

**THE ROLE OF COMMUNITY RADIO BROADCASTING IN AGRICULTURAL
MAIZE PRODUCTION IN RURAL KENYA: A CASE STUDY OF KISIMA
COMMUNITY RADIO IN NYAMIRA COUNTY**

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ABSTRACT

Purpose: Radio has formed a key component in improving agricultural production by creating awareness among farmers about agricultural information and the availability of markets for their produce. However, local farmers' access to agricultural information has for long time remained very poor at various phases of the rural development as a result of the language radio uses to reach them. The use of vernacular radio stations like Kisima community Radio which uses Ekegusii to reach local farmers with the information they need would, provide the opportunity for improving farm production. This study explored the ways in which Kisima a vernacular community broadcasting Radio contributes in the improvement of farm productivity of its audience.

Methodology: The study used descriptive research design. It was conducted through a case study of Kisima Community Radio, in Nyamira County. The target population of this study was all small-scale maize farmers aged between 15 to 65years in Borabu Constituency. The sample frame for this study was a list of villages from Borabu Sub County. A multistage sampling was used to sample villages and family representatives. The study employed expert interviews, questionnaires and semi-structured interviews for the farmers. Being a descriptive research, the data was analyzed and tabulated using descriptive methods which illustrated the diverse findings of the study.

Results: Respondents acknowledged the unique role of Kisima community radio being a media for agricultural communication. Majority of the producers indicated awareness of the role to a large extent; this was good since it became easier for them to use their power to produce agricultural content, control content that would help improve maize production in Borabu Sub County. During content production producers ought to be aware the impact some content can have on the farmers, this was seen to be agreed upon by 77.78% of the producers who observed the need on the ground before reporting. There was also a strong indication of independence among the producers to approve content that they felt was capable of causing different reactions in maize farming. The Kisima Community Radio programs on farming through their producers are passionate about Maize farming. The radio has started supporting farmers where producers have seen the need to help improve maize farming through regular programming of maize farming discussions and sensitization on the prices of maize for farmers, which means, therefore, more income for the farmers.

Policy Recommendation: There should be more pro-activeness from the farmers. This can only be achieved through empowerment and offering the right agriculture solutions so as to have this vision a reality. There should be campaigns that seek to reward farmers who have embraced new methods of farming plus those who seek to boost the agriculture culture in Borabu Sub-county. There should also be on ground farmers field days where farmers get to feel mingle with other farmers and get challenged to boost their maize farming methods. This will in turn motivate the farmers who are doing well to continue working hard. Also in as much as county and community leaders will offer solutions for farming, the farmers too should be given a platform to voice their needs through Kisima community radio.

Key word: *Community Radio Broadcasting, Agricultural Maize Production, Kisima Community Radio, Nyamira County*

1.1 INTRODUCTION

Mass communication has generated very vital useful knowledge on agriculture dissemination of information along with new concepts and farming techniques can bring opportunities to the farmers (Mohammad, 2013). Radio has been proved as an important tool for enhancement of agriculture in the rural areas it is powerful and an effective medium to project the information and knowledge related to agriculture. Nakabugu (2014) Sharma (2014) radio is a reliable medium that can cover wider areas and can reach a large number of people. The strength of radio as the medium of communication is that it is cost effective in terms of transmission on presentation and portability. Radio can be a useful medium in educating farmers. It appeals to them with new programs having modern agricultural technologies. However, the literacy of farmers is important to understand such programs and apply them appropriately (Mohammad & Hazbullah, 2013).

As rural farmers themselves participate in the radio programs, they become more interesting and effective because of the feeling of ownership. The message and information related to agriculture can be provided using radio. According to Nakabugu (2014), information on better farming methods, improved seeds, timely planting, agro-forestry, better harvesting methods, soil conservation, marketing, post-harvest handling and diversification. Nakabugu (2014) states that rural radio gives farmers an opportunity to interact with each other and other relevant authorities' like extension workers, crop and animal experts through format like live talk shows, phone in programs and on location broadcasts.

The absence of functional agricultural information delivery system has therefore been identified as a major constraint to agricultural development in least developed and developing countries grapple with insufficient personnel and funding of agricultural extension services (Aina, 2013). Chamala (2013) noted that such a conversion of new technologies and scientific discourses will depend to a great extent on the speed with which they are transferred from its source to the ultimate unit of its utilization so that the peasant user clearly understands, accepts and supplies it in their day-to-day practices. This in turn demands a suitable and effective communication strategy that will involve the masses to participate in the development issues affecting their lives which later contributes to national development (Agwu, et al., 2015). Agricultural information is a critical ingredient to improving small-scale agricultural production especially among peasant farmers consequently leading to improved rural livelihoods food security and national economies. Improvement of agricultural productivity will be realized when farmers are linked to Agricultural information about farm inputs and markets to their produce.

Kenya's approach to agricultural and rural development is enshrined in its modernization of agriculture plan which calls for a shift from traditional agriculture to a technologically based scope to ensure food security (Nakabugu, 2014). The challenge experienced in achieving this goal centrally lies in its communication strategy as a denominator to cause change. This calls for communication approaches that target and involve the rural communities since they depend on Agriculture for their livelihood. Nazari and Hazbullah (2013) noted that a large number of innovations in farming as well as other areas are being released and commercialized to the rural people particularly the farmers, by different communicators and through a variety of channels. But the effects of such communications have not been quite as pronounced as one might expect

(Crouch, 2015). This is evidenced by the rural people's generally inadequate knowledge, understanding, skills and sometimes negative attitude relating to change. Many subsistence farmers therefore, are not reached with information believed to be of value to them (Hornik, 2014). This makes them either to delay or take no action at all with regard to the suggested innovation.

