

**THE IMPACT OF RADIO AGRICULTURAL PROGRAMMES ON SMALL SCALE
FARMERS: THE CASE OF “MALI SHAMBANI” PROGRAMME ON KBC RADIO
TAIFA**

By:

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DECLARATION

This research project proposal is my own original work and has not been presented to any learning institution for award of any diploma or degree.

Signed

Date.....

TOEPISTA NABUSOBA REG NO: K50/80749/2012

I confirm that this research proposal was carried out by the above named candidate under my supervision.

Signed.....

Date.....

ELIAS MOKUA (PHD)

DEDICATION

To my loving mother, the late Susan Wegosasa Sulwa

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Abstract

Kenya's economy is dependent on agriculture supported by small scale farmers. The sector provides a livelihood for about 80% of Kenya's population and employs more than 70% of the rural population. Communicating information on agriculture innovations to farmers has relied on extension services which limits the number of farmers reached. This study sought to assess the impact of agricultural radio programmes in responding to farmer information needs with specific reference to *Mali Shambani* a radio programme broadcast on KBC Radio Taifa.

Radio remains the most cost effective means of building awareness, and supporting the adoption of new farming practices by small scale farmers. Although radio is the most popular mass medium, agriculture programming is executed with little participation from the farmers and extension agents. Broadcast media houses hardly undertake surveys for agricultural programmes to find out the effectiveness of the programmes aired. This study therefore provides an insight into best approaches to agricultural programming for radio stations and stakeholders in the agriculture sector.

According to the agenda setting theory, media often set the agenda for the public by highlighting what they deem important by telling people what to think about. This research project applies agenda setting theory to show how the selection of topics and packaging of agricultural content impacts on farmers' uptake of agriculture innovations. To establish this, the researcher used a mixed method for data collection, both qualitative and quantitative. A total of 31 respondents were interviewed using purposive sampling, 13 in Tongareni Sub-county of Bungoma County. The other 18 were selected from the *Mali Shambani* feedback data base of participants of the live show. The 18 listeners were drawn Western, Nyanza, Eastern, Coast, and Central Kenya.

The research findings indicate that agricultural knowledge is essential for increased productivity and that radio is the preferred medium for small scale farmers and extension experts in sharing information on agriculture innovations. Radio agriculture programmes alone cannot bring about change in the farming communities, there is need to integrate participatory models to serve rural farming communities effectively. *Mali Shambani* was found to use a top down approach with minimal participation from farmers mostly the youth and women.

Based on the findings the researcher recommends that broadcast media organizations invest in innovative and participatory approaches to agriculture programming for sustenance. This would attract listenership and increased level of awareness and agricultural productivity leading to increased revenue for the stations from the partnerships.

ABBREVIATIONS

AGRA:	African Green Revolution
AGREN:	Agriculture Research and Extension Network
AFRRI:	African Farm Radio Research Initiative
AIRC:	Agriculture Information Centre
AMDI:	Africa Media Development Initiative
CCK:	Communications Commission of Kenya
EAGC:	East African Grain Council
ISAAA:	International Service for the Acquisition of Agricultural Biotechnology Applications
KARI:	Kenya Agricultural research Institute
KARF:	Kenya Audience Research Foundation
NASEP:	National Agriculture Sector Policy

CHAPTER 1: INTRODUCTION

1.1 Background to the study

Mass media are vital tools of communication; they have been instrumental in informing the masses about developments taking place in the world, influenced changes and aided democratization at their home fronts and revolutionized humanity. Traditional mass media channels that include radio, television and newspapers continue to be relevant particularly in most of Africa where new technology has been slow in taking root. New developments in technology have not obliterated traditional forms of mass media.

Radio in particular has consistently remained in the lead over all other forms of media as the most utilized medium, it has continued to provide real time news about events unfolding around the world, educating audiences about diverse subjects such as climate change, health issues, nutrition, and governance. The influence of radio is best demonstrated by the stranglehold post authoritarian African governments maintained over the medium soon after gaining independence through state owned radio with the excuse they were protecting the citizens from “its corrupting influence on the audience” (Williams, 2003:5).

Local Radio in Africa tops the list as the most attended medium among the mass media followed by local television, while newspapers come fifth after international radio and television (Gallup ISAAA 2014 media workshop). The attraction of radio has not waned and is still considered a vital tool in national development since pre-independence and moreso after independence as a tool for rural development. This medium has continued to be used as a main tool for communication and access of information by stakeholders; the sender and the receiver. The present dramatic developments in the information communication technology sector have not changed the place of radio, but have only served to enhance the medium with convergence; the incorporation of mobile phones has speeded up the flow of information from the sender to the receiver and increased interactivity. Convergence with ICTs “.... is a re-discovery of radio in the context of new ICTs a realization that technology has made radio into a more two-way medium and that it can help bridge the digital divide by providing a powerful tool for information dissemination and access especially for hard-to-reach rural audiences” Myers (2009:5).

According to Myers (2008:8) in her publication *Radio and Development in Africa*, radio is the most popular medium, research findings in the publication indicated ownership levels among adults in East Africa to be between 69%-93%, Kenya being in the second position with 92% after Tanzania and Burundi with the least 69%. However in the wealthier African states in the Maghreb region in the North trends are different where TV viewership is in the lead closely followed by radio. The same study indicated radio's daily usage at 70% to 90% in Africa with Kenya among the countries registering "heavy listening" weekly at 90% followed by TV. These facts are also confirmed by the KARF audience surveys (Q4 2013) that indicated daily listenership of radio at 90%. The growth of radio has also been rapid compared to other mass media; according to CCK in 2007 there were 150 radio stations and 54 TV stations (www.cck.go.ke).

Radio preference as a mass medium is attributed to its unique characteristics that "allow the owners to expand the spectrum beyond urban areas, avoid economic barriers to consumers paused by high priced newspaper or TV subscriptions" (AMDI: 31). The oral nature of radio and its ability to employ native languages enables the medium to reach the critical rural population which in Kenya is about 80%. Radio is also preferred for its portability, affordability, simplicity, and flexibility to the user.

It is these traits about radio that have arguably placed the medium in the lead and consequently convinced governments and development partners that it can assist to reach their targets to advance their economic and social development agendas.

Radio is considered useful in improving the sharing of agricultural information by remote rural farming communities "it supports agriculture extension through the use of local language and rural radio to communicate directly with farmers and listener groups" AGREN (2003). Radio programmes on agriculture are run in most stations that serve agricultural communities and this is the norm rather than the exception in developing countries especially in Africa where the economy of the countries is heavily dependent on agriculture with small scale farmers being the major producers. The conviction by governments that knowledge and information are critical to increased productivity is evident in their application of the mass media in their agricultural

education campaigns and in particular the use of radio which is accessible to the rural communities.

1.1.2 Radio and agricultural programming

KBC Radio Taifa is the Swahili radio national channel it is also the flagship station of the public broadcaster, it is one of the two national channels the other being the English Service. The national Swahili radio channel known as “Swahili Service” was started in 1953 by the colonial government along with other vernacular stations to serve Africans and even after Kenya attained independence the new government inherited the broadcast structures and maintained the status until the liberalization of the electronic media in the early 90s.

The station has a national geographical reach and despite the stiff competition from private media it is able to reach the remotest parts of the country. It broadcasts both on FM and medium wave on various frequencies to attain the national reach and access. It broadcasts 24 hours daily dedicating 40% to music and entertainment and 60 to “talk” programming in order to fulfill the organization’s mandate to serve the public through programmes that are educative, informative, and entertaining. KBC Radio Taifa broadcasts programmes of a diverse nature ranging from politics, economics, and social issues. Agriculture content forms a good part of talk programmes, current programmes on agriculture include *Makala ya Kilimo*, and *Mali Shambani* produced at KBC studios while others like *Sikio la Mkulima*, and *Mtunze Punda* are sponsored. *Sikio la Mkulima* is just one of the programmes running on KBC radio which is sponsored by the Agriculture Information Resource Centre- AIRC. This is an institution under the Ministry of Agriculture in Kenya whose mandate is to manage agriculture information and to serve a wide range of audience in the agriculture sector with specialized agriculture information through mass media (www.kilimo.go.ke). Among its objectives is to disseminate specialized agricultural information through mass media. AIRC has bought airtime on other KBC vernacular radio channels such as Kikamba, Kalenjin, and Luo to run agriculture programmes. FAO also sponsored a series of interactive programmes targeting pastoral communities in partnership with the ministry of livestock development titled *Mali ni Mifugo* aired every Friday at 8.00pm for a period of six months in 2013 to 2014. The European Union in partnership with the Kenya

Agriculture Commodity Exchange (KACE) bought airtime on KBC Radio Taifa and ran a weekly series *Soko Hewani*. The ministry of Agriculture Fisheries and Livestock have previously sponsored one off programmes on the station with specific agriculture messages.

KBC was a major partner in the Farmer Voice Radio (FVR) project a Bill and Melinda Gates Foundation funded initiative aimed at using radio as a tool for extension. The public broadcaster provided free airtime on five of its radio channels; KBC Radio Taifa and English Service (national stations), FM stations; Pwani, Coro, and Mayienga, (serving Coast, Central, and Nyanza regions respectively) to transmit agriculture content agreed upon by the partner organizations who included the Kenya Federation of Agricultural Producers (KENFAP), Jomo Kenyatta University of Agriculture and Technology, and Kenyatta University. The FVR project which ran for three years 2009 to 2012, was a unique approach to agricultural programming, it incorporated agriculture extension in the content delivering impact programming to the audience. Impact programming entailed programme repeats to ensure the audience got the message right for implementation by the listener.

1.2 Problem statement

The attainment of food security for all remains elusive in Kenya; this is reflected in a statement by the Agriculture Sector Development Support Program (ASDSP)

“Currently, over 10 million people in Kenya suffer from chronic food insecurity and poor nutrition, and between 2 and 4 million people require emergency food assistance at any given time. Nearly 30 per cent of Kenya’s children are classified as undernourished, and micronutrient deficiencies are widespread.” ASDSP (2011:2)

The report of 2011 by the Agriculture Sector Development Support Programme paints a grim picture of the performance of the agriculture sector in Kenya. Indeed the agriculture sector in the country has been on the downward trend and this is reflected in the National Agriculture Sector Policy; “ the growth rate of 3.5 per cent per annum in the 1980’s declined to about 1.3 per cent in the late 1990s and early 2000” NASEP (2012:2). This trend is mirrored in the drop of the maize crop considered to be the staple food whose production fell by 45 percent in 2013. The online Standard newspaper; 27 September, 2013 quoted the principal secretary admitting “that

the annual production had dropped from 3.6 to 2 metric tonnes which spelled doom to efforts of addressing food insecurity in the country recording a loss of 2 billion in value”. The declining productivity is aggravated by under-utilization of the land, “land remains under exploited for agricultural production. In the high and medium potential areas, only 31 per cent of the land is under crop production, which represents a mere 5 per cent of the total land in the country.” (Vision 2030:4)

Kenya’s population is estimated at 40 million (population census 2009) 75 per cent of which is reported to reside in the rural areas and is heavily dependent on agriculture for almost all their income. While the country’s economy is said to lean heavily on agriculture the great potential of the sector has not been exploited; the country produced only 1.3 tonnes per ha and that milk production had stagnated at 5 liters per cow for each day (ASDSP 2011).

The economy of the country is mainly dependent on agriculture and this is supported by the fact that the agricultural sector provides a livelihood for about “80 per cent of Kenya’s population and gives informal employment to more than 70% of the rural population” (NASEP 2012). According to PriceWaterCoopers “periods of high economic growth have been synonymous with increased agricultural growth.” The agricultural sector in Kenya is dominated by the small holder farmers who account for “75% of the total agricultural output and 70% of the marketed agricultural produce” (NASEP 2012).

The gap in the agriculture sector is synonymous with inadequate information to farmers on the uptake of effective farming methods. The improvement of the agriculture sector is dependent on agriculture extension which according to a research paper by Tegemeo Institute on Agriculture Extension in Kenya (2006:3) “ agriculture extension services provide farmers with important information, such as patterns in crop prices, new seeds varieties, management practices with respect to crop cultivation and marketing, and training in new technologies.....” the same paper however opines that “declining effectiveness of the extension service has been identified as a major factor hampering growth of Kenyan agriculture.”

Radio is the preferred medium in developing countries to pass information aimed at increased development as has been shown in audience surveys. The coverage of agriculture content on radio has not been adequate, a presentation of findings of a comparative study carried out in Kenya and Burkina Faso on the use of radio in communicating agricultural biotechnology by Dr. Oriare the principle investigator at the 46th session of OFAB confirmed the popularity of radio but also indicated that “agriculture biotechnology is not adequately covered by mass media in a way that could enable informed public debate and policy choices, demonstrated by inadequate treatment and placement of stories.” The lessons learnt from the study indicated that “There exists a significant demand among radio audiences for information about agricultural biotechnology, which is largely unmet despite the awareness of this demand by the majority of the broadcasters.”

Although it is acknowledged that radio is powerful the medium has to be scrutinized in totality. Myers (2009) states that “while there are some proven successes in terms of radio development to date there are still some question marks over radio’s impact. That systematic and reliable data on the radio sector is under developed or nonexistent”. Other scholars share this perspective that there are gaps that need to be addressed. “Lack of systematic methods to measure the impact of the programmes have on the population make evaluating their effectiveness difficult” (Girard, 1992:117). Radio stations find surveys on individual programmes expensive to undertake and rely more on the general quarterly surveys undertaken by Synovate, a research company.

