The study established that the programme helped farmers improve their production. The producer was usually guided by Kenya's vision 2030 which aspired to making Kenya an agriculturally productive society with the aim of curbing food insecurity among the Kenyan population.

The techniques of farming that the programme talked about included agro forestry, soil conservation, well utilization of farms, application of fertilizers to crops, how to improve productivity, top dressing and control of field pests, cross breeding and use of greenhouse. Other techniques included aquaponics, hydroponics, green house technology, horticulture, use of composite manure, modern methods of controlling diseases for animals and crops, techniques of applying farm inputs, market infrastructure for the produce and so on.

On the benefits of the programme, the study found that farmers got informed of the appropriate farm inputs that help increase production. In addition, the programme sensitized farmers on how to prepare the land for planting. The study also found that through the programme, farmers had benefited from the programme by growing short-term crops such as carrots, beatrudes, cucumbers, pumpkins, vegetables and grafted avocados that mature fast. The programme had also benefited the farmers in improving their yields, controlling diseases and storage techniques of farm produce.

5.3 Conclusion

In connection to whether the needs of the farming community are met by radio in Bomachoge Chache Constituency, the study concludes that the farmers acquired new skills in agriculture, new techniques of diseases and pests control and learned new types of farming. They also learnt how to practice effective farming, how to enhance their farming skills, poultry farming, how to enhance their farm outputs, how to maximize benefits from agriculture and how to utilize modern technology in agricultural production.

Concerning the competence of the resource persons used in radio programming, the study concludes that the programme's expert had valuable information on modern techniques of farming. Additionally, manufacturing organizations such as Osho Chemicals, Syngenta and

Agri-Seed Company played a vital role in facilitating the programme technical experts in the studio in order to address agricultural issues.

With regard to the appropriateness of the timing of the programme, the study concludes that most of the farmers were contented with the time the programme was aired which was 7.30am but a significant number were not. The youths and men shared the view that the timing should be changed to evening considering that in the morning, they were engaged in other activities. However, this timing was convenient for women who at that time were still in the house preparing breakfast for the families. With regard to sufficiency of time allocated for the programme, the study concludes that the time was not enough to address the overall needs of the farmer. A repeat of the program me was therefore necessary. In addition, the programme should be added more time ranging from 25 to 30minutes.

With regard to the usefulness of the programme to farmers, the study concludes that the programme assisted the farmers to enhance their production. It informed them of the appropriate farm input that could help increase production. Additionally, the programme educated farmers on how to plan for their planting seasons. Moreover, it offered solutions to problems that were pest related and it made them aware of the new methods of farming.

5.4 Recommendations

This study established that some farmers were not comfortable with the time the programme was aired. This study therefore recommends that the programme should be changed to evening when most farmers were available in their houses.

The study also found that the time allocated for the programme was not sufficient. This study therefore recommends that some more time should be allocated to the programme. In addition, the producer should consider airing a repeat of the programme.

The study also found that most farmers were not responding to the programme as the programme producer used the station's general mobile line which was constantly engaged. This study therefore recommends that the programme producer should get another number that is different from the station's general mobile line to ease the call's congestion.

The study also established that the programme producer was reading the contact numbers very fast making it hard for the farmers to get them all. This study therefore recommends that the programme producers should read the numbers slowly for the farmers to get them and participate in the programme.

The study found that the program fails to provide necessary information about markets for the produce, which at times leads to huge losses. This study therefore recommends that the producers should consider coming up with a programme on marketing techniques of farm products.

5.5 Suggestion for Further Studies

This study was limited to Bomachoge Chache Constituency and Egesa FM. The study therefore recommends further studies on the role of radio in agricultural development in Kisii County. The study also recommends further studies on the factors affecting the participation of farmers in agricultural development programmes in radio stations in Kenya.

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Appendices

Appendix 1: Questionnaire for farmers

My name is Richard Kembero, a Master’s student at the University of Nairobi’s School of Journalism and Mass Communication. I am studying the role of radio in agricultural development. This questionnaire seeks to gather data about the efficacy of radio and its contribution to agricultural development. The information will be used exclusively for academic purposes.

1. What is your name?.....{Optional}
2. How old are you?.....{18+}
3. Gender: Male Female
4. What is the level of your education? Primary Secondary College University .
Specify.....
5. Do you listen to Egesa FM radio? Yes No If No, which other radio stations do you listen to?.....
6. Which is your favorite program?.....
7. Have you heard about “Oboremi bwaito” programme on Egesa FM?
8. What lessons do you learn from this program?
.....
9. Does the program address the needs of farmers? Yes No If yes, please explain.....
If No, please explain.....
10. Do you think experts used in the program to explain issues understand modern techniques of farming? Yes No
If yes, please mention some of the techniques of farming that the program talks about
.....
.....
If No, please briefly explain.....
11. Do you think the amount of time the program airs is sufficient? Yes No If No, briefly explain.....
12. Do you think the time the program airs is appropriate? Yes No If No, please briefly explain.....
13. Do you think the program helps farmers improve their production? Yes No If yes, please mention some of the benefits of the program.....
.....
If No, please explain why.....