The increasing number of radio sets and radio stations in developing countries indicates that radio broadcasting can play a strong role in rural development. The effectiveness of this medium can be further enhanced if radio stations are localized and geared to programming that meets the specific interests and needs of their "special audiences (Nazari, & Hazbullah, 2013). However, radio cannot be singly used to reach rural farmers. Projects that depend on a single medium to reach their audiences may find that some parts of the audience is inaccessible, does not understand, nor use the medium as a stimulus for practice change (Nazari, & Hazbullah, 2013). Therefore, there is need to use multiple channels. Since they have a higher probability of success, both because different channels serve different needs. In the knowledge stage, as individuals become aware of an innovation, they rely on mass media such as radio; and as they move toward a decision, they tend to rely on personal sources such as extension services, farm group discussions (Quail, 2012).

Agricultural information dissemination therefore is an important aspect in quest to improve agricultural productivity both in Africa and specifically Kenya, and several channels have been used for this purpose. They include; Extension Officers, Pamphlets, field days, Newspapers, TV, Radio and many more (Hawkins, 2018). Vernacular radio broadcasting becomes ideally best placed to provide this kind of information to its listeners, especially subsistence farmers because majority of them live in rural areas, practice agriculture as a source of livelihood, and might not have an in-depth understanding of English and/or Swahili that have been recognized and used in the public domain (Quail, 2015).

Millions of livelihoods in majority of the Kenyan rural areas depend highly on agriculture which is in small scale Dey et al (2018). Borabu Sub County is primarily occupied by small-scale farmers whose main enterprise is majorly subsistence crops which serve as the main family food supply with the surplus of tea being sold through complex and unfair marketing chains for income generation (Srampickal, 2013). As a result, local farmers have suffered the effects of

poor communication channels that have been used to reach them with the agricultural information on farm inputs such as fertilizers, approved seeds, weather conditions, market and other important information that are essential in maize productivity. This has contributed to poor farm maize productivity and expansion of investment in agriculture in rural areas (Munyua, 2017). This situation has been so because such information has been disseminated by those FM radios using the national languages that are perceived by rural population as secondary and remote from their immediate needs and daily living, leading to a large section of the citizenry missing much of what is of their benefit (Orao, 2016). The role of agricultural information in maize productivity has been a major concern to rural development stakeholders (The National Policy Vision 2030 Republic of Kenya, 2010).

Despite the concerted efforts to implement agricultural strategies, maize productivity still continues to affect this sector. This is because the rural population contributing majorly to agricultural sector has become inaccessible with the relevant information they need, a concept that has not been factored in this National policies. Therefore, there is need to link rural farmers in Borabu with the relevant agricultural information through community Radio in particular Kisima in Nyamira county. A survey conducted by the National Sample Survey Organization in June (2005) revealed that only 40% of farming households have access to information about modern farming technologies. Similarly the cost of delivering information face-to-face in the public sector is very high. This crumbling extension network can be strengthened by the use of vernacular community radio in particular Kisima Nyamira County being the focus area of the researcher.

Borabu Sub County presented a different picture from the rest of the county because it is a settlement area. In addition, it presented the least population density. The problem concerned the fact that the division's resource potential was high but their utilization was relatively low. Maize is a high value cash crop and as far as its production was concerned, it was very low compared to the region's potentials coupled with the population growth rate of 2.16 per cent there would be a considerable strain on the rich agricultural base a factor that could jeopardize future developments. The maize sector in Borabu was studied with the main objective of examining its role in the development of the sub county (Nyamira County Development Profile, 2013).

The study focused on the role of Kisima Community radio on agricultural maize production among rural small scale farmers in Borabu constituency Nyamira County. The choice of Kisima community Radio is informed by two reasons, first Kisima community radio is rural based and runs various programmes in vernacular to help take care of audience needs preliminary research reveals lack of studies on the role of community radio broadcasting in agricultural maize production in rural Kenya in particular Kisima community radio. Second. Numerous cases of lack of enough maize supply have been experienced in Borabu despite it being very fertile in maize farming. The study used descriptive research design which primarily shows the state of affairs as it exists at the present by providing a relatively complete picture of what is occurring at Kisima community radio in any given time in programming, production and scheduling. It again allows the development of questions for further study. The specific objectives of the paper are to; describe the role of community radio broadcasting content in Agricultural maize production in Nyamira County, examine the role of community radio broadcasting producers in agricultural maize production in Nyamira County.

2.0 LITERATURE REVIEW

2.1 Theoretical Literature Review

The theories that guided the study include the democratic-participant theory and the social responsibility theory.

2.1.1 The Democratic-Participant Theory

This theory states that mass media ought to support the participation of masses in the process of initiation, planning and execution of interventions to impact their lives. Davis (2012) media are to be used to stimulate and empower pluralistic groups thereby supporting the growth of cultural pluralism at the grassroots level.

Identification process as well as the Democratic participation theory calls for the development of –small media that can effectively be controlled by members of grassroots groups. Kisima Community radio is not left out in making sure the agricultural maize content it airs benefits farmers in Borabu Sub County.