1.3 Significance of the study

The findings of this study shall inform the radio producers of farming programmes on the impact of their programmes on farmers and better approaches to disseminating agriculture information. It is expected that this will assist them in packaging of agriculture content for radio. This would also provide the basis upon which to review programme production policies in terms of allocation of resources towards effective programmes that involve the other stake holders. The findings shall be a reference point for stakeholders and content providers of agriculture information to strengthen their partnerships with radio stations.

1.4 Justification of the study

This research was motivated by the lack of documented evidence on the impact of agriculture programmes on radio. Few surveys have been done to study the use of radio in communicating agriculture information. In addition, the researcher's experience working as a radio producer indicates that there is little research by radio stations on individual programmes. Broadcast media houses rarely undertake survey's on the impact of specific programmes they air. This is because there are many programmes aired and the stations find it very expensive to commission research on the impact of their programmes. In most cases the only programmes which may have such surveys are those that are funded by donors and the organizations have to account for the allocation of funds to projects.

The communication field is experiencing changes at a fast rate with the development of new technologies. It is therefore imperative that more research is done to capture the trends of using radio. This would assist radio personnel to come up with innovative programmes that respond to the information needs of their audiences.

1.5 Objectives of the study

Main objective:

The purpose of this study is to evaluate the impact of radio agricultural programmes on small scale farmers towards improving their agricultural practices.

Specific objectives

1. Assess the relevance of *Mali Shambani* agricultural programme to small scale farmers
2. Assess farmers satisfaction of *Mali Shambani* radio programme
3. Assess the implementation of learnt knowledge from *Mali Shambani* radio programme

4. Evaluate radio programme formats preferred by small scale farmers in acquiring knowledge

1.6 Research questions

1. How relevant are the issues addressed in the *Mali Shambani* radio programme to the information needs of small scale farmers?
2. How satisfied are the small scale farmers with the content featured in the *Mali Shambani* programme?
3. How useful is the agricultural content in the programme *Mali Shambani* in changing farming practices of small scale famers?
4. What are the preferred radio agricultural formats by small scale farmers?

1.7 Scope and limitation of study

The research project focuses on the impact of *Mali Shambani* agricultural programme on small scale farmers. The study was limited to listeners of *Mali shambani* programme on KBC Radio Taifa. 13 respondents were selected farmers in Tongaren Sub-county of Bungoma County in Western Kenya while 18 were selected from the feedback data base of the interactive progamme, programme participants; callers and those who send SMS from various parts of the country; Coast, Central, Rift Valley, and Nyanza in addition to western region. Tongaren sub-county was initially selected for this study because it is situated in the high productive agricultural region of Western Kenya. Tongaren is a settlement scheme whose agriculture base was established before independence compared to the other sub-counties in Bungoma.

KBC Radio Taifa the national station has increasingly lost audiences over the years due to stiff competition from private commercial stations. Listening trends have changed over the years Synovate (2014) while previous years continue to indicate growing preference for vernacular

stations. The Synovate firm conducted focus group discussions in 2010 commissioned by KBC on its four stations; Metro FM, Coro FM, English Service, and the Kiswahili station Idhaa ya Taifa. The study found out that while there were loyal listeners on the Swahili national station, there was a general feeling that the station was old fashioned and slow in adopting formats that attract audiences. This was evident when after visiting 37 farmers in Tongaren only 13 were found to listen to KBC Radio Taifa and the *Mali Shambani* programme.

The slow progress of getting a representative sample from Tongaren was the major challenge the researcher then made a decision to use the *Mali Shambani* feedback data base to include in the research sample. 18 listeners from the programme feedback data base were selected to make a sample population that is representative. These 18 respondents drawn from almost all regions of the country were selected from the database over a period of eight months; January to September 2014. The inclusion of respondents from the *Mali Shambani* feedback data base did not alter the findings of the study. Regardless of the changes made in the geographical area covered the results are valid.

1.8 DEFINITION OF KEY TERMS AND PHRASES

Content: specific audio material carried in any particular programme episode

Food security: a situation where all people at all times have access to sufficient, safe, nutritious food to maintain a healthy life

Small holder farmers: are farmers owning small-based plots of land on which they grow subsistence crops and one or two cash crops relying almost exclusively on family labour.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

This section will discuss the various theoretical underpinnings and conceptual frameworks; communication and mass communication connected to this study. The chapter presents literature reviews and describes relevant concepts that guide the assumptions of the research project. The section further examines media use in Kenya and radio approaches to communicating agriculture information to rural communities in developing countries.

2.1 Concepts

The significance of communication and communication tools in agriculture cannot be overemphasized. These are the concepts that aid the applied by the diffusion of agriculture innovations and allow sharing knowledge among actors in the agriculture sector. “Communication is the transmission of a message from a source to a receiver.....or the process of creating shared meaning” (Baran 20004:4). The definition of communication is presented differently by scholars depending on their orientation and perspectives. While sociologists see communications “as the mechanism through which human relations exist and develop”, psychologists define communication as "the process by which an individual (the communicator) transmits stimuli (usually verbal symbols) to modify the behaviour of the other individuals (communicates)" and this definition describes what many extension workers and change agents hope to achieve. Communication achieves different functions; it enables human beings to interact and share knowledge and is defined by the functions it achieves. Severin and Tankard (1980) highlight the different functions of communication; “sharing, influence, and any kind of response (with or without intent)”.

Mass communication is a scientific study “of mass media, the messages they generate, the audiences they attempt to reach and their effects on these audiences” Alexis Tan (1985:53). This definition of mass communication gives emphasis to the message and its effect on the audience. There is yet another dimension to communication; effect and effectiveness. According to Mcquail (1978:10), effect in this respect refers “to any of the consequences of mass media whether intended or not” while effectiveness refers “to the capacity to achieve given objectives

whether this be attracting large audiences or influencing opinions and behavior” Mass Communication has been given various definitions by different scholars who imply that it is the means of disseminating information or message to large, anonymous, and scattered heterogeneous receivers through the use of sophisticated equipment. “It is a process by which information originates from the source to the receiver, having been thoroughly filtered and transmitted through a channel” (Sambe 2005:29). Mass communication is further defined by the means through which the message is filtered, according to Kaye & Medoff (2005) “for a medium to be regarded as mass in communication it must have acquired fifty million adopters”. Radio, television, and the internet fit in this category because at any one time they reach millions of people. “What makes mass media distinct is that it is a process by which media technologies allow information and messages to simultaneously reach a large heterogeneous audience” Williams (2003:5).

The use of mass media is inclined towards development communication and the development media theory which advocates media support for the efforts of a government or an existing political regime to bring about national economic development. According to Moemeka (1996:5) “development communication is the application of the processes of communication to the development process. It is the use of principles and practices of exchange of ideas to development objectives”. The development theory is premised on the perception that the problems that assail developing countries are due to ignorance and that change can only occur through provision of information. “Development communication seeks to create an atmosphere for change as well as providing innovations through which society may change” (Kumar 2011). Moemeka further posits that “mass communication in the development approach accords the importance to self-development at the village and neighbourhood levels.....with this approach the mass media may be used to transmit information of a background nature to a group, village or community about their expressed needs and disseminate innovations that they may meet some needs.”

Of all mass communication mediums radio is more utilized for many reasons;

“Radio dominates the media output of religious media particularly due to the lower economic and regulatory entry barriers for owners that those of newspapers

or television. Moreover the focus on radio allows owners to expand the broadcast spectrum beyond the urban areas, avoid economic barriers to consumers posed by high priced newspaper or television subscriptions, and to address high illiteracy rates in the population.” AMDI (2006:31)

Radio’s unique characteristics; pervasive and penetrative, make it the preferred media channel and moreso the nature of its delivery, “talk” that is carried through all radio formats; features, drama, music, news, and documentaries among others appeal to the audience differently. Myers (2008:18) observes that radio content of a development nature “work better on radio than television because radio is better for communicating complex ideas and has added value of the listeners’ imaginations”. However radio programmes will attract large following from the audience if well produced, this will also depend on the content, format or style, and presentation. Myers (2008:19) further observes the challenges development content on radio faces; “African radio is, of course, the need to produce programmes on a tight budget, which means that potentially high-impact educational dramas - which require retaining dedicated teams of writers, actors, technicians, editors, vehicles, fuel-supplies etc. - are too expensive to produce locally and are therefore produced by separate production houses and funded by donor aid....” Myers (2008:20) further argues that “it is therefore no accident that the African airwaves are full of *live* studio-based programmes, i.e. news, DJ-led music shows, call-in programmes, and live studio discussions. This gives African radio a very 'fresh' sound, but it has its dangers in terms of broadcasting unconsidered opinion, myths and rumours, trivia and, at times, incitement to political or ethnic violence, when live discussions are badly managed”.

2.2 Theoretical frame work

This study draws on the agenda setting a media effects theory. Agenda setting has to do with media content but more than that McCombs and Shaw (Griffin, 2009:359) state that “mass media have the ability to transfer the salience of items on their news agendas to the public agenda”.

Another perspective from Miller (2005:271) is of the opinion that “agenda setting involves the consideration of three related agendas; the media agenda, the public agenda, and the policy agenda”, the author further quotes scholars of agenda setting (Zhu & Blood 1997) who stated that “agenda setting is a process whereby the news media lead the public in assigning relative

importance to various public issues”. Miller further states that the “media influences the public agenda by saying “*the issue is important*” in an overt way but by giving more space and time to that issue and by giving it more prominence and time”.

Griffin (2009:364) emphasizes media’s influence making reference to framing as discussed by other scholars and quotes from James Tankard who defines a media frame as “the central organizing idea for news content that supplies a context and suggests that the issue is through the use of *selection, emphasis, exclusion, and elaboration*”.

Baran and Davis (2009:279) draw on the work of the pioneers of agenda setting McCombs and Shaw “In choosing and displaying news, editors, newsroom staff, and broadcasters play an important part in shaping political reality. Readers learn not only about a given situation, but how much importance to attach to that issue from the amount of information in a news story and its position....The mass media may well determine the important issues-that is, the media may set the ‘agenda’ of the campaign”.

A report on a study on the use of radio in communicating agricultural biotechnology released in 2012 by ISAAA observed that;

“The media often frame agricultural biotechnology quite differently and diversity of coverage has been controversial as the information sources. Some media have emphasized the high risks and potential harm to humans and the environment while others have been the opposite. The more they do this the more the stakeholders espouse varied perceptions and opinions about agriculture biotechnology. The media shall set the agenda for whatever majority of stakeholders perceive of agricultural biotechnology in countries where the media frame it thus.....Indeed radio may set the agenda for agricultural biotechnology by giving it more time and space enabling certain stakeholders to enjoy greater access to such information than others”.

Radio formats are designed to reinforce messages in order to bring change among farmers to adopt new farming techniques for improved productivity. Radio producers do this through programme planning which informs the selection of topics, presentation of the topics on radio with interviews from selected experts and farmers. Farmer Voice Radio project (2012) impact programming formats are grounded in the agenda setting theory aimed at influencing farmers to adopt effective farming techniques. This position is confirmed by Farm Radio International “We are working with key research and development partners, enabling them to effectively use radio

in their knowledge-sharing efforts – and thus contribute to improved livelihoods on a large scale” (<http://www.farmradio.org/about-us/impact-programming/>).

The agenda setting theory has been challenged by scholars who are of the view that it does not always work, Griffin (2009:369) posits that “the media agenda affects the salience of some issues for some people some of the time” this is perhaps what informed McCombs in 1994 when he suggested that ‘*agenda setting is a theory of limited media effects*’”. The ISAAA report (2012) opines that the agenda setting theory “ignores the influence of social networksThese social networks provide various benefits to farmers such as identification, social rewards, social protection, prestige, belonging, among others....all these social networks and agencies may influence farmers by setting and even imposing their various agendas.”

2.3 Media in Kenya

Media in Kenya has evolved over the years since the coming of the white settlers through the colonial period, post colonial period that was a dominance of single rule to a multi party democratized nation. “The modern media in Africa, as we know them today, were a creation of European missionaries, immigrants and the colonial administrations as the chief actors. They were responsible for the introduction of the printing press in many countries in Africa and in many other parts of the Third World, from which the present Media Systems in Africa” Ochilo (1993:21). Mass media in Kenya dates back to the pre colonial period with print being the first entrant in the 1890s closely followed by radio in the late 1920 and later television in the 1950s. Media in the pre-colonial period was characterized by marginalization of the Africans only to serve the white settlers as Mbeke (2008) asserts that the authoritarian colonial government’s dominant perception of the Press was always that of an unnecessary evil that deserved close supervision and control. According to Ochilo (1993: 24) Asians later ventured into the business of ownership of some sections of the media with the aim of using the media to legitimize their second place to the whites in Kenya. The Africans on the other hand, ventured into the media ownership later basically to use the media as tools for putting across their demands for freedom, justice and equality.

When it was evident that independence was inevitable the colonialist government established the “Kenya Broadcasting Corporation (KBC) in 1959 with the objective of providing both radio and television broadcasting and by the end of 1962 a transmission station and recording studio had been set up, and television was officially launched the following year” (OSIEA 2011:10). After independence in 1963, similar patterns of media ownership and development continued as they were under the colonial rule Ochilo (1993:21). The factors that shaped the development of media during the Kenyatta era were largely driven by the ideology of order, the push for development, political contention, and ideological issues surrounding media ownership Mbeke (2008).

These governments had full control of the electronic media run under the Ministry of Information and Broadcasting headed by a Minister appointed by the President. Its other departments were The Kenya Broadcasting Corporation and the Kenya News Agency. “Currently, the ruling party also owns and runs a party Daily Newspaper, the *Kenya Times* and a television station. Their overall objective is to inform, educate, entertain and to propagate all that consolidates ‘national unity, peace and stability’ in Kenya” Ochilo (1993:24).