14. Apart from radio, which other sources do you think the farmer obtains agricultural information from?

- a)
- b)
- c)
- d)
- e)

15. Of the sources above, which one do you think is more popular than radio?

.....

If none, why do you think radio is most popular in disseminating agricultural information?

- a).....
- b).....
- c)
- d)

18. Where do you listen your radio from?

- a) In the house []
- d) In the farm []
- e) At the office []
- f) Public paces/ market []
- g) Others. Specify.....

19. In most instances, do you listen in a group or alone? (Tick as appropriate) Group [] Alone []

20. Do you participate in the program? Yes [] No [] If yes, which modes do you use?

- a) Call-ins/phones []
- b) Short messages (SMS) []
- c) Emails []
- d) Facebook []

If No, explain why.....

21. What other programs do you listen to on radio? (Tick as appropriate)

- a) News []
- b) Entertainment []
- c) Development issues []
- d) Pass time []
- e) Others, specify.....

22. What are your general remarks about the role of radio in agricultural development in Bomachoge Constituency?

.....
.....
.....

Thank you for your time.

Appendix 2: Interview questions for the program producer, Egesa fm radio

My name is Richard Kembero, a Master's student at the University of Nairobi's School of Journalism and Mass Communication. I am studying the role of radio in agricultural development. This questionnaire seeks to gather data about the efficacy of radio and its contribution to agricultural development. The information will be used exclusively for academic purposes.

1. Which tenets do you follow when creating agricultural programs?
2. How do you decide on the content that you air?
3. Whom do you target in your morning interview program (“Oboremi bwaito”)?
4. What role does the advertiser's play in your programming?
5. Do you think the time of the day that the program airs is appropriate for the TA?
6. What do you consider when choosing an interviewee for your program?
7. What is the percentage listenership of your program?
8. Do the farmers contribute in deciding the content for your program?
9. Which channels do they use in reaching you?
10. What are some of the achievements the program has made to farmers?
11. A part from your program, do you think there are other alternative sources of agricultural information accessible by the farmer?
12. Comparing radio with Television and Newspapers, which is the fastest means in passing agricultural information?
13. What are some of the barriers that you face in the whole production process of the program?

Thank you for your time.

Appendix 3: Interview guide for farmers

My name is Richard Kembero, a Master's student at the University of Nairobi's School of Journalism and Mass Communication. I am studying the role of radio in agricultural development. This questionnaire seeks to gather data about the efficacy of radio and its contribution to agricultural development. The information will be used exclusively for academic purposes.

1. Are you aware of Egesa FM?
2. Do you listen to the morning programme "Oboremi Bwaito"?
3. Is the language used helpful to you in understanding well the program?
4. Do you think the program's time of broadcast is appropriate?
5. Do you think the amount of time it airs is sufficient?
6. What do you think of the frequency of the program?
7. Do you think the content/topics discussed are relevant to the needs of the farmer?
8. Do you think the experts used in the program address farming issues well?
9. Do you make your contribution to the producer on the topics you want to be discussed?
10. What ways do you use to reach the producer
11. What are some of the farming techniques talked about by the program?
12. What are some of the benefits of these techniques to you as a farmer?
13. Apart from radio, what are other sources of agricultural information to you as a farmer?
14. Of the sources above, which one do you think is more popular in disseminating agricultural information than radio?

Appendix 4: Focus Group Discussion Guide for Women, Youths & Men

My name is Richard Kembero, a Master's student at the University of Nairobi's School of Journalism and Mass Communication. I am studying the role of radio in agricultural development. This questionnaire seeks to gather data about the efficacy of radio and its contribution to agricultural development. The information will be used exclusively for academic purposes.

1. Are you aware of Egesa FM?
2. Do you listen to the morning program "Oboremi Bwaito"?
3. Do you think the program's time of broadcast is appropriate?
4. Do you think the amount of time it airs is sufficient?
5. What do you think of the frequency of the program?
6. Do you think the content/topics discussed are relevant to the needs of the farmer?
7. Do you think the experts used in the program address farming issues well?
8. Do you make your contribution to the producer on the topics you want to be discussed?
9. What ways do you use to reach the producer?
10. What are some of the farming techniques talked about by the program?
11. What are some of the benefits of these techniques to you as farmers?
12. Apart from radio, what are other sources of agricultural information to you as farmers?
13. Of the sources above, which one do you think is more popular in disseminating agricultural information than radio?