2.1.2 The Social Responsibility Theory

Was first developed in the 1940s by Robert Maynard Hutchins, is yet another school of thought that examines the role of mass media in society. One key assertion of the social responsibility theory is that media professionals have certain obligations to their audience (s). These obligations include high standards of informativeness, truth, accuracy objectivity and balance. Discussing this theory, Baran (2013) argues that media should be pluralistic and therefore reflect the diversity of the society, giving (equal) access to various points of view and rights to reply. Moreover, media should be self-regulating within the framework of the law and established institutions and should avoid whatever might lead to crime, violence or civil disorder or give offense to minority groups within the society. The social responsibility theory challenges media practitioners and professionals to constantly develop creative and new ways of serving their communities. In essence, media should exist to serve the interest of the masses and those who own or control media houses should constantly be identifying new and better ways of using their media houses to highlight and address the present and ever-changing challenges that confront humanity including food insufficiency. This way, the media would be contributing positively towards the socio-economic improvement of their audience (s).

2.2 Conceptual Framework

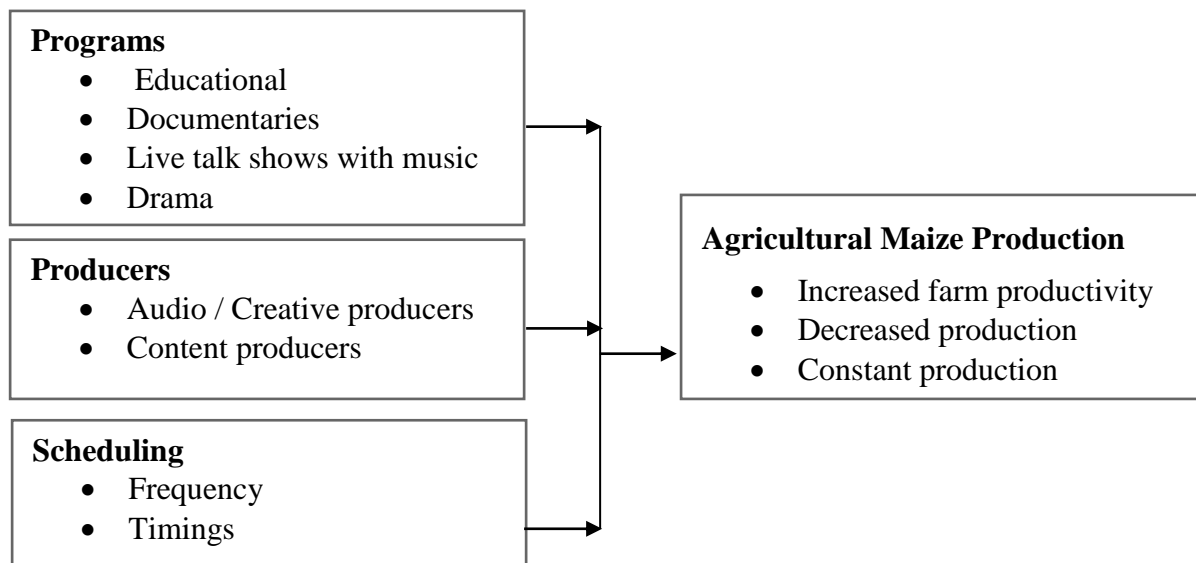


Figure 1: Conceptual framework

2.2.1 Programs

Radio plays a significant role at the grass roots level for rural development. For instance, programmes of poverty, agriculture, gender inequality, education, social problems among others could be the focus for programming. In exploring the importance of sharing information locally and the opening up of wider information networks for farmers in Northern Ghana with reference to vernacular radio programmes, Agwu, et al. (2016) noted that rural radio encourages villagers to take an active part in the development process or even better to take their own initiative to improve the living conditions in their communities. Since most farmers have not been to school, rural radio acts as a substitute for formal education. Rural radio enables communities to articulate their experiences and to critically examine issues and policies affecting their lives for example a community can use the radio to highlight new agricultural policies. These policies can be debated upon and discussed using the radio and immediate feedback can be given for relevant authorities to take action. In cases where extension workers may not be able to reach, rural radio takes on that role (Chakraborty, 2014).

Here a community can be given a recording on cassette to substitute the extension worker who has not been able to reach that community. Vital information for agricultural development can be passed on through the use of radio for example information on better farming methods, improved seeds, timely planting, agro-forestry, better harvesting methods, soil conservation, marketing, post-harvest handling and diversification. According to Chakra borty, (2014) since rural radio targets a specific community, geographical area or interest, then the language of choice can be used to ensure that the message is clearly understood. Therefore rural radio gives you the option of using the prevalent language. Rural radio gives farmers an opportunity to interact with each other and other relevant authorities e.g. extension workers, crop and animal experts through formats like live talk shows, phone-in programmes and on location broadcasts. Radio demystifies the scientific jargon. It is able to explain the research in simpler and ordinary language that people understand. Since rural radio is community based, it can be used to mobilize people towards community development work e.g. construction of valley dams, protected wells and immunization of animals (Mbeke, 2013).