Since the pre-colonial and the post colonial period the media in Kenya have metamorphosed to the vibrant sector it is today, from the colonial period that excluded the Africans, to the monolithic and controlling authoritarian African governments, and later on a liberalized albeit homogeneous media ownership . The struggle for democracy in the early 1990s brought major economic changes in Kenya leading to the liberalization during this time led to the proliferation of independent newspapers and magazines such as Economic Review and Finance (Mshindi, 2008). In addition broadcast media grew in number ending the monopoly of KBC the sole owner of radio and TV. In 2009 Synovate surveys indicated the number of licensed radio stations were 160 with over 10 TV stations.

Kenya has four major types of media; television, radio, newspapers and internet. Given the literacy levels and resources, Kenyan print media readership is relatively small; approximately 37 percent of Kenyans surveyed said they had not read a newspaper in more than a year (Bowen, 2010). Readership trends are higher in more urban areas. A survey by Media Council of Kenya in 2012 of 3000 respondents revealed that 85% of respondents used radio, followed by television

at 83%, newspapers at 68% and Internet and mobile phones at 42% and 41% respectively. This study shows that radio is more popular followed by TV, according to the audience research company Synovate, every quarter newspapers lose one percent of their readership, who are migrating either to radios or are receiving content in other ways (likely the internet and SMS breaking-news alerts issued by the same newspapers).

According to Bowen (2010) nearly all Kenyans are radio listeners and use the radio as a source of news and information rather than for mere entertainment. A recent survey found 89 percent of Kenyan adults get their news and information via radio at least once a week, and many of the listeners report trusting the broadcasts that they choose to listen to

2.4 Communicating agriculture information through radio

The aspect of communication is critical to sharing of agriculture innovations among actors, “in the more than fifty years of radio broadcasting, the farm forum is perhaps the best known type of rural broadcasting” Dikshit et al (1979). In their compilation of a publication for UNESCO about rural radio, they provide a glimpse into the history of agriculture programming on radio in the world. The potential of radio in development was apparent from its inception in the 1920s in Africa when mass media were viewed as tools of power with which authoritarian governments would use to mobilize communities to rally communities around the development agenda. “For farming communities living on the periphery of information technologies and societies, radio is the only window to global reality” (AFRI 2008:66). Mapusteni (2006) in his study on the Use of Radio in Zimbabwe is of the view that “what motivated the use of radio as a pedagogic and educational tool were its perceived strengths”. The strengths of radio as realized by the users have been enumerated by other scholars;

“It is based in oral tradition, it appeals to and relies on the imagination of the listener, it can cross time and space without limit, it can go places and evoke images that are impossible in real life, and it is a personal medium (in being a companion that) can reach millions of listeners at once with the power to speak to each one of the individually, (It can easily intrude into a person’s schedule and private life with little or no interruption)”. Fossard (1996:7)

The statements advanced by scholars in favour of radio build a case for the relevance of radio use in development. Weaknesses are however observed, according to Girard (2001:116) “efficiency of rural radio is often limited by its structure and lack of peasant involvement in determining its programming. Programmes are often broadcast on a single radio network that sometimes does not reach the entire country”. The medium’s strengths however far outweigh the limitations placing it way above any other mass media in developing countries, “in the developing countries, radio is the powerful and effective medium to project the information and knowledge related to agriculture (Nakabugu, 2001). In yet another publication Nakabugu (2010) observes:

“Information on better farming methods, improved seeds, timely planting, agro-forestry, better harvesting methods, soil conservation, marketing, post-harvest handling and diversification. Rural radio gives farmers an opportunity to interact with each other and other relevant authorities e.g. extension workers, crop and animal experts through format like live talk shows, phone in programs, and on location broadcasts. Since Rural radio is community based, it can be used to mobilize people towards community development work as construction of valley dams, protected wells and immunization of animals”.

The significance of media in development is undeniably critical, according to Ansah (1992), the role of the media has been enhanced by the current realization that the old paradigms of development that tended to equate development with modernization are wanting. This approach was characterized by the "diffusion of innovations" and the "extension" of knowledge and service from the change agents to the people. “In this context the role of communication was to transfer knowledge or technological innovations from change agents to recipients and thus create a climate for an appetite for change among the people striving towards development” Ochilo (1993:26), the writer however criticises this approach “as being found to be elitist, top-down and paternalistic to the extent that it excluded people from participating in the planning and the implementation of desired development programmes”. Such criticisms have led to the realization incorporating communication in national programs. This has led to efforts by governments and institutions to design communication models aimed at bridging this gap in some developing countries.

Moemeka (1980) gives examples of countries that used radio for raising the intellectual and living standard of rural communities, Tanzania and Colombia. Tanzania's educational project was periodic centred on national radio station and broadcast messages to numerous listening groups centred around the country. Columbia on the other hand removed physical distance by decentralization, setting up stations in rural areas. The use of ICTs in agriculture extension stems from the realization that although effective, extension is expensive and cannot reach the desired number of within the required period. According to Bell, Payne and Bohn (2011), the functions of extension are to "link farmers to markets; raise general awareness of opportunities; provide technical information, demonstrate or train; diagnose problems and recommend solutions; respond to follow-up questions raised by clients; provide mass advisories; facilitate access to credit and inputs; assist with business planning; and conduct surveys, monitoring and evaluation, and enumerations. Those functions require different ICT strategies and options". Vignare (2013) makes a case for the integration of extension services with ICTs, he states that;

"Broadcast technologies are very useful for extension strategies. Broadcast tools generally have limited audience participation, but many radio programs targeted to farmers often include questions and answers through call-in. Still, there is less audience participation than would occur with one-to-one mobile or even well-designed Internet training or DVD/CD training. Coupling broadcast tools with interaction can enhance the impact. Broadcast is aimed at serving large groups of people through radio, television or production of video. Digital video could be used today on site for small trainings through television, through video players and online, often through satellite feeds (on a monitor or projected on a screen)".

According to AFRRRI (2008) there are three types of rural radio; public, private/commercial and all of them are faced with different challenges for both radio frequency allocations and funding, with a majority of resources in the hands of public radio stations. Resource challenges of rural radio led to partnerships with international organizations that support programming. Since 1979, Farm Radio International (formerly known as Developing Countries Farm Radio Network) has been supporting radio broadcasters in Africa by providing free information on agriculture and food security specifically for small-holder farmers. The organization has recently expanded to include additional supports such as a weekly news service for African broadcasters and an annual script-writing competition with broadcasting equipment as prizes.

2.4.1 Farm Radio International

FRI is a Canadian-based, not-for-profit organization working in direct partnership with approximately 400 radio broadcasters in 38 African countries to fight poverty and food insecurity. Its mission is to support broadcasters in developing countries to strengthen small-scale farming and rural communities. FRI was established over 35 years ago in response to the fact that farm radio broadcasts in the global South did not, for the most part, serve small-scale farmers. Rather, they were geared toward large-scale commercial farmers – an audience with very different needs from the largely subsistence farmers that make up the large majority of the population of these regions. By producing and sharing radio scripts, a weekly news and information service, and other valuable resources with radio broadcasters, FRI increases the relevance, quality and quantity of farm-radio programming of partner stations that, collectively, serve some 220 million small-scale farmers in Africa (FRI, 2007).

FRI later started the Africa Farm Radio Research Initiative (AFRRI) aimed at investigating the effectiveness of radio in addressing the food security and agricultural goals of resource-poor farmers in five African countries: Ghana, Malawi, Mali, Tanzania and Uganda (Commonwealth 2012). AFRRI developed the use of Participatory Radio Campaigns (PRC) to gather, implement, evaluate and share best practices for using radio-based communication strategies to enhance food security in rural Africa. It was pioneered in Malawi, starting in 2007 with the inception of AFRRI-I project, funded by the Bill and Melinda Gates Foundation (BMGF) and implemented by Farm Radio International (FRI) (MEAS case study #8 2014). Participatory Radio Campaigns (PRCs) developed by Farm Radio International as a way to help farmers learn about, evaluate, and introduce new agricultural practices that they are interested in trying. With training and facilitation support from Farm Radio International, selected radio stations work closely with farmers and farmer organizations, agricultural extension and advisory services, researchers and others to carefully plan and deliver a four-six month radio campaign (www.farmradio.org).

Agriculture programming has evolved bringing different models into play; organisations at the centre of communicating agriculture innovations endeavour to develop new models which emphasize interaction;

The Farm Radio Trust (FRT) evolved out of the African Farm Radio Research Initiative (AFRR-I); it grew and developed through the Farmer Voice Radio (FVR) and African Farm Radio Results Initiative-II (AFRR-II) projects. The purpose of the FVR project was to develop an alternative approach to agricultural extension and advisory services using radio. The FVR model used radio to extend the reach of traditional extension services by harnessing the voices and experience of farmers, as well as local experts. These were developed into radio programming to provide effective technology-assisted learning for smallholder farmers (AIR, 2009) (MEAS case study # 8 2014).

2.4.2 Farmer voice radio

The FVR project was implemented in Kenya and Malawi in 2009 for three years and later expanded to Uganda and Tanzania. FVR was funded by Bill and Melinda Gates Foundation and led by the American Institutes for Research (AIR). The project was initiated to address the challenge of communicating agriculture information to small scale farmers due to inadequate agricultural extension services that “are capacity-constrained and insufficient”. The implementers acknowledged the strengths of “radio and related technologies offer a powerful, cost-effective alternative for delivering agricultural information” but also aware of the limitations particularly of radio agriculture programmes. Agriculture programming continued to air old formats of long discussions with experts with little involvement of key stakeholders; farmers especially women farmers, community stakeholders, and excluded the youth. The programmes were haphazardly planned solely by producers and therefore lacked a systematic agenda.

FVR sought to mitigate these challenges, by providing sustainable agricultural extension services through radio and complementary technologies. This was also through building partnerships and networks between agriculture institutions and experts and radio production teams, for sustainable content provision and assist in programme planning. FVR project further augmented the stations capacity to involve farmers at all stages of programme planning, develop innovative agricultural radio formats that appeal to farmers, integrate gender in agriculture programming. This included another important aspect; a research desk – a feedback system to monitor farmer responses in all participating radio stations. At the end of the project in 2012 among noted achievements was that cooperating radio stations had committed more than 6,900 hours per year of free airtime, while

agencies in all four countries (governmental or farmer associations) have assigned 87 extension officers to work with FVR at no cost. (<http://www.farmervoice.org/content/solution>)

This chapter has attempted to discuss concepts related to the study; communication, mass communication and the processes involved. It has discussed agenda setting theory as applied in agriculture radio formats pursued by programme makers in the fast changing media trends. The developments in media and mass communication and established the use of radio in communicating agriculture information to rural farming communities.

CHAPTER 3: METHODOLOGY

This chapter provides a description of the procedure the researcher used in conducting the study. It explains the geographical area covered by the study, the research design, the population and sample size collected and the procedure applied. It explains the research tools used to collect the data, including methods implemented to maintain validity and reliability of the instruments.

3.1 Research method

This study applied survey research method to establish the agriculture information seeking trends of small scale farmers who listen to *Mali Shambani* programme on KBC Radio Taifa and its impact to their farming activities. Wiseman and Aron (1970:37) define the survey research as “a method for collecting and analyzing social data via highly structured and often very detailed interview or questionnaire in order to obtain information from large numbers of respondents presumed to be representative of a specific population”. While Severin and Tankard (2001:35) state that “survey research is the study of a portion or sample of a specific population (e.g magazine subscribers, newspaper readers, television viewers, people of a community or state, etc)”.

3.2 Population sample

The study used quantitative and qualitative methods of data collection, the researcher focused on three areas for the collection to primary data; farmers who are listeners of the *Mali Shambani* programme, agriculture experts (extension officers), and the radio production team of the programme.

The research sample consisted of 31 farmer respondents who are listeners of *Mali Shambani* programme broadcast on KBC Radio Taifa selected purposively. 13 from Tongaren Sub-county and 18 selected from the feedback data base of the agriculture programme under study. Initially the researcher had selected Tongaren sub-county situated in Bungoma County one of the fertile regions of Kenya with an agricultural land potential is estimated at 183,800 ha, the county has a combination of good soils, adequate amount of rainfall which is well distributed during the growing season makes it suitable for a variety of small scale farming enterprises (ACT 2011).

Tongaren sub-county is one of the county's highly productive areas because it had an early start in agriculture as a settlement scheme in pre and post independence.

The researcher initially conducted interviews with individual farmers in Tongaren. 37 questionnaires were distributed to a representative sample from Tongaren Sub-county with the assistance of an extension officer from the ministry of agriculture. It was however found out that out of the 37 respondents only 13 listened to KBC Radio Taifa and *Mali Shambani* programme and if the exercise was to continue it would have required more resources, time and money. A decision was taken to use the *Mali Shambani* feedback data base; the list of listeners who call and send SMSs to the programme to enable primary data collection from the actual listeners of *Mali Shambani*. Data from the 13 respondents who had been interviewed from Tongaren were retained and the researcher then carried out telephone interviews with the additional 18 respondents selected from the programme's feedback data base. The list of respondents drawn from the feedback data base of the interactive show *Mali Shambani* was taken from a period spread over nine months from January to September 2014, these respondents are from various parts of the country; Western, Central, Rift Valley, Nyanza, and Coast.