Radio is a unique and effective tool in passing out information. Chapman et al. (2016) noted that the growth of rural radio stations reflects both the improvements in livelihoods and Education through in information technologies and the shifting of development paradigm towards a more participatory style of information and knowledge transfer. It promotes culture and Local Governance. Kumar (2014) identified radio as an avenue for participatory communication and as a tool relevant in both economic and social development by sharing information. Community radio is a type of radio service that offers a model of radio broadcasting beyond commercial and public service. As an entertainment and cultural too, community radio broadcasting serves geographic communities and communities' interest through income economic activities (White, 2018).

The content of broadcasting is largely popular and relevant to a local/specific audience but which may often be overlooked by commercial or mass-media broadcasters. It is a social cohesion tool. Community radio stations are operated, owned, and driven by the communities they serve. Community radio is not-for profit and provides a mechanism for facilitating individuals, groups, and communities to tell their own diverse stories, to share experiences, and in a media rich world to become active creators and contributors of media (White, 2018). In many parts of the world today, community radio acts as a vehicle for the community and voluntary sector, civil society, agencies, NGOs and citizens to work in partnership to promote community development and role of scheduling of the programs in Agricultural maize production in Nyamira County.

Radio in this regard provides a set of participatory communication techniques that support agricultural extension efforts by using local languages to communicate directly with farmers and listeners' groups. Using the Most Significant Change (MSC) process, Walters et al (2011) assessed the impact of community radio in Indonesia and concluded that effective radio activities can make a significant change in a community's life. The MSC methodology has its origins in community health development debates. It has recently been applied to community radio impact evaluation. By the MSC process, community members provide feedback in the form of stories describing the desirable change in their life as a result of the activities of the radio (White, 2018).

Through media skills training and access to the airwaves, a community radio facilitates a number of capacity building activities. Unlike in the case of the mainstream media, rather than merely talking about the community, the people themselves make the programmes. This strengthens

local culture with the recognition that this is their station; it becomes a forum for a wide diversity of local opinions and views.

OECD (2001) stated that economic theory postulates that Community Radio, to a large extent, if effectively organized, performs three main significant functions at the grass root level for rural development. Firstly, it promotes issues of agriculture, gender equality, education, trade and commerce, disaster, weather, natural calamities, poverty and social problems. Community radio is usually for the people, run by the people and owned by the people. Secondly, it enhances the capacities of local people to work together to tackle a range of social problems, including poverty and exclusion through radio. Lastly, it contributes to nurturing of the creative talents of the community and providing a forum for a diversity of opinions and information.

2.2.2 Producers

Radio producers need to be able to generate original ideas and to think creatively about how to communicate them to audiences, have excellent writing and storytelling skills with the ability to tailor and adapt content for different audiences and platforms (Mbeke, 2012). They also need to have knowledge of the radio market, different station and program me styles and audience demographics, be able to learn how to use a variety of recording equipment and to operate different radio studios have excellent communication skills, complemented by diplomacy, empathy and patience, along with the ability to build rapport and draw information from people (Quail, 2015) and be able to coach and develop others have the confidence and tenacity to pursue information, overcome obstacles and pitch ideas to senior colleague. Possess a comprehensive knowledge of the subjects relevant to the radio genre. Radio producers have a role in shaping the values and beliefs in the society.

Its many advantages are unequalled by any other medium, namely, its production ‘immediacy’ with instant replay in the field (Mcquail, 2015), to check on shooting details, its ability to add on commentary in local languages, its ease of editing, and its ‘show anywhere, anytime’ flexibility using battery or generator operated playback equipment where electricity is lacking (Nazari, & Hazbullah, 2013). During extensive long-term projects in Peru, Mexico and Mali, FAO has perfected a complete learning package that combines radio with discussion, simple printed materials, and practical fieldwork (Quail, 2015). Often referred to as a model for international reference, the efficiency of the methodology has been evaluated by the World Bank in terms of

both training costs (ranging from 1/3 to 1/5 the costs of traditional training; and high internal rate of return. More recent examples include training for women farmers in Jamaica where radio was combined performances, oral testimonies and printed material (Myers, 2018). The Centre has carved out its principal aim as ‘facilitating people’s participation at all levels of the development effort to identify and implement appropriate policies, programs and technologies to prevent and reduce poverty in order to improve people’s livelihood in a sustainable way’ (Anyaeibunam et al., 2014). The experience gained from many projects and studies related to people’s livelihood, has demonstrated the fact that radio is one of the most effective (and not very costly) means of communication for development in people’s livelihood, especially in society, as well as of social participation, of information and advice on literacy, health, child care, improved agricultural methods, vocational training and protection of the environment which are key (Myers, 2018). Also growing number of development specialists and agencies argue that appropriate use of Information Communication Technology (ICTs) for accelerating the dissemination of research-based recommendations, blending them with indigenous practices, and rendering them locally useable through media adaptation, and especially radio, may well provide part of the solution towards reducing the chronic food deficits and reducing poverty (Nazari, & Hazbullah, 2013).

2.2.3 Timing

The frequency of radio programs scheduling and time duration in agriculture information through regular transmission gives valuable information about new farming methods. Therefore the researcher would look forward to crosscheck how appropriate the programmes were, time taken on air and effect of days allocated whether enough or not (Mbeke, 2012). The programs provide farmers with the opportunity to speak and be heard on all matters. They are centered on encouraging smallholder farmers to name their concerns, discuss them, and organize to act on them (Khanal, 2013). The programs provide farmers with the information they need, and when they need it. Programs should be broadcast consistently and conveniently, on a reliable, regular basis, at least weekly, at a time when farmers can listen. The programs are entertaining and attract large number of farmers. There is no excuse for boring farm radio programs (Vijay Cuddeford, Farm Radio International, 2012).

Farm Radio International's voice standards for farmer programs: Farm Radio International, with the help of many farm broadcasters across sub-Saharan Africa, has identified important characteristics that should be reflected in radio programming that serves smallholder farmers. The characteristics are summed up in the acronym "VOICE." The VOICE Standards are a work in progress and are regularly revised in light of new learning. The programs value smallholder farmers, both women and men (Khanal, 2012). They respect farmers for their hard work producing food for their families and the markets, often in the face of major challenges. They reach out to farmers to understand their situation, and are dedicated to supporting them in their farming work

At different times of day there are different proportions of listeners at home, driving or working. To reach as large and wide a section of your community as possible, you need to decide how you will organize your output. At breakfast more people listen to the radio between 7am and 10 am than at any other time of day (Gathigi, 2013). If you can attract listeners with your breakfast show then you should have a good chance of keeping them through the day. Your breakfast show presenters have the most important and prestigious job of all your broadcasters. Just what makes good breakfast radio is a highly debatable question however. There is a fine line between an energized and energizing host, who puts smiles on faces and makes everyone glad to have got out of bed, and an irritating git who yells and giggles constantly. Lunchtime is another switch-on time for many listeners. As at breakfast time, they mostly don't want to be overly challenged or provoked over their sandwiches, so again a mainstream approach to your programming is probably desirable – light chat, popular tunes and a friendly attitude.

Although you may struggle to keep drivers tuned in for long, there are so many people listening to the radio in their cars between 4pm and 6pm that you can reach a lot of people and that is immensely important for your public profile (Gathigi, 2013). A good drive-time show should be a mix of the informative and the entertaining, and be designed with the listenership in mind. They will probably be listening closely to what you play and say, so there is some scope for thoughtful features and intelligent discussion, but bear in mind that listeners will be tuning in and out on a regular basis so keep everything short, snappy and varied (Gathigi, 2013). Later in the day listeners are more likely to be looking for programmes that reflect their specific tastes and interests. Listeners tend to be younger and fussier. They are also likely to be listeners who will

not hear your station at other times of day. A broader range of specialist programming in the evenings will broaden your reach to your community.

This leaves plenty of hours free for the types of community programming (schools, community action, health and issues programming, which make up such an important part of your role as a community radio station. Radio listeners have different habits at home, at work and in the cars witch on at key times of the day (Khanal, 2012). It is your task to ensure that this programming is as entertaining, fascinating and useful as possible to try to keep your listeners switched on and tuned in from morning to night. Try to avoid creating ‘switch-off’ points when your scheduling lurches suddenly from mainstream pop radio to death metal hour or a serious political debate (a station broadcasting in one main language would find the same effect by switching languages).Your scheduling should flow naturally and smoothly through the day and the week (Khanal, 2012). The relative importance of community issues and radio production issues is a continual and healthy source of tension in community radio. Radio is a wonderfully democratic medium, a presenter and producer with the most basic equipment and minimal budget can sometimes make programmes as inspiring and polished as any BBC-produced, Sony Award-winning production. Assuming the talent is at your disposal, often the only obstacle is the time and effort required for training, education, research and preparation (Chakraborty, 2017). Of course you want your broadcasts to sound as good and professional as possible. But never let that override your other commitments. There are three aspects to programming at a community radio station.

Quality of process how much benefit is there to individuals and groups who are making these programmes (Agwu, 2013). The volunteers who will gain most from making radio may not be the volunteers who will make the slickest broadcasts. Likewise the programmes with the greatest community impact may be presented by radio veterans who have learned as much as they will ever want to learn about creating radio and for whom ‘self-improvement’ is a non-issue (Gathigi, 2013). At every community radio station there will be a slightly different attitude to the relative importance of each factor, and even within stations there will be enormous differences between shows.

2.2.4 Rural Kenya Agricultural Production

The dependent variable of the study focused primarily on agricultural production in rural Kenya. Agricultural production provides income, employment and food at affordable prices as well as raw material for the processing industry and foreign exchange from exports. Creating a sustainable agricultural development path meant improving the quality of life in rural areas, ensuring enough food for present and future generations and generating sufficient income for farmers (Bhavnani et al., 2018). Supporting sustainable agricultural development also involves ensuring and maintaining productive capacity for the future and increasing productivity without damaging the environment or jeopardizing natural resources (Srampickal, 2016). In addition, it requires respect for and recognition of local knowledge and local management of natural resources, and efforts to promote the capabilities of current generations without compromising the prospects of future ones.

Consequently, economic and environmental sustainability, adequate farmer incomes, productive capacity for the future, improved food security and social sustainability are important elements of developing countries' agricultural development (Gathigi, 2013). Through offering solutions to complex issues by developing better farming and systems to help farmers with productivity on the farm and grow more nutritious food while conserving natural resources. Expansion of rural agricultural production help eradicates extreme poverty and hunger through a "twin-track" approach: improving agricultural productivity and promoting better nutritional practices at all levels; and promoting programmes that enhance direct and immediate access to food by the neediest. It also leads to improvements in the productivity of agriculture and related sectors directly increasing farm and rural incomes and household food security (Agwu, et al., 2016). Access to the food needed for a healthy life for all members (adequate in terms of quality, quantity, safety and culturally acceptable), without undue risk of losing such access.