3.3 Sampling technique and instruments

The researcher used purposive sampling method to draw a representative population of Bungoma sub-county and also used the feedback data base of the *Mali Shambani* programme, this is the list of listeners who participate in the interactive show by calling and sending SMSs. The purposive sample "is a technique that allows the researcher to use cases that have the required information with respect to the objectives of his or her study" Mugenda and Mugenda (2003:50). Purposive sampling enabled the researcher to select respondents who are listeners of *Mali Shambani* on KBC Radio Taifa.

The researcher used a mixed approach to obtain primary data, the use of structured and unstructured questionnaires. According to Mugenda and Mugenda (2003: 71) in a structured questionnaire "each item in the questionnaire is developed to address a specific objective, research question or hypothesis of the study". The researcher developed an interview guide

which was used to conduct key informant interviews with the producers of *Mali Shambani* programme. The researcher also conducted key informant interviews with five agriculture extension officers.

3.4 Data analysis

The study employed a descriptive survey and according to Berger (2001:188) “descriptive survey describes the population being studied”. These surveys seek to obtain information about demographic factors such as age, gender, marital status, occupation, etc and relate this information to opinions, beliefs, values, and behaviours of people or research population. Broadcaster for instance use survey research to find out how popular their programmes are.....the focus of descriptive surveys is on present day behavior of people”.

CHAPTER 4: DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents the results of the study after exploring respondents' reactions to questions regarding the impact of radio agricultural programming. It provides data analysis and interpretation of results on respondents' reaction to the relevance of agricultural content broadcast on radio, and its influence in changing farming practices. The researcher used triangulation a method that combines both quantitative and qualitative data to achieve the objectives of the study. The data collection methods were varied; the researcher used structured questionnaires, in-depth interviews with key informants and focus group discussions. Selected quotes from the respondents involved in the study are also presented. Data from farmers was gathered using structured questionnaire, while agriculture experts and radio producers were interviewed using a questionnaire guide.

4.2 Background information on respondents

The study focused on three categories of respondents; farmers, the programme *Mali Shambani*, and agriculture experts (extension officers).

The research sample was composed of 31 farmer respondents, the initial respondents were drawn from Tongaren sub-county of Bungoma district through purposive sampling; ensuring they are farmers and were indeed listeners of KBC Radio Taifa and listeners of the agricultural programme "*Mali Shambani*". 37 questionnaires were distributed to respondents in Tongareni Bungoma County, however only 13 were listeners of the station and indeed the radio programme under study "*Mali Shambani*". A decision was taken to select the other 18 from the data base of listeners who participate in the "*Mali Shambani*" by calling in and sending SMSs. The list of respondents drawn from interactive show in the "*Mali Shambani*" programme is taken from a data base of a period spread over nine months from January to September 2014, these respondents are from various parts of the country; Western, Central, Rift Valley, Nyanza, and Coast. Three respondents were selected randomly from each of the nine months bringing the total to 18 bringing the total of respondent to 31.

Out of the 31 respondents, 27 were male (87%) while 4 (13%) were female as illustrated in figure below.

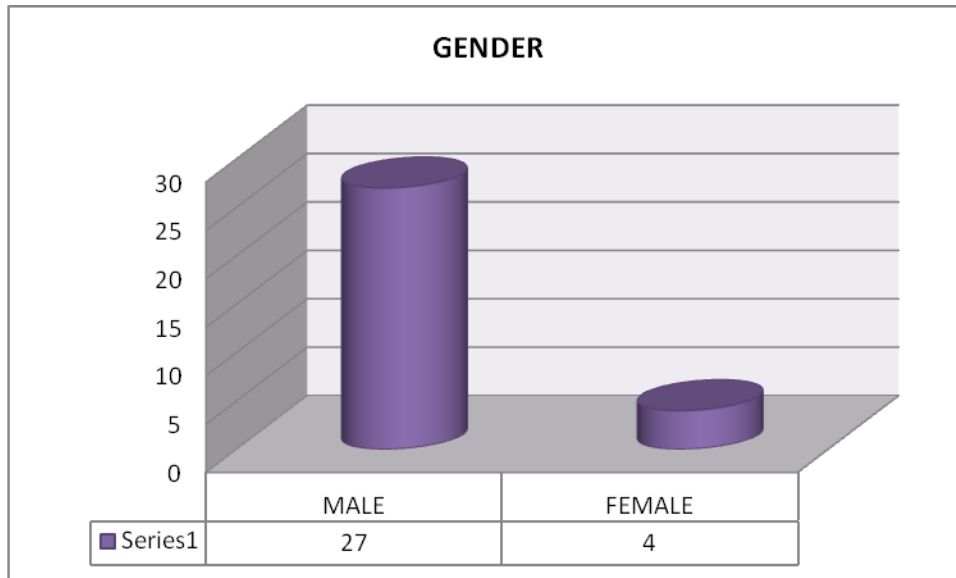


Figure i

The number of males is much higher than that of females, this is characteristic of the cultural predisposition of communities in Kenya where land is predominantly owned by men, and also confirms that the participants of interactive shows are mostly men. The age of respondents in the study ranges from 16 to 52 years and above. Those aged between 16 and 20 accounted for 3%, 25-33 at 17%, 34-42 14%, 43-51 28%, and those over 52 years at 38%. The results explain the age bracket of farmers in Kenya over 43 years.

These findings also give the audience profile of KBC Radio Taifa to be older; listeners aged 43 to 55 years at 66%, the results are consistent with the Synovate surveys (2014) that show the KBC station has a predominant listenership of people aged over 45 years old. The findings also show fewer women participants the results reflect the issue of land ownership where most farm land is owned by men. This is depicted in fig. 1 below

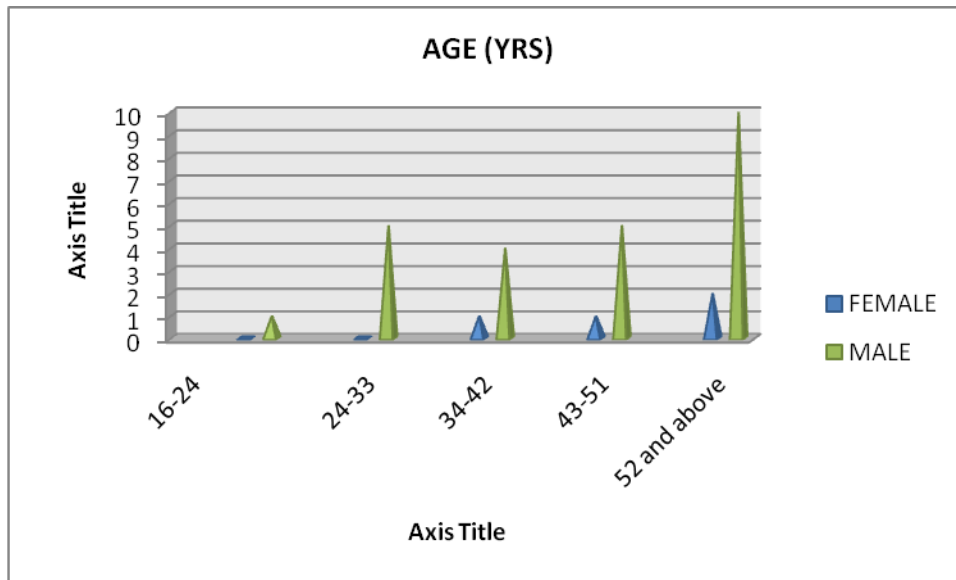


Figure ii

4.2.1 Education level

All respondents were literate the number of those having attended secondary being the highest, 14 respondents 45%, and primary recorded the least number at 16% with 5 respondents. 12 out of 31 respondents had college certificates at 39%. This is indicative of the rising literacy levels in Kenya that reflects the consequences of free primary education however many people are not able to go beyond secondary education. However the findings show low literacy levels among women compared to men as illustrated in the figure below.

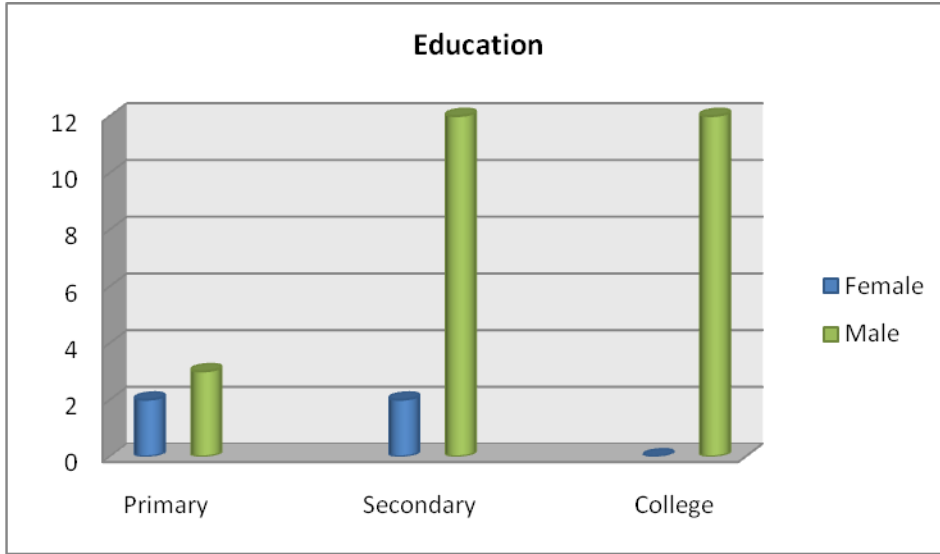


Figure iii

4.2.2 Land ownership

The size of land owned by the respondents interviewed was 10 acres and below, the majority of the respondents; 50% own between one quarter and two acres of land followed by 38% who own between two and ahalf acres to five acresand only 10% own between 8 to ten acres of land. The figure below illustrates the acreage owned by the respondents;

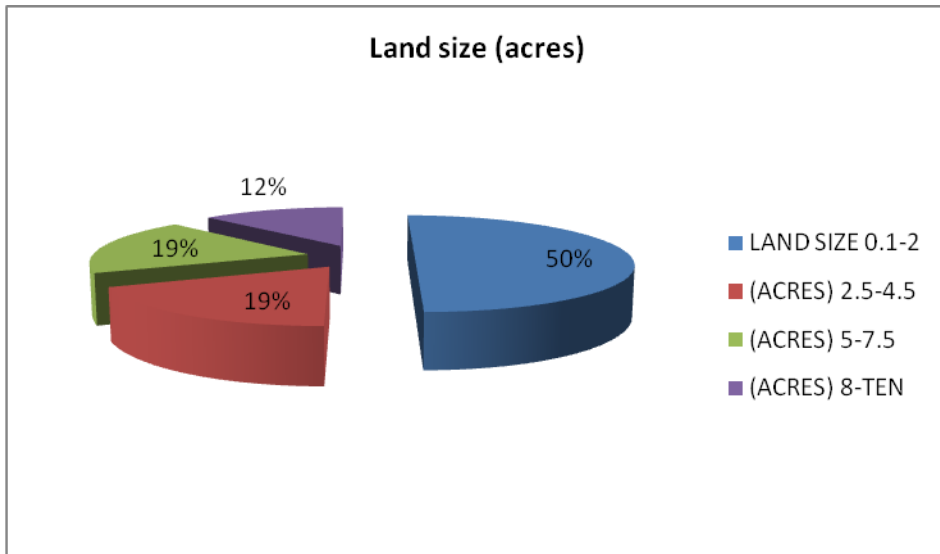


Figure iv

69% of the respondents own less than five acres of land and they are generally engaged in crop production and livestock farming and mostly subsistence farming.

4.2.3 Media use

The study compared the respondents' utilization of four types of media; radio, television, newspapers, and the internet. The results revealed that 58% respondents listen to radio very much more often compared to the other forms of media. The daily usage of TV stood at 18%, while the newspapers at 22% and internet access at 1%.

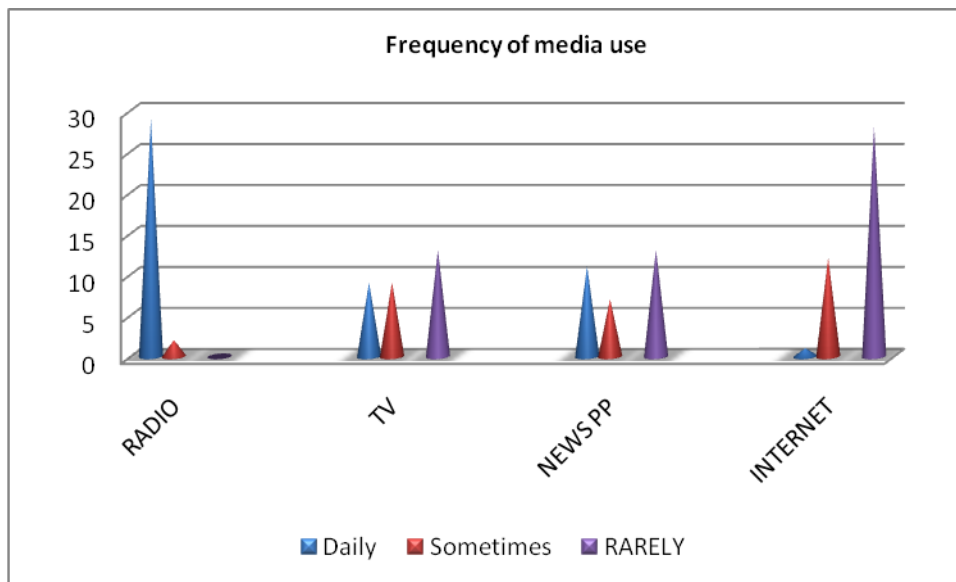


Figure v

The results show that the radio is the most popular media channel and easy to access now especially because of technological advancement, they can tune in to the radio on their telephones. The few times respondents reported not being able to listen to radio daily is because of the lack of batteries or loss of electricity. The internet is least utilized because most of the country is yet to have the required infrastructure to enable access although very few of the respondents pointed out that they are able to read the newspaper by accessing it on their smart phones. The number of respondents who read newspapers mirrors the literacy levels of farmers in the country that has continued to grow over the years.