The agricultural sector is the mainstay of the Kenya's economy. The sector directly contributes 24% of the Gross Domestic Product (GDP) and 27% of GDP indirectly through linkages with manufacturing, distribution and other service related sectors. Approximately 45% of government revenue is derived from agriculture and the sector contributes over 75% of industrial raw materials and more than 50% of the export earnings Kenya Agricultural Research Institute (2012). The sector is the largest employer in the economy, accounting for 60 per cent of the total

employment. Over 80% of the populations, especially living in rural areas, derive their livelihoods mainly from agricultural related activities. Due to these reasons the Government of Kenya GoK (2013) has continued to give agriculture a high priority as an important tool for promoting national development.

In 2008, the GoK launched Kenya Vision 2030 as the new long-term development blueprint for the country whose focus is to create a “Globally competitive and prosperous country with a high quality of life by 2030”.The Vision also aims at transforming Kenya into “a newly industrializing, middle income country providing a high quality of life to all its citizens in a clean and secure environment”. The Vision is anchored on the economic, social, and political pillars and will be supported on the foundations of macroeconomic stability; continuity in governance reforms; enhanced equity and wealth creation opportunities for the poor; infrastructure; energy; science, technology and innovation; land reform; human resources development; security; and public sector reforms. Given the central role the agricultural sector plays in the economy, the Government is in the process of finalizing the development of the Agricultural Sector Development Strategy (ASDS). The overall aim of this strategy is to strategically make the agricultural sector a key driver for achieving the 10 per cent annual economic growth rate expected under the economic pillar of the Vision 2030. Through the ASDS, the Government aims at transforming the agricultural sector into a profitable economic activity capable of attracting private investment and providing gainful employment for the people. The achievement of national food security is to be a key objective of the agricultural sector.

3.0 METHODOLOGY

The researcher used descriptive research design which primarily showed the state of affairs as it existed by providing a relatively complete picture of what was occurring at Kisima radio in any given time in programming, production and scheduling allowing the development of questions for further study. The target population of this study was all small-scale maize farmers aged between 19 to 65years in Borabu Constituency in particular Borabu Sub County this was the age of people who were able to make independent informed decisions given proper guidelines by the community radio in matters of maize farming. These farmers engaged in mixed farming and owned no more than five acres of land. There were 60,235 people aged 13 – 65 years in this Constituency KNBS (2009) (Kenya National Bureau of Standard).

To constitute a structured sample, the researcher used cluster sampling method since the study comprised a large and dispersed target population. The researcher constituted two stages whereby first stage was random selection of clusters, thus the entire population of interest was divided into small distinct geographic areas, such as villages, then found an approximate size of the population for each “village”. At this stage, the primary sampling unit was the village. Afterwards, clusters were assigned randomly to villages. In the second stage random selection of informants within clusters was chosen randomly within each cluster using simple random sampling. A multistage sampling was used to sample villages and household heads.

The Sub County has three locations with 30 villages: Esise, Nyansiongo and Mekenene having 11, 9 and 10 villages respectively. These villages are divided into heterogeneous households from which farmers were finally selected for the study. Using multistage sampling method, purposive sampling technique was employed at both village and household levels to sample villages and households which later formed primary and secondary sampling units respectively.

Using the list of the heterogeneously distributed villages of both -locations with the help of chiefs and Agricultural officers working in those areas 3 villages were purposively selected from each location based on better farming and radio listening habit giving a total of 9 villages this was so since the study involved a large population without an appropriate and exclusive list of all its members. Agricultural instructors and the village headmen of the sampled villages were asked to provide a list of all family informants of the sampled villages from which a sampling frame was generated. The researcher with the help of the village heads purposively sampled 10 family informants from each village which were perceived as better farmers with good radio listenership habit, giving a total sample of 90 Families. This number of 10 families was chosen since it was difficult to get the members of all villages and those of the Families from the expansive population in Borabu Sub County.

The researcher further selected 2 staffs from a total of 10 at Kisima community radio Office, The producer and presenter / host of the agricultural program since they were in charge of the programmes at Kisima community radio. Two (2) Agricultural Officers who were working with the local farmers from Borabu constituency agriculture Office as key informants i.e. crop officer and the livestock officer. These sample units (4 key informants) were chosen because they bore particular features or characteristics which enabled a detailed exploration and understanding of

the subject under question by the researcher. The data analysis methods used involved; frequencies, percentages and presentations of tables.

4.0 RESULTS AND DISCUSSION

4.1 Descriptive Results

The study attempted to establish whether Kisima Radio had improved maize production in Nyamira County through its vernacular broadcasting. Interestingly the respondents acknowledged the unique role of Kisima community radio being a media for agricultural communication. Majority of the producers indicated awareness of the role to a large extent; this was good since it became easier for them to use their power to produce agricultural content, control content that would help improve maize production in Borabu Sub County.

There was an overwhelmingly agreement on observation of ethics by the producers, this was a key principle that could assist one speculate what kind of content to expect to be aired. The producers indicated that there was a strong observation of ethics as indicated by 61.11% of the respondents. Still on an element related to ethics, a majority of producers agreed to observe the situation on the ground before reporting content. During content production producers ought to be aware the impact some content can have on the farmers, this was seen to be agreed upon, 77.78% of the producers observed the need on the ground before reporting.