The reasons given by the respondents for the need to access media in the results shown were, for entertainment, news, and educative information.

4.2 How relevant is “Mali Shambani” to small scale farmers?

All farmer respondents said the programme featured topics that are relevant to their agricultural activities. 24 out of 31 farmer respondents indicated they participate in the programme through calling and sending SMSs. The farmers said that the “Mali Shambani” programme content focuses on farming practices they engage in and in addition new farming techniques they are likely to practice. The programme according to them offered specific subjects of interest such as; where to get farm inputs, certified seed, pest control among others

25 respondents indicated listening to the programme often as compared to 6 who said they could only listen to the programme sometimes, that is 81% compared to 19% respectively. Most respondents were able to remember when they last listened to the programme by date within the month of August and September 2014 while others could only recall by the topics that made an impression on them. Those unable to listen often indicated the lack of batteries and power while some said they were attending to other duties.

“I have been listening to “Mali Shambani for five years and the last time I listened was this week on 22nd September, 2014 when the programme discussed honey production”. An 80 year old farmer from Kitui County, Mwingi Sub-county.

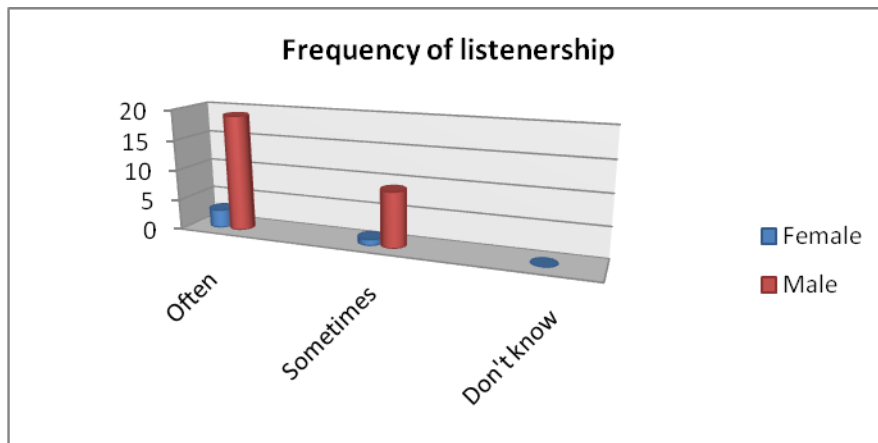


Figure vi

Agricultural extension experts interviewed said agricultural programmes provided relevant information to farmers especially when they were well researched and invited experts from the agricultural sector.

“Agriculture programmes on radio are important because they help bridge the agricultural information-gap which faces small scale farmers”. Martin Njeru, livestock expert.

The experts also said that the programmes they participated in enabled them to reach many farmers in a very short time. A listener from Nandi County, Aldai sub-county who participate in “*Mali Shambani*” programme happened to be an extension officer who listened to an episode on the lethal maize necrosis a viral disease that decimated maize plantations said of a programme he listened to in August 2014:

“I am a livestock officer and the experts were talking about a new disease that affects maize. I got to understand that the affected maize can still be used as livestock feed”

The production team that produces “*Mali Shambani*” said they try to ensure relevance the of programme content by seeking guidance from agriculture experts. They involve agriculture officers when they plan the programme schedule. This was initially done and facilitated by the programme funders in meetings with content providers and later on the production team would liaise with the officers on phone. In 2009 the programme production benefited from a project called Faver Voice Radio (FVR) in which KBC was a key partner in providing airtime to broadcast agriculture programmes. The production teams and the experts would hold joint programme planning meetings, and using the farming calendar the teams would develop programme plans of topics for a period of thirteen weeks or 13 programmes (one quarter) that would be of interest to the farmers. The “*Mali Shambani*” production team would also take suggestions from listeners assumed to be farmers on the kind of topics they wished to listen to.

“At the beginning of the year in January for instance we schedule topics on land preparation and farm inputs to prepare the farmers for the planting season. Such a programme would advise tillage issues, soil testing and proper use of fertilizers, and acquisition of proper seed for higher yields”. Geoffery Onditi, one of the producers.

The production team however added that the programme plans are not usually consistent in their planning with experts because after the FVR project came to an end they were unable to facilitate the meetings with the experts and now rely more on the individual experts who are not consistent. And most of the time they make decisions on a weekly basis depending on the availability of experts in a given agriculture discipline or sector.

4.3 How satisfied are small scale farmers with the content aired in the programme “Mali Shambani”?

The fig below shows levels of the audience satisfaction to the “Mali Shambani” programme content aired.

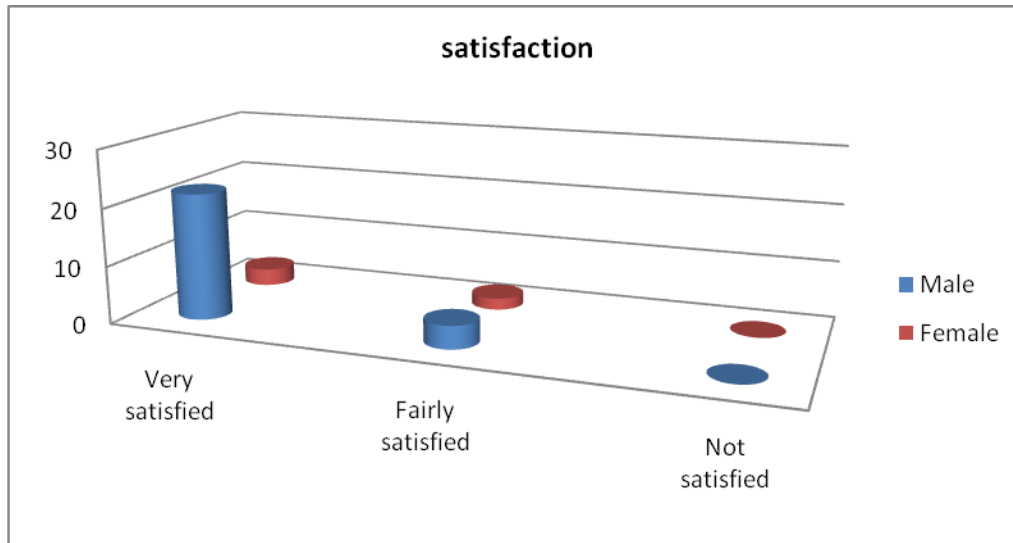


Figure vii

All the farmer respondents who were interviewed said they were satisfied with “Mali Shambani” programme.

4.3.1 Reasons for programme satisfaction

The researcher sought to know why the respondents found the programme satisfactory, 52% said the programme content was educative, 39% said it was informative, while 9% said the programme content provided credible information from agricultural experts from diverse areas to discuss the relevant agriculture topics. The respondents felt there was no way KBC the national

station would invite experts who are not credible; “KBC cannot invite experts who are not believable” one farmer, a caller to the programme from Bungoma said while another said;

“I listen and get answers instantly. The programme also invites very credible experts. They are simply great”.

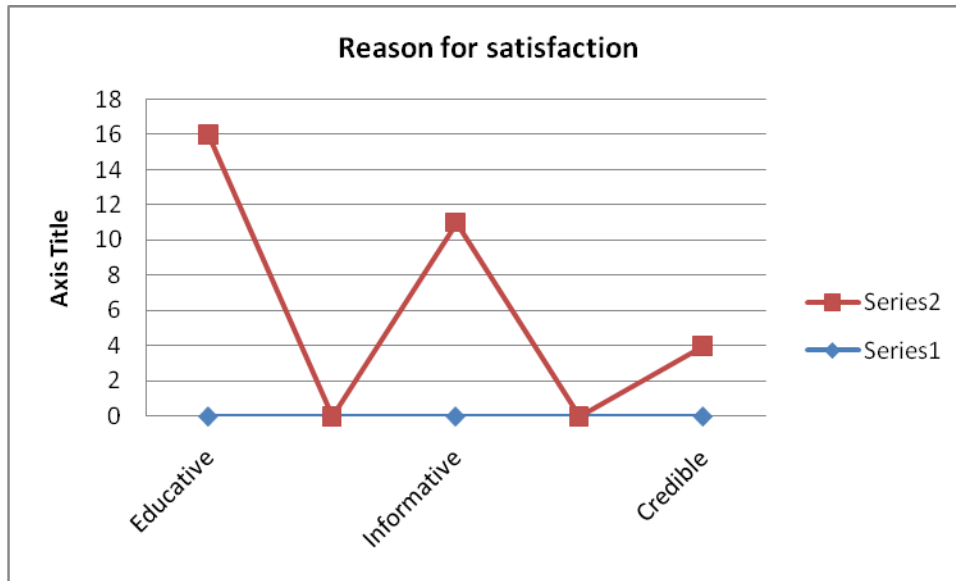


Figure viii

Several other reasons were given by respondents for finding the programme content satisfying; they said that the programme was well researched and that it offers a platform to interact with experts;

“I asked a question about inputs and I was answered to get certified seed and other farm inputs” a lady farmer from Kakamega County.

They said that the experts invited to the programme were clear and knowledgeable about the subjects they discussed and as such the programme offered learning about new farming techniques as one of the farmers said;

“I get information on silk farming, poultry rearing, and farming as an enterprise”.

Agriculture extension experts interviewed said some of their farmers who listened to “*Mali Shambani*” made follow up visits to their offices to get more information about issues of interest that had been featured in the programme.

The radio production team said the programme was designed to be enjoyable even as it discussed technical farming issues, the programme format is a magazine programme. The programme format allows for diversity of issues so that people with different interests would find something that concerns their activities. The magazine programme includes various segments; introduction narrative of topic of the week, Agriculture news and agriculture commodity , discussion with agriculture experts on the subject of the week, interview with a role model farmer, new production techniques, Agri-business tips, and interactive phone-in session with experts.

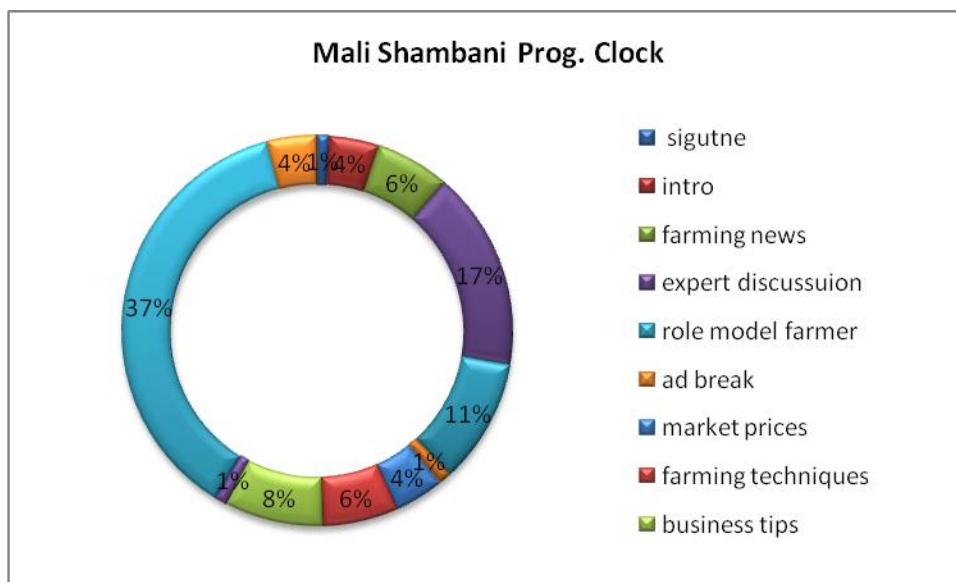


Figure ix

However the programme order is not consistent because of the shortage of resources to facilitate them to go out to the field to interview farmers and other stakeholders to complete the segments. The production team said most of the time they invited the experts to the live show for discussion and responses to the listeners during the interactive session. This according to them was much easier and cheaper to keep a programme on air weekly. This is the reason some farmer

respondents said that they found the programme too technical when it only featured the agriculture experts.

4.4 How useful is the information in the agriculture programme to the implementation of learnt knowledge by small scale farmers?

18 respondents (63%) out of 31 said they acted on the information gained from the programme content while 13 (37%) did not indicate having used the information in although some of them showed interest in implementing the information they had heard in the programme.

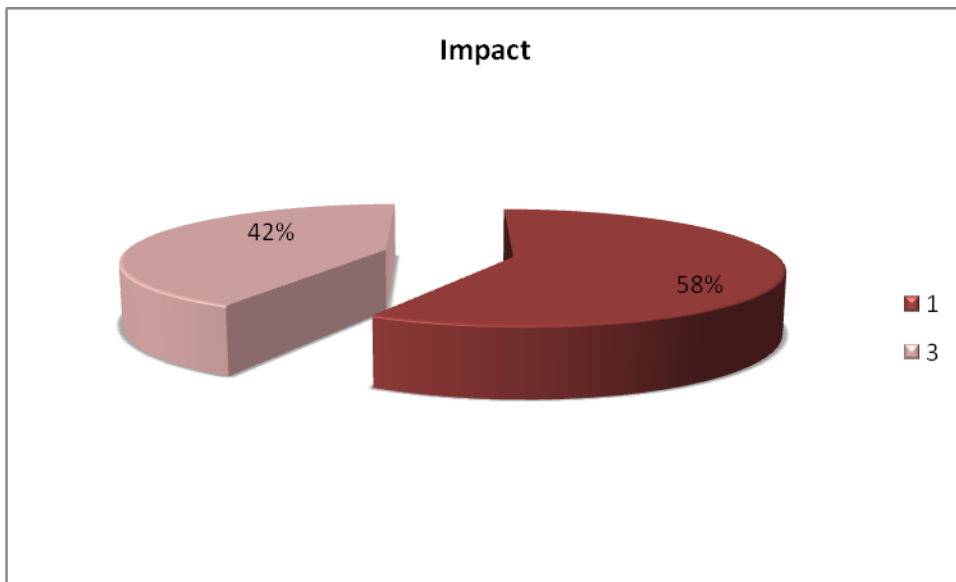


Figure x

A 22 year old respondent from Siaya county Alego Usonga sub-county said;

“I am planning to start poultry production. The programme for example gave me new ideas about rearing indigenous chicken called KARI Kienyeji. I am 22 years old and the programme has motivated me to engage more and more in agriculture”.