Regarding production policy, majority of the producers indicated that their organization did not have a separate production policy to be applied during production on farming situation in Borabu. 72.22% of the respondents indicated that their community radio station did not have a separate production policy for farming content application. This showed that a general production policy was applied in every circumstance thus there was a possibility that content that had the potential to deny farmers enough information would be circulated to the audience. Again regarding the question of whether the production policy was effectively relaying proper farming content, majority of the respondents indicated that it was very effective with a 66.66% mark for this part. Needless to say, there was room for content that could cause no change in farming to reach the audience since a general production policy and too because some producers indicated that their production policy was just effective. There was also a strong indication of independence among the producers to approve content that they felt was capable of causing different reactions in maize farming. 100% of the producers indicated that they were not coerced

to approve content by their seniors. This showed there was freedom to think and make decision regarding content that went to the audience.

Kisima community radio had most of the farming programs aired during the period of November and December 2017 carried maize farming element with minimal content with other information. The researcher was able to discover a trend of gradual increase of content with maize production element during the period. This was evident from the drastic reduction of content with other programs element and at the same time an increment of content with farming element during the month of January 2008. There was high level of observation of code of conduct among the producers as it was evident from the productions aired which adhered to rules during the months of November and December, and an overwhelmingly 69.44% content contained messages of agricultural production and improvement. This is maintained even when the production was poor during the January 2008, (70%).

There is hope for Borabu Sub-County. There is a lot of potential for the growth in agriculture Maize farming within this sub-county. The Kisima Community Radio programs on farming through their producers are passionate about Maize farming. The radio has started supporting farmers where producers have seen the need to help improve Maize farming through regular programming of maize farming discussions and sensitization on the prices of maize for farmers, which means, therefore, more income for the farmers.

Investors who go to Borabu sub- County are doing a good thing since they are helping to boost the economy of the people in the sub -county, but the Borabu sub- County farmers should be bold enough and seize the opportunity that the county presents. Education and empowerment is really important too, in this county. There are so many success stories which the media has not highlighted about the county. Kisima community radio is doing a good job in empowering the farmers but the community leaders in the county should play their role to ensure that the dream of agriculture maize farming success becomes a reality in Borabu.

4.2 Regression Analysis

Regression analysis was conducted using the three independent variables (community radio content, community radio broadcasting producers and scheduling of the programs) against the dependent variable (agricultural maize production). For each independent variable, the information gathered on content, producers and scheduling of the programs was used as input into the regression model. The rating on maize production was used as the input for the dependent variable. The results of the regression model were presented in Table 1, 2 and 3.

Table 1: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.734	.539	.529	.702

The findings presented in Table 1 provide the r, r squared, the adjusted r squared and the standard error of the estimate. The r squared results showed that the model explained 53.9% of the change in maize production in Borabu. This suggested that community radio content, community radio broadcasting producers and scheduling of the programs explained 53.9% of the variation in maize production in Borabu Constituency while 46.1% of the variation in maize production was explained by other factors that were excluded in the model. This was a strong explanatory power since the three community radio broadcasting aspects included in the study explained more than half of the variation in maize production in Borabu Constituency.

The regression analysis also provided the analysis of variance (ANOVA). This enabled testing of the statistical significance of the model. The results were presented in Table 2.

Table 2: Analysis of Variance

Source of variance	Sum of Squares	Df	Mean Square	F	Sig.
Regression	9.878	3	3.293	11.676	.000
Residual	8.449	30	.282		
Total	18.327	33			

The study results of the ANOVA presented in Table 4.16 showed that at 5% significance level, the model was statistically significant ($f = 11.676$, $p < 0.05$). These findings suggested that the model was reliable and the data was a good fit. These findings indicated that community radio content, community radio broadcasting producers and scheduling of the programs were able to predict maize production in Borabu Constituency.

The significance of the independent variables (community radio content, community radio broadcasting producers and scheduling of the programs) in affecting maize production in Borabu Constituency was tested through a t test. The findings were presented in Table 3.

Table 3: Significance of Independent Variables

	Unstandardized Coefficients		Standardized		
	B	Std. Error	Beta	T	Sig.
(Constant)	2.197	.433		5.078	.000
Community radio content	.893	.103	.641	8.641	.000
Community radio broadcasting producers	.152	.174	.136	0.874	.641
Scheduling of the programs	.297	.100	.226	2.951	.004

The study results presented in Table 3 showed that community radio content had a positive and significant influence on maize production in Borabu Constituency ($\beta = 0.893$, $p = 0.000$). The implication of these results was that the content provided by Kisima Community Radio and other radio stations was critical in enabling the farmers to increase their maize production. Further, the findings indicated that community radio content had the most influence on maize production in Borabu Constituency compared to the other two community radio aspects,

The study findings indicated that community radio broadcasting producers had no significant influence on maize production in Borabu Constituency ($\beta = 0.152$, $p = 0.641$). These study results suggest that the producers in the community radio stations did not have any influence on maize production in Borabu Constituency. These findings indicated that though the content of the programs was critical, the producers did not matter to the maize producers.