A farmer from Nyandarua county, Kipipiri sub-county, Gerald Mwangi said the programme has helped him to plan and reduce on costs; he was able to learn how to make compost manure for his farm. Gibson Ngala from coast region in Kilifi County, Rabai who is a farmer and also

employed as a teacher says he listened to an episode on pawpaw production and implemented the techniques on his farm successfully. While a listener from Kisii county said;

“The programme has been helpful in terms of improving my dairy feeds. My cows now have enough and quality feeds. I have also started poultry farming after listening to the programme on KBC Radio Taifa through Mali Shambani.”

13 respondents had not indicated having acted on the information; some however attributed this failure to implement on inadequate resources particularly capital to expand their farming activities. A respondent from Kitui county Mwingi sub-county who currently owns two acres of land said;

“I plan to buy more land near the river to grow mangoes and passion fruit by irrigation as well as start honey production using modern techniques, I currently own only one traditional bee hive.”

Respondents also indicated that they share the information from the programme with their farmers groups, one female respondent said she shares the information with her father owns two acres of land in Western and is in the ECA Fund adding that;

“The information is helpful especially in encouraging farmers to diversify their crops to avoid over reliance on maize and beans which usually leads to food shortage in my county of Kakamega”.

An agriculture expert who had participated in the live Mali Shambani show said;

“First of all the number of farmers calling into the show was immense. Secondly, in a span of five minutes after the show I received over 100 caller attempts on my cell phone from farmers who had heard me on radio. Thirdly over the next two weeks after the show I received over 500 phone calls and messages from small scale poultry farmers all over Kenya”. Martin Njeru, rearing livestock expert.

The phone calls Mr. Njeru received were of listeners requesting information on such issues as what are the proper feeds for chickens of various ages, diseases and treatment of the chickens, where to get proper drugs, and issues of marketing; requests on where to get chick for rearing, and possible markets for chicken products.

Individual farmers pick important information immediately and are able to benefit on the spot. Some farmers who cannot access information through the modern technologies like internet and

cannot read papers or agricultural literature are able to get information and adopt new technologies. The radio also enables them to access markets for their produce and there by improve their economic base through commodity prices and market information given on radio on such programmes like “*Soko Hewani*” on West FM in Western Kenya and “*Mugambo wa Mulimi*” on Inooro FM in Central.

The production team shared that some listeners came to the KBC gate to make inquiries about certain farming topics that they wanted to implement. They have had listeners coming to inquire about ‘Spirulina’, mushroom farming, and arrow root farming. Meetings with some farmers whose interviews they aired in the programme said they had their neighbours visiting them to inquire on the practices they had discussed on radio.

Apart from the farmers the radio production team found the programme content beneficial for their own use. All the producers of the programme come from a farming background and have families practicing agriculture, their encounter with various farmers they said shows that agriculture is a lucrative activity and being at the centre of such information feel challenged to use it personally:

“Our colleagues in Pwani FM got information about conservation agriculture which they practiced, one of them had their father donate land to the team and the grew maize in Zai Pits at the Coast. And I myself intends to hire a plot in Ruai to do greenhouse farming” one of the producers said”.

4.5 What are the preferred programme formats by farmers in acquiring knowledge

The respondent farmers liked the fact that the programme invites experts who are credible, they also like the live interactive show because they are able to get instant answers to their questions. They prefer programming that engages farmers because they are able to identify with them at their level, “having experts only on the programme makes it too technical” one of the farmers said they want a programme that interacts with farmers at their level in the field as well as during agriculture events. A listener (farmer) from Nakuru County, Rongai Sub-county said;

“The programme should include voices of farmers more and more as compared to what they are doing now. More field visits would be good. Mali Shambani should avail itself at agricultural shows to popularize it more and more”

The agriculture experts are mainly extension officers who serve between 500 and 5,000 farmers within their jurisdiction. They said that the most commonly used method to communicate agriculture information is through farm visits, farmers field days, trainings and on-farm demonstrations, as well as through the mobile telephone. The radio as a communication channel takes the third position after the mobile phone and farmer group meetings respectively. The farmer visits and meetings are preferred because they offer personalized attention to farmers and demonstrations are done making this method more effective than all the others. Although effective the experts cited some short comings with the farmer visits and meetings; they are unable to cover as many farmers as they would wish to mainly because of inadequate resources and logistical problems of transportation to individual farms and low attendance of meetings by the farmers. They said the live shows were effective because they are able to communicate to many farmers in one sitting, one agriculture officer said;

The most important impact of these radio programmes is that they help bridge the agricultural information-gap which faces small scale farmers. The farmers are able to get proper guidance directly from agricultural experts into their households through radio at no cost for consultancy or extension services.

The experts said programmes in local languages were good because they are easily understood by the farmers and both the farmers and the experts share the desire to have farmers voices included in agricultural programming, one of the experts proposed that;

“Developing programs that are aired in vernacular to meet the needs of the farmers who can not understand other languages. Using farmers who have been practicing specific technologies to speak to the farmers on the radio. using competent and practical professionals to air the programmes”

The production team views were not any different with those of farmers and the experts, they too wished to have the programme with farmer voices. The live shows are preferred for the reason that they are more lively and enjoyable, especially when the experts were available, and materials for all the programme segments were available. According to the production team the live shows enabled them to gauge the popularity of the programme and the topics feature from the number of responses generated from any one single episode.

4.6 Summary

The study focused on the impact of *Mali Shambani* radio programme aired on KBC Radio Taifa on small scale farmers. 31 farmer respondents were interviewed, 13 in Tongaren Sub-county of Bungoma County while 18 were drawn from the feedback data base of listeners of the programme. Out of 31 respondents, 27 were male and 4 were female all aged between 16 and 55 years

The demographic results reveal that farming in Kenya is practiced by adults from their forties, most of these farmers are men and therefore one may conclude that few women own agriculture land. The highest numbers of farmers (45%) are literate with primary education. The economic status of the majority farmers is reflected in the size of land they own, 90% own between one quarter of an acre and 4.5 acres of land.

The findings revealed radio is the popular media channel among farmers compared to other media; 58% listen to radio compared to their usage of TV 18% and reading newspapers 22% while the internet is the least accessed.

The agriculture content featured in *Mali Shambani* is relevant providing the motivation to listen to the programme frequently. 25 respondents indicated they listen to the programme often while 6 indicated they listen to the programme sometimes. The finding was that the programme mostly provided relevant information to the farmer as revealed by their level of satisfaction to the programme. Majority of the respondents found the information useful and a significant percentage (52%) said they found the programme content educative, 39% said it was informative while 9% said the programme had credible information from experts.

Findings also show that young people rarely listen to KBC Radio Taifa and that both the youth and women rarely participate in the interactive programme through calling and SMSs. Majority of the respondents felt the programme ought to be given more time, preferred to have more interactivity in the *Mali Shambani* radio show. They also wished the programme would carry more interviews with farmers to blend with the expert information that they found too technical.

Agriculture programmes on radio are essential to small scale farmers as they can easily access the medium and because of the oral nature of radio. Radio producers and agriculture experts need

to collaborate to ensure sustainable quality content and programming that appeal to all categories of farmers.

CHAPTER 5: DISCUSSIONS, CONCLUSION, AND RECOMMENDATION

5.1 Agriculture knowledge to farmers is significant

The findings of this study confirmed that farmers' need for agriculture information is significant, "information is a critical determinant of the success in human endeavour such as storage of farm produce towards food security" Sokoy et al (2014). Rural communities which depend mainly on agriculture rely on indigenous knowledge for innovation and adoption. Indigenous knowledge however is insufficient if the small scale farmer is expected to increase food production for food security this therefore means that "formal and informal knowledge and innovation must therefore be linked to accelerate sustainable agricultural development" (IFPRI 2009). It is also acknowledged that knowledge is not the preserve of science and new knowledge but "an interactive, bottom-up, social process" (EIP 2013).

The IFPRI policy briefs define knowledge "as organized or processed information or data, is fundamental in the pursuit of innovation," and innovation as the "means putting ideas, knowledge, and technology to work in a manner that brings about a significant improvement in performance or product quality". "Farmers on their own part need to know how to increase their yield, how to use new techniques and the findings of contemporary agricultural research and how to operate in changing market and credit situation" (Lucky and Achebe 2013:12). Perkins (2012:15) observes that many agricultural innovations have been developed — by researchers and by small-scale farmers themselves — that, if adopted on a wide scale, would make a significant contribution to increasing food security and reducing poverty.

It is a fact that information has the power to turn around the fortunes of farmers around the world and particularly in Sub-Saharan Africa. This is because agriculture is the mainstay of African economies being the largest employer and contributor to wealth creation and poverty alleviation. Smallholder farmers produce nearly 90% of Africa's agricultural output amid challenges and effects of climate change, policy recommendations from AfricaAdapt e-discussion listed "Invest in knowledge-sharing and awareness-raising activities" as one of the four major policy recommendations and proposed that "Governments should foster knowledge-sharing strategies

that include the media....The media play a key role in disseminating data and raising awareness of climate change. Radio shows and news reports on success stories or local farming innovations should be supported and promoted (AfricaAdapt 2012). Kenya's economy is supported by agriculture and it is mainly dependent on small scale farmers 75% (NASEP 2012:2). Kenya is among African countries which are supported by small scale farmers yet despite the importance African countries are yet to devote their efforts to the dissemination of knowledge and modern knowledge on agriculture to rural areas where up to 80 of the African population live Sokoya et al (2014).

For a long time farmers in Africa have depended on extension services employed by government for important information on management practices, seed varieties, diseases and pests, and crop prices Tegemeo (2006). The extension concept adopted by many African countries was based on the notion that "no innovation ever gets accepted without effective communication from the originators to the target adopters" (Amenyeonu 1987:110). Extension services can change the way farmers practice their agriculture from a subsistence economy to a more productive activity aimed at entrepreneurship to improve the family's standard of living and the entire community Moemeka (1981:20), Extension agents play a central role in diffusing new technology (Lucky & achebe 2013:13).

It is however acknowledged that although extension services exist they do not satisfy the farmers' information needs Nyareza, Dick (2009) this is evident by the farmers' information seeking tendencies as demonstrated in this study, farmers do not only attend to one single source for information, they will listen to radio programmes on agriculture, watch TV, and read news papers that carry information on agriculture their subject of interest. Other studies have also revealed that farmers in Kenya seek agriculture information from various sources; from agricultural shows and demonstrations, from fellow farmers in farmer groups, chief's barazas and church meetings ISAAA (2009:60).

Agricultural extension has long been seen as a key element for enabling farmers to obtain information and technologies that can improve their livelihoods (Purcell & Anderson 1997) and is recognised as an important factor in promoting agricultural development (Birkhaeuser *et al.*

1991; Anderson & Feder 2007). The agriculture extension model has however been criticized for being a model characterised by ‘top-down’, ‘linear’, ‘rigid’ approaches were criticised for their reductionist perspectives and the passive role of farmers (Taye 2013) and “neglect of societal actors as contributors to innovation, and for considering only one source of legitimate knowledge” (Leeuwis 2004; Knickel et al. 2009). This method was abandoned in the 1990s (Zhou) and now a more inclusive approach to sharing knowledge has been adopted, “working collaboratively, national agricultural research institutes, international research centers, farmers, and extension services have already produced numerous research results that have led to increased knowledge and innovation in agriculture” (IFPRI 2009).

The shortcomings of agriculture extension have compelled agricultural organizations and institutions to develop strategies that include mass communication for effective communication of agriculture knowledge and innovations to farming communities. The FAO developed the Strategic Extension Campaign (SEC) methodology in many countries of Africa, Asia and Latin America in order to support the local extension agents in their work whilst also harnessing the multimedia tools available to encourage greater community participation (AGREN 2003:5). According to Chapman et al (2003) experience with rural radio has shown the potential for agricultural extension to benefit from both the reach and the relevance, it has the potential for “opening wider information networks for famers”. Extension officers should use the radio and that radio stations and their journalists should integrate extension officers as credible sources for information Spurk et al (2013)

5.2 Radio is the most accessible medium to farmers

The second major finding of this study is that radio is the most accessible medium to farmers aged over forty years, majority of respondents listen to radio compared to television and newspapers. Even in the fast changing world of communication and emerging of new ICTs radio has proved difficult to replace because it is “in constant expansion” (UNESCO 2001). Radio is as a mass media channel is repeatedly finding itself the preferred medium for communicating information about agriculture innovations as its reach far exceeds any other mass media channel, and as such “ a powerful tool for information dissemination and access especially for hard to reach rural audiences” (Myers 2008:5).