Study results presented in Table 3 also showed that scheduling of the programs significantly and positively influenced maize production in Borabu Constituency ($\beta = 0.602$; $p = 0.000$). The findings indicated that the scheduling of programs was critical for maize production. These findings indicated that in community radio's scheduling of programs on agricultural maize production was critical so that to air the programmes when most farmers were listening. This will make the content to reach more people and hence influence maize production.

On this section, the researcher attempted to discuss the findings of the questionnaire and the respondents which were also interpreted in order to reveal the important issues regarding the research objectives, an effort to answer the question of the role of community radio broadcasting in agricultural maize production in Nyamira County. Interestingly the respondents acknowledged the unique role of Kisima community radio being a media for agricultural communication. Majority of the producers indicated awareness of the role to a large extent; this was good since it became easier for them to use their power to produce agricultural content control content that would help improve maize production in Borabu Sub County.

5.0 CONCLUSION

Respondents generally seem to agree on different key issues. For the first objective, people of Borabu in Nyamira County were not as pro- active as they ought to be with their farming culture. The farmers in this county were not willing to go out of their way to ensure that they step up their life and eradicate poverty by embracing diverse methods of farming. The challenges for farmers in Borabu -sub County could be seen clearly but they could be done away with. The researcher found out that the successful farmers did not want to be mentioned as case studies of successful farming in the sub-county because they felt that they were not that best. For cases of seeds planting, the people of Borabu in Nyamira County ended up not going for modern seeds or if they went for them they keep the seeds and not taking the initiative of planting them.

Kisima community radio production team had set pace for this but it was not enough. The people here listened to the show but opted not to practice farming because they thought that their land is small and need not to be used for maize farming until they become big shambas. The researcher also found out that Borabu sub -County was attracting investors from different counties who went there, bought land and practiced farming. Knowledge of different time schedules for maize

farming, when to plant in the county was also missing in that farmers practiced to plant maize in small scale and beans and would dare not venture into large farming practices since they had no information even when and whether there is a weekly farming program on Kisima radio. This beats the argument that the people of Borabu sub -County have land in regards to small land limiting them to practice farming. This particular farmer in Borabu Nyansiongo village had a very large land but a small portion was used for maize farming. Therefore, the major obstacle to improvement in maize productivity is farmer knowledge and attitude.

6.0 RECOMMENDATIONS

There should be more pro-activeness from the farmers. This can only be achieved through empowerment and offering the right Agriculture solutions so as to have this vision a reality. There should be campaigns that seek to reward farmers who have embraced new methods of farming plus those who seek to boost the agriculture culture in the Sub -county. For example, rewarding a maize farmer who has planted Maize in large scale and it has gone to a certain height...meaning that this farmer is keen to see the Maize grow. There should also be on ground farmers field days where farmers get to feel mingle with other farmers and get challenged to boost their Maize farming methods. This will in turn motivate the farmers who are doing well to continue working hard. Also in as much as county and community leaders will offer solutions for farming, the farmers too should be given a platform to voice their needs through Kisima community radio.

There is need to introduce of exchange programs in the county should too be embraced; For example, Maize farmers in in Borabu sub -County being taken to Uasin Gishu county where Maize growing is very highly embraced and doing well. This will help with the diversity of knowledge in regards to Agriculture Maize production and hence lead to pro-activeness among the farmers of Borabu Sub- County.

Media as an agenda setter should too prioritize this and ensure that issues to do with farming in Borabu sub- County should be addressed. This more so, also applies to the broadcast media that seeks to target the people in the sub-county. Kenya is one of the hardest-hit regions of the globe in terms of climate variations. The population growth rate is currently around 4.4 percent, which means by 2050 the population will double from 40 million to 80 million. The government is still

struggling to feed the population. But two-thirds of Kenyan land has never been farmed because there is no rainfall. However, the world's leading scientists have given us a way out. Large tracts of land can be converted to arable land through irrigation. The government is already working on the Galana-Kulalu project in Tana River County a one-million-acre irrigation scheme that will dramatically change the landscape of Kenya's food economy.

There is not going to be room for large-scale farming on arable lands due to population growth that has led to most of the land being taken over by home construction and other real estate projects. So most farming is going to rely on irrigation and greenhouses to create concentrated, sustainable farming that has proven to yield more and feed more as well as increase family income. There is also good news: the new Constitution offers women property ownership rights and we are not going to be surprised when the richest person in agriculture will be a woman in Kenya! In a nutshell: within ten years, technology will define agriculture. Innovators and entrepreneurs will have room to flourish here. The Christian Monitor, A United States of America website, highlights on the importance of media in Kenya in influencing positive attitude among farmers. It quotes Shamba Shape Up (Shamba) is a television series in Kenya helping small-scale farmers give their farms a make-over. It has an estimated audience of more than 11 million people, and is Kenya's most watched agricultural television show.

The series has a format similar to that of other home renovation shows-Shamba visits a new farm each week and helps give both farmers and the television audience the tools they need to improve productivity and increase income on their farms. Shamba (Swahili for farm) is the first television program of its kind in Africa-and perhaps the world-dedicated to helping small-scale farmers learn about a variety of issues including: irrigation; animal husbandry; pest control; and, financial management. The Shamba team is made up of veterinarians, agronomists, and crop specialists-from partner organizations including the International Fund for Agricultural Development (IFAD), and the African Agricultural Technology Foundation (AATF). The partners change each week depending on the theme of the show. In this regard, community media can too tone down their own agendas and work with the farmers to understand what they need and what their agriculture vision is.

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