Radio is used extensively as a communication medium in developing countries to support educational programmes in teaching, health, literacy training, nutrition education, and the promotion of changes in farming practices to improve agricultural production (Nwaerodu & Thompson, 1987). The rationale for using radio in extension and advisory services came from an understanding that radio is an excellent, cost-effective means of sharing knowledge, building awareness, facilitating informed decision-making and supporting the adoption of new practices by small-scale farmers (FRI, 2007). According to Sharma (2008), radio is the reliable medium that can cover wider area and can reach to the large number of people. The strength of radio as the medium of communication is that it is cost effective in terms of transmission, presentation and portability (Khanal 2011).

Effective methods of dissemination of agriculture innovations to farmers remains a challenge to Africa's agricultural sector such that some scholars have recommended "new concepts for communication with farmers and researchers where radio plays a central role" (Spurk et al. 2013) is yet another reason for turning to radio. Radio is considered important because "regular transmission of radio programs related to agriculture gives valuable information about new farming methods" (Khanal 2011:201). Such successes have been recorded by the Agricultural Information Resource Centre a division in the ministry of agriculture in Kenya which is charged with the responsibility of promoting information on agriculture innovations to farmers, agriculture extension experts trained in radio package agriculture programmes which are aired on the public as well as private stations (Kiplag'at, 2003:6). Radio has continued to influence food production and food security of farmers through transmission of relevant content however the challenge is "for agricultural communicators today is to develop and package messages and content that appeal to their target audiences—the farming constituencies" (AFRI 2012).

The rationale for using radio in extension and advisory services came from an understanding that radio is an excellent, cost-effective means of sharing knowledge, building awareness, facilitating informed decision-making and supporting the adoption of new practices by small-scale farmers (Farm Radio International, 2007). International organizations like United Nations Children's Fund (UNICEF), United Nations Educational Scientific Cultural Organization

(UNESCO) and Food and Agricultural Organization (FAO) have been using radio for the development in respective fields since 1960 Chapman et al (2003). Chapman (2003) further opines that “the strength of rural radio as an extension tool is widely regarded to lie in its ability to reach illiterate farmers and provide them with information relating to all aspects of agricultural production in a language they understand”. Radio is affordable, accessible to the illiterate, can use local languages, and can give voice to end-users critical for effective agricultural extension and advisory services FRI (2007).

Broadcasting is addressed to a very wide, heterogeneous, and dispersed public of whom very little is known, and because of the unorganized nature of the audience there is always doubt as to whether people are listening, and if they are whether they are benefiting from the programmes (Moemeka 1980: 42,43). Moemeka (1980:44) further observes that agricultural programmes are “devised with little or no consultation with specialist agents who are close to the people and to the government”. Indeed the findings of the study revealed that no audience studies are carried out on agriculture programmes, producers of agriculture programmes rely on feed back in the programmes form listeners to gauge the popularity of the programmes. Efficiency of rural radio is limited by its structure and often lack of peasant involvement in determining its programming. Programmes are often broadcast on a single radio network that sometimes does not reach the entire community Girard (1992:116).

5.3 Farmers voices in agriculture programmes are more desired

The research findings revealed that farmers prefer to listen to fellow farmers they could identify with, this is because the farmers speak in a language they can understand. While interviews with specialists were welcome they found them too technical and hence the need to integrate with farmer interviews for better understanding.

The participation of rural farmers makes the programmes more “interesting and effective as the message and information easily gets through creating a sense of ownership” (Khanal 2011:202). According to McRoberts & Frankie, “few farmers decide to adopt a novel farming technique solely based upon information received from mass media or extension officers. External factors

may create interest in and awareness of innovations, but the actual decision to adopt a new technique is usually not taken by the majority of farmers until information and practical experience from peer-farmers is received". This statement is supported by David and Asamoah (2011:26) who observe that the use of local facilitators creates a sense of ownership and adds to the credibility of technical messages participation then becomes an effective communication tool as farmers can identify with them and consider change of behavior. Radio producers of "*Mali Shambani*" said when they interviewed farmers they were more likely generate interest and feedback from the listeners with requests for more information, the farmers also receive calls for further information from fellow farmers known to them after such interviews are aired.

While inclusion of farmers in agriculture programmes is desirable by both the audience and the radio producers at the stations there are challenges that hamper inclusion of farmers' voices in the programmes. Andrew Moemeka (1980:44) observes that "there is lack of interaction between producers and consumers of programmes before the programmes are planned, produced and broadcast" so most of the programmes "though seemingly relevant are not always based on first hand identification of urgent needs as indicated by the audience concerned" Moemeka (1980:4). Resource challenges of radio have made radio "rather than engaging its audience it has become predominantly concerned with the search for larger audiences" Girard (1992:2). This situation leads to a passive audience depicted by Kevin Williams (2003:172) as "passive recipients of media messages with little or no say in how they interpret them" a situation he perceives as providing the audience with the "power to resist" William (2003:64).

With effective capacity support radio stations and their personnel, broadcasters can produce high-impact radio programs and phone-in shows, facilitate and record community discussions and debates, document the experiences of individual farmers and other value-chain actors, put farmers' questions to subject specialists, and link sellers with buyers on air (Farm Radio International, 2011). The need to harmonise availability of services by stakeholders with agriculture information is important as was depicted in the case in which "farmers asked why legumes were promoted without ensuring that a seed system was in place" MEAS (case study # 8 February 2014). The involvement of small scale farmers in programming is effective as revealed by FRI in their comprehensive Participatory Radio Campaign (PRC) approach that includes

understanding farmer information needs and in the entire programme design such that “the uptake of detailed knowledge of specific farming practices among small scale farmers, adoption of new farming practices, such that on average one in five households living in the passive listening communities actually introduced a new farming practice after being engaged in a PRC” (MEAS 2014)

5.4 Young people rarely listen to “mali shambani” programme on KBC

The findings revealed that very few young people listen to the agriculture programme “*Mali Shambani*”. Studies by Synovate have shown that KBC Radio Taifa audience to be above 45 years of age Synovate (2009), indeed a report by the media council of Kenya (2010) revealed that fewer young people attend to mainstream media and have a preference for FM stations whose format emphasizes entertainment. A list of the leading radio stations nationally shows Kiss FM, a station with a special focus on the youth, has the highest audience share (57.5%), followed by Citizen (42%) and Easy FM (41.2%) (Steadman, 2005). “Most of these stations have started since 1998, and have a lot of entertainment content and modernised styles of reporting, which particularly appeal to the youth” AMDI (2006:21).

A report on the Forum on Communication for Development & Community Media for Family Farming Rome-Italy, 2014 observed that “Agriculture is not an attractive opportunity for youth who are not willing to take up farming as a profession”. While other reasons for lack of interest in agriculture among young people is attributed to “customary social systems that are so oppressive or restrictive, youth are also aware of urban-rural inequalities and aspire to standards of living not typically associated with agricultural livelihoods (Future Agricultures, Policy Brief 037 June 2010), the same policy brief observes that “In Tanzania, for example, young people reportedly regard farming as a ‘dirty activity’ without proper facilities, while in South Africa teenage girls point to the low status ascribed to farm children compared to children living in towns and villages” . That agriculture is not recognized as an opportunity by young people is reflected in a World Bank report (2013:9) in findings that revealed that “agriculture is rarely mentioned as a ‘best job’ although it is not considered the worst”. The same report further observes that “The farms that many young Africans know from childhood are small and worked

with a low level of mechanization” World Bank (2013:16) is among the reasons young people are turned off by farming.

The near exclusion of young people in agriculture is undesirable because they are the future generation upon whom their individual countries depend on for a solid foundation for food security for their future populations. Africa has the world’s most youthful population, with 60% of the population aged between 15 – 24 years. This population growth is higher than the rest of the world, this population growth and subsequent urban growth is closely associated with increased food demand (FAO 2011). It is reported that the average age of primary farmers in Kenya is the late 50s (Torkelsson, 2012), a source of worry for the agriculture sector as the youth migrate to urban areas to find more ‘lucrative’ jobs. Nearly 75 million African youth are unemployed, and many of those employed are generally job insecure, with little hope for advancement or building a viable career (FAO 2013). Unemployment in Africa can be as high as 80 per cent, even for relatively performing countries (Oppenheimer and spice, 2011).

A World Bank report (2013) emphasizes that agriculture is uniquely positioned to absorb the number of unemployed youth while a report on climate change affirms that “targeting young people would help to bypass challenges that adult face, young people are more environmentally conscious and open to change than adults and exercise increasing amounts of power over decision making”. The age factor is significant in agricultural information accessibility and utilization and as such young people (farmers) are more responsive to new ideas and practice than older ones who were observed to be conservative and less responsive to adoption of new practices (Okwu *et al*, 2007). Various forums on agriculture are in consensus that the involvement of young people in agriculture is inevitable if food security on the continent is to be achieved. “Unless today’s African youth are productively engaged in modern agriculture that generates higher incomes and creates employment, the prospect of the post-2015 development agenda will remain bleak for Africa’ Festus K. Akinnifesi (FAO 2013).

The youth have begun to engage in agriculture sector; about 80 percent of youth residing in the rural areas are engaged in agricultural activities (Adekunle et al. 2009). IFPRI –Nigeria strategy support program. World Bank data (2012) on 15 African countries which include Kenya reveal a

significant number of young people are engaged in the agriculture sector. 76% of rural youth aged between 15 and 34 years are employed in agriculture while 39% of their urban counterparts are.

As critical players in the agriculture sector the youth have a right to information about agriculture innovations for their complete and meaningful engagement in agriculture. From the findings it is obvious that few young people listen and interact with national radio. A new approach to attract young listeners to agriculture programmes is recommended, the producers ought to consider 'Youth Radio' which broadcasts programming that is produced by or for young people Shipler (2006). Young people are known to be versatile in their use of ICTs, such programmes should have a multi approach in the use of ICTs; which combines radio, social media, and the mobile telephony.

“Goodluck, a 35-year-old farmer who lives near the town of Maseno in Western Kenya wakes up in the morning and switches on his smartphone to check the weather forecast, the day’s market prices for his crops and any announcements from the authorities that might be important for his business and his cooperative. Just before leaving for his farm, he suddenly remembers that he had heard about a new pest outbreak in the area on the radio the previous night. He wanted to talk to his input supplier, Kahilu, about it later in the day and sends him a quick SMS to arrange for a meeting. He also reminds himself that he should get in touch with the farmers’ helpline to find out if they have any update on the pest outbreak”
Adebola Adedugbe, A member of Young Professionals in Agricultural Research for Development (YPARD),

5.5 Women rarely participate in the agriculture programme “Mali Shambani”

The results of the findings reveal that the participation of women in “Mali Shambani” is minimal; this finding is a reflection of the place of women in both the agriculture sector and their use of mass media. Out of the total 31 respondents only four were women, this finding confirm the surveys of other scholars who have concluded that “The use of radio, like all ICTs, is not gender neutral.

There are significant differences between the way women and men use radio; and there is evidence that women have less access to radio than men” Myers (2008). Myers earlier survey in

Eritrea (2004) revealed several factors that affect “rural women listeners, namely: men's ownership and control of radio sets, women's lower levels of education (and lack of knowledge of languages other than their mother tongue), and women's higher and more constant domestic workload which left them little time to devote to radio listening”.

Women are the majority of small scale farmers in the developing countries; they do a larger share of the farm work compared to men (SIDA 2010). They are responsible for half of the world's food, producing up to 80% of basic food stuffs for both the household and for sale in Sub-Saharan Africa (FAO 2009). Women make up almost 50 percent of the agricultural labour force in sub-Saharan Africa, an increase from about 45 percent in 1980. The averages in Africa range from just over 40 percent in Southern Africa to just over 50 percent in Eastern Africa (FAO 2011). The FAO (2009) Program for Gender Equality in Agriculture and Rural Development observes that although women make substantial contributions to household well-being and agricultural production, men largely control the sale of crops and animals and use of the income.Women in agriculture increasingly supply national and international markets with traditional and high-value niche produce.

However, in comparison to men, women farmers face gender-specific disadvantages. These include lower mobility, less access to training, less access to farm and market information, and less access to productive resources”. It is believed that productivity in Sub-Saharan Africa could rise by 20% if women had equal access to land, seed, and fertilizer. Women in Kenya perform between 60 and 80% of the agriculture work in rural areas (Sessional paper 2006), yet they have less control over the yields they produce mainly because “women were denied land rights” FIDA (2009).

Access to appropriate information can have a significant impact on agricultural productivity; studies about agriculture extension services have shown that they led to increased productivity such services however did not reach women farmers (CYMMYT 1999). The Farm Radio Network (2004) opines that “when women have access to appropriate information, they can make better choices that benefit their families and their communities. And radio is the best way to reach rural women – particularly since they account for two thirds of the world's billion illiterate.”

Despite the fact that women are critical to food security in Africa and therefore significant as an audience their participation in agricultural radio programming is passive. Experiences and lessons from Farm Radio Programming in Malawi discovered that “women tended to shy away during participatory research activities, program recordings and feedback sessions. A special effort was needed to bring out women’s voices. But more women than men were active when they participated in-group activities like singing and dancing” (MEAS case study # 8 2011). Even community radio that is much closer to the community reveals similar tendencies about women’s participation in radio programming. A case study on the Filipino women revealed that “those in the countryside where socialization has been limited to poverty, and inadequate education attainment are often shy, reserved, and timid” (UNESCO 2001:23). The use of community radio among peasant farmers in Zimbabwe which had more women respondents on knowledge sharing practices on radio revealed that farmers were more willing to share information on community stations rather than national stations for fear of ‘political victimization’ (Nyareza & Dick).

Radio producers of agriculture content in particularly in national stations are faced with the challenge of developing content that appeal to women. AFRI prescribe a participatory approach as opposed to a passive one which according to Perkins (Perkins 2012:17) is “one that valued farmers as decision-makers rather than as passive recipients of diffused information. It is for this reason the model is called a participatory radio campaign”.

In addition, information access and listening habits for men and women were different. The timing and mix of programs became important for radio stations. To ensure that both men and women were able to listen, broadcasts (and repeats) were aired at different times. The best time for women to listen to the radio is the afternoon, as most of the household and fieldwork is done in the morning AFRI.

In conclusion women are a significant segment of the audience whose agriculture information needs ought to be taken seriously by radio producers of agriculture programmes. Radio stations and personnel packaging agriculture programmes ought to consider the social cultural dynamics that relate to men and women with regard to their listening patters. The researcher recommends

that radio stations on the listening patterns of women: when they listen, what they want to listen to, and what formats appeal to them.

5.6 Recommendations

The findings of this study emphasise the centrality of knowledge in agriculture innovations and that farmers rely most on radio to get information about agriculture innovations while extension remains the most trusted source despite its challenges. There is need to integrate extension services with radio agriculture programming in order to effectively serve rural farming communities. It is imperative that agriculture institutions and radio stations form partnerships to overcome challenges that both sides experience.

Radio is repeatedly the most preferred mass media channel easily available to rural farming communities. It is cost effective in terms of transmission, presentation, and portability (Khanal 2011); qualities that enable farmers to receive information and to bring change in farming methods and applying new techniques” (Ekoja 2003:2). Radio producers and stations need to find sustainable ways of packaging innovative programmes; partnerships with agricultural institutions in producing programmes would be more sustainable compared to donor funded programmes. Extension agents ought to be aware of the weakness and opportunities that radio offers and ensure they employ a multi-sectored approach in communicating agriculture innovations to farmers.

The voice of the farmer in farm radio programmes enhances the credibility of the programmes and encourages the adoption of agriculture innovations for farming audiences thereby increasing productivity. The use of multiple programming formats, and the integration of other ICTs creates richer, more interesting and more interactive radio programs. The inclusion of farmers’ perspectives and voices is particularly important (MEAS case study #8 2014). Radio stations need to invest more in the participation of farmers in the programmes if they are to be effective and sustain listenership as intended. The researcher recommends that station managers invest in agriculture programming and should consider building partnerships with organizations in the agricultural sector for both technical and financial support for sustainability.

References

- Acker, Jenny (2011) *A Review of Information and Communication Technologies for Agriculture Extension in Developing Countries*, Center for Global Development, www.cgdv.org
- African Development Initiative (2006) Research Summary Report www.bbcworldservicetrust.org/amdi
- AFRRI (2008); Communicating with Radio: What Do We Know? *Findings from selected rural radio effectiveness evaluations*, African Farm Radio Research Initiative (AFRRI) Farm Radio International, Ottawa, Canada viewed on October 20, 2014; www.farmradio.org/radio-resource-packs/, www.farmradio.org/why-radio
- AgREN, network paper No. 17 (2000) ODI, *Agriculture and knowledge systems in Kenya, implications for technology dissemination and development*
- Allen K. & Gagliadone. The Media Map Project, Kenya: case study snapshot of donor support to ICTS and media (2011)
- A.T. Lucky and N.E.E. Achebe (2012); Information Communication Technology and Agricultural Information Dissemination: A Case Study of Institute of Agricultural Research (IAR) Ahmadu Bello University, Zaria, Kaduna State... *Research Journal of Information Technology* 5(1): 11-17, 2013 ISSN: 2041-3106; e-ISSN: 2041-3114 © Maxwell Scientific Organization, 2013 Published: March 01, 2013
- Baran, S.J. (2002). *Introduction to Mass Communication*. New York: McGraw Hill.
- Bowen, H., 2010, 'Information at the grassroots: Analyzing the media use and communication habits of Kenyans to support effective development,' research report prepared InterMedia, African Development Research Series, London, U.K., viewed October 21, 2014, http://www.intermedia.org/brochures/AudienceScapes_Kenya%20Quant.pdf.
- Budd, R.W (1978). *A Content Analysis of Communications*. New York: Macmillan
- Chapota, R, Fatch, P, & Mthinda, C: The Role of Radio in Agricultural Extension and Advisory Services – Experiences and Lessons from Farm Radio Programming in Malawi MEAS Case Study # 8, February 2014 viewed October, 23, 2014. <http://www.slideshare.net/MEAS1/case-study-on-the-role-of-radio-based-extension-and-advisor>
- Doss, R Cheryl, CIMMYT (1999) *Twenty-five years of Research on Women Farmers in Africa: Lessons and Implications for agriculture Research Institutions*.

- Griffin, EM (2009) *A First Look at Communication theory* seventh edition: McGraw-Hill New York
- FIDA (2009) *Women's Land and Property Rights in Promoting Gender Equality* at Georgetown University Law Centre, Washington DC, USA
- ICT4D EFFECTS, Youth ICTs and Agriculture; Exploring How Digital Tools and Skill Influence the Motivation of Young Farmers, November 2013
- ISAAA- AfriCentre assessing the utility of radio in communicating agricultural biotechnology in Africa (case studies of Burkina Faso and Kenya) 2011
- Kwadwo Asenso-Okyere and Kristin Davis (2009); *Knowledge and Innovation for Agricultural Development*; IFPRI Policy Brief 11 March 2009
- Maputseni C. (2006) *Using Radio for Advocacy and Communication of Issues Affecting Farm Communities in Zimbabwe*: Thesis. Malmö University, Sweden.
- Mbeke, P. (2008) *The Media, Legal, Regulatory and Policy Environment in Kenya: A Historical Briefing* Nairobi: BBC World Service Trust
- Mbeke, P.O, Ugangu, W. and Okello-Oriale, R., 2010, 'The Media We Want: The Kenya Media Vulnerabilities Studies,' Friedrich Ebert Stiftung, November, viewed October 16, 2014, <http://www.awcfs.org/dmdocuments/books/MediaVulnerabilitiesStudy.pdf>
- McCombs, M & Shaw D, (1972) *Agenda Setting Function of Mass Media, Public Opinion Quarterly*, Vol 36 No. 2
- McQuail, D & Curan J., Gurevitch M., Woolacott J. (Eds) (1979) *Mass Communication and Society*. Beverly Hills Calif; Sage Publications
- Miller, K. (2005) *Communication Theories; Perspectives, Processes, and Contexts* Second Edition Texas A&M University
- Mshindi, T. and Mbeke, P.O., 2008, *Kenya media sector analysis report*, a research report prepared by the Canadian International Development Agency (CIDA), Quebec, viewed October 10, 2014, http://pioneers4change.org/?option=com_k2&view=item&id=51:kenya-media-sector-analysis-report-november-2008&Itemid=135.
- Munyanga, M & T. S, Jayne (2006); *Agriculture Policy in Kenya: Practice and Policy Lessons*, Tegemeo Institute of agricultural Policy and Development, Egerton University
- Myers, M. (2008) *Radio and development in Africa: A Concept Paper*. Ottawa, International Development Research Centre

- Ministry of Agriculture (2011) Program document ;*Agriculture Sector Development Support Programme*: Kilimo House
- Ochilo, P, (1993) Press Freedom and the Role of the Media in Kenya; *Africa Media Review* Vol. 7 No. 3 1993 African Council for Communication Education
- Proceedings of the 3rd Annual Farm Radio Symposium, (November 2011) *Addressing Information Needs in Agriculture Value Chains: The Role of Radio Programming*. Lilongwe institute of management Malawi
- Republic of Kenya (2012) *National Agricultural Sector Extension Policy* (NACEP) <http://www.nafis.go.ke/wp-content/uploads/2012/05/asdsp-program-doc-after-signing-1-jan-12.pdf>
- Sambe J.A. *Introduction to Mass Communication Practice in Nigeria*. Ibadan:Spectrum Books Limited. 10
- Severin, J & Tankard, (1979) *Communication Theories: Origins, Methods and Uses in the Mass Media*; publisher: Hasting House
- Shoemaker, P (1991) *Gatekeeping*. London; Sage.
- Tan, A. (1985) *mass communication theories and research* John Wiley & Sons University of Michigan
- Taye, H., 2013, 'Evaluating the impact of agricultural extension programmes in sub-Saharan Africa: Challenges and prospects', *African Evaluation Journal* 1(1), Art. #19, 9 pages. <http://dx.doi.org/10.4102/aej.v1i1.19>
- Torkelsson, A. 2012. "Sex Disaggregated Data on Agriculture, Water and Food Security Lessons from the Kenya". World Water Week Seminar on Global Practice in Promoting Gender Equality in the Water Sector, Stockholm, August 30, 2012.
- Vision 2030 (2007): *A Globally competitive and Prosperous Kenya*
- Williams, K. (2003)*Understanding Media Theory*. New York, NY: Oxford University Press
- Wright, C. R. (1986) *Mass Communication: A Sociological Perspective* (3rd edition) New York: Random House
- <http://www.arnoldpublishers.com>
- <http://www.sciencedomain.org>
- www.standardmedia.co.ke/business/article/2000094389/foodsecurity-warning-as-maize-production-drops-45

ANNEX 1: QUESTIONNAIRE FOR FARMERS
STUDY ON THE IMPACT OF RADIO AGRICULTURAL PROGRAMMES ON SMALL SCALE FARMERS

QUESTIONNAIRE FOR FARMERS

This questionnaire is for a study on the impact of radio “*Mali Shambani*” agricultural programme on small holder farmers in the fulfillment of my MA degree in Communication. Your consent will be highly appreciated. Your answers will be held in confidence and used only for the purpose of this study.

Date of interview: _____ Name: _____ (Optional)
County: _____ Sub- county: _____

SECTION 1: DEMOGRAPHICS

1. Gender : Male [] Female []

2. Age: (a) 16-24 [] (b) 25- 33 [] (c) 34-42 [] (d) 43-51 [] (e) 52- and above []

3. Level of education:
(a) None [] (b) Primary [] (c) Secondary [] (d) Graduate

4. State the size of land you own (in acres)

SECTION 2: MEDIA USE

5. How often do you access;
a) Radio
i) Daily ii) twice a week iii) rarely
b) Television
i) Daily ii) twice a week iii) rarely
c) Newspapers
i) Daily ii) twice a week iii) rarely

6. What is the reason for your daily access (of your preferred medium)?
.....
.....
.....

LISTENERSHIP TO MALI SHAMBANI PROGRAMME

7. Do you listen to agriculture programmes on KBC radio Taifa?

Yes No

8. What programmes do you recall listening to?

Name them:.....

9. How often do you listen to the programme Mali Shambani?

Often Seldom Not at all

10. When did you last listen to the programme “Mali Shambani”?

.....

11. Do you participate in the programme?

Yes No

12. How do you participate in the programme?

SMS Calling

Other(state).....

13. Are the topics addressed in the programme relevant to your agriculture activities?

Yes No

14. How are if at all satisfied with the programme content?

Very satisfied Fairly satisfied Not satisfied

15. a) What are your reasons for finding the programme satisfactory?

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

b) If not why?

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

16. Have you been able to practice what you heard in the programme?

Yes No

17. How helpful (if at all) did you find what you heard in the programme to your farming activities?

.....
.....

.....
.....
18. What aspects of the programme would you like to be improved?

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

19. What other agriculture programmes do you listen to on KBC Radio Taifa and other radio stations?

.....
.....

ENDS

ANNEX 2: GUIDE FOR AGRICULTURE EXPERTS
STUDY ON THE IMPACT OF RADIO AGRICULTURAL PROGRAMMES ON SMALL SCALE FARMERS

QUESTIONNAIRE FOR AGRICULTURE EXTENSION OFFICERS

This questionnaire is for a study on the impact of radio agricultural programmes on small holder farmers. Your consent will be highly appreciated. Your answers will be held in confidence and used only for the purpose of this study.

Date of interview: _____ Name: _____

Organization: _____ County: _____

- 1. What is the number of farmers you serve?.....
- 2. a) How do you mostly communicate agriculture extension information to farmers?

.....

- 3. Have you ever used radio to communicate agriculture information?
Yes No

- 4. What are the advantages of radio?
.....
.....
.....

- 5. What is your experience of using radio programmes to communicate agriculture information? (please discuss the radio programmes you have been involve in)
.....
.....
.....

- 6. Are the topics addressed in the programme relevant to the information needs of small scale farmers?
Yes No

- 7. How do you know you are reaching the farmers with agriculture information when using radio?
.....
.....

.....
.....
8. What is the impact (if at all) of radio programmes on agriculture in improving farming practices of small scale farmers?

.....
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9. What are the limitations of using radio in communicating agriculture information?

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

10. How can radio programmes be improved to effectively communicate agriculture information?

END

ANNEX 3: GUIDE FOR RADIO PRODUCERS

1. Name of Radio Station
2. Title of Radio Programme
3. Duration of programme
4. Date and time of transmission
5. Frequency of the programme
6. Target audience
7. The period the programme has been on air
8. Programme format (i.e state if it is a magazine, use of interviews, call-in or pre-recorded etc)
9. What issues are covered in the programme.
10. How the topics the feature in the programme selected?
11. Who/what (institutions and experts) are your sources of information?
12. What is the feedback system used in the programme? ie SMS, letters etc
13. How you respond to issues raised by the audience?
14. How do you gauge the impact of the programme to the audience?
15. How do you ensure fairness, balance, and use of accuracy in your programming.
16. How do are you equipped to handle agriculture issues which are mostly scientific?
17. Comment on the challenges you face in covering agricultural issues and how you overcome